FINAL REPORT
FOR
KANSAS UNIVERSITY
TRAINING REACTOR DECOMMISSIONING

December 8, 1992

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The University of Kansas

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1.0 Introduction

The overall objective of this project was to remove all of the residual radioactive material from the Kansas University Training Reactor (KUTR) and to terminate the university's Possession Only License No. R-78. All radioactive materials above restricted release limits in NRC Reg. Guide 1.86 were to be removed from the site and shipped to the Barnwell, South Carolina low level waste facility. All activities were conducted under the university's License No. R-78.

2.0 Facility Description

2.1 Reactor Facility Description

The KUTR is located in a building on the western edge of the main campus of the University of Kansas at Lawrence. Lawrence is situated on the banks of the Kansas River in the northeast corner of the State of Kansas, approximately midway between Kansas City and Topeka. Figure 2-1 shows the location of the reactor site on the Kansas University campus. Figures 2-2 and 2-3 show the ground level and upper level layout of the KUTR building.

The KUTR and the reactor building share no facilities or equipment with other buildings on the campus except for utilities including electricity, gas, water, compressed air and sewer system.

2.2 Reactor Description

The KUTR was an open-pool-type heterogeneous assembly. The core was moderated and cooled by light water and was reflected by graphite on three faces and by water on the top, bottom and one face. The fuel elements were of uranium-aluminum alloyclad with aluminum. The fuel was enriched to approximately 93% U-235.

The reactor core was located to one side near the bottom of a 6,600 gallon tank. The tank is cylindrical at the top and formed with a rectangular pocket on one side near the bottom of the tank to accommodate the core.

The core was composed of thirteen standard fuel elements and three control rod fuel elements, containing a total of 2.5 kg fully enriched uranium.

The reactor configuration included the aluminum tank (dry), graphite thermal column, beam tubes and beam port plugs and concrete biological shield in place.

The activated control rods and sheaths, grid plate assembly (the core support structure), aluminum angles and stainless steel bolts were stored in the shielded vault in the hot lab. The slightly activated neutron detection chambers were stored in the reactor facility.

All nuclear fuel elements and source material were shipped off-site or transferred to a state licensed Facility. (2 one Curie PuBe sources are listed on the State of Kansas' broad licenses). All unirradiated nuclear fuel element assemblies were shipped to the Oak Ridge National Laboratory at Oak Ridge Tennessee on January 6, 1986 and February 2, 1986. All irradiated nuclear fuel element assemblies were shipped to the Savannah River Plant at Barnwell, South Carolina in two shipments (one on January 28, 1986 and one on February 2, 1986.) The only residual radioactivity at the facility was in the activated components of the reactor including portions of the core support structure, aluminum tank wall and biological shield concrete in the region near the core location.

3.0 Background

3.1 Operating License History

The KUTR was initially authorized to operate at power levels up to 10kw. In 1971, after approximately 8600 kw-hours of operation, the reactor was authorized to operate at 250kw for short periods. The total thermal energy generated from startup in June 1961 through June 1963 was about 24,000 kw-hours. Of that amount, 15,300 kw-hours was after the higher power (peak) authorization. From 1977 to cessation of operations in June, 1984, the reactor was primarily used for experimentation and demonstration. Since June, 1984, the reactor has been effectively shut down.

3.2 Reactor

The KUTR was designed and built by the Bendix Aviation Corporation, and attained initial criticality in June 1961. The reactor core was typical rectangular geometry consisting of about 13 MTR-type thin plate aluminum clad fuel elements. The core was located at the bottom of an aluminum-lined poured concrete pool, immersed below about 15 ft. of ordinary water. The core was neutron-reflected by graphite on three sides, and was adjacent to a graphite-filled thermal (neutron) column on one side.

Four beam tubes extended from the core face, through the water and concrete shield into the reactor room experimental areas. The KUTR was licensed initially to operate at thermal power levels up to 10 kW, and in 1971 was authorized to operate for limited periods up to 250 kW. Reactor operations were terminated in 1984, at which time total energy generation with the same fuel loading was 23MWh. Before decommissioning the reactor facility configuration included the dry aluminum tank, solid and granular fill graphite thermal column, beam tubes and shield plugs, and the poured monolith concrete shield. Some of these components had been irradiated by neutrons during reactor operations and, therefore contained some induced radioactivity. The activated control rods and sheaths, grid plate assembly, some aluminum angles, and stainless steel bolts were stored in a shielded vault in a laboratory designated for radioactive materials storage. Components of the reactor system that were outside the biological shield of the reactor were surveyed by the university of Kansas Radiation Safety Services and recycled. (For example, control console with electronics, drive motors etc.)

The monolithic concrete shield was made up of five levels decreasing in diameter from the floor to the top of the reactor tank. The first four levels were octagon in shape with the fifth level being round.

3.3 Facility Operating History

The reactor was operated from 1961 through June 1984. A review of the annual operating reports and interviews with the reactor management staff indicates there were no unusual events including no radioactive spills within the facility nor radioactive releases from the facility. The only remaining system beyond the biological shield was a drain line running beneath the reactor room floor to the equipment room hold-up tank. The entire piping run is accessible via an open pipe chase beneath the floor. The KU staff personnel surveyed the drain line and the sample results from the hot lab drain and drain pipe to the hold-up tank ascertained no contamination to be present.

3.4 Radiological Status of Facility Prior to Decommissioning

Figure 3-1 shows a plan view of the reactor core configuration and its relationship to the beam tubes and the pneumatic tube. Figure 3-2 shows an enlarged top view of the reactor core configuration and its relationship to the beam tubes and pneumatic tube assembly. The entire core support structure and the source and fission chambers had been removed.

3.4.1 Area Dose Rates

The pre-decommissioning area dose levels within the dry reactor tank at floor level are shown in Figure 3-3. Figure 3-4 shows the contact dose rates within the region of the thermal column external to the reactor tank and the contact dose levels on the outer surface of the beam ports. Measurements were made with an Eberline Ionization Chamber, Model RO2.

3.4.2 Surface Contamination

There was low level surface contamination on the graphite blocks and granular fill located within the thermal column region, therefore, low level surface contamination is present in the thermal column area. There was no loose surface contamination on the inner surface of the reactor tank.

3.4.3 Activation

Material samples in the form of aluminum pieces and concrete borings were taken from the reactor tank wall and floor in the vicinity of the core. Approximately (4 ft) of the aluminum liner is activated with a total estimated activity of 2 μCi's.

Of the core support structures removed from the reactor tank, only the grid plates, bolts and aluminum angles show indication of radioactivity. It is predominately Cobalt 60. Their estimated activity is as follows:

Item	Weight, lbs.	(mCi)
Grid Plates (2)	18	0.03
Bolts (20) and Aluminum Angles (2)	5	0.5

The samples obtained from the lead shielding and graphite stringers that were located in the thermal column region are somewhat activated. The estimated activity of the lead shielding is 1.40 μCi in approximately ten (10) ft of lead. The estimated activity of the graphite is 2.28 μCi in approximately one hundred and twenty (120) ft of graphite. There was no indication of alpha activation.

4.0 ORGANIZATION

4.1 Decommissioning Organization

4.1.1 Radiation Safety Officer

The Radiation Safety Officer (RSO) heads the Radiation Safety Service and supervises a professional staff. This person is a qualified health physicist who shall maintain proficiency in radiation safety over the Decommissioning Operations Contractor (DOC) during decommissioning activities. The RSO advised the Reactor Director about all matters regarding radiation monitoring and radiation safety during decommissioning activities.

4.1.2 Nuclear Reactor Committee

The Nuclear Reactor Committee, as constituted by Amendment 15 to the KUTR license, monitored facility decommissioning activities. This was accomplished via an independent review and audit of the decommissioning operations by a qualified individual designated by the Nuclear Reactor Committee. The audit included radiation safety controls, implementation of approved procedures, instrument calibrations, personnel certification, and all associated records.

4.1.3 Executive Engineer

The Executive Engineer assisted the reactor director in providing overall contractual direction to the DOC. The Executive Engineer observed the worker safety training for compliance and,

1. Coordinated University review of DOC documents
2. Approved DOC documents, as required, on behalf of the University
3. Monitored work performance of the DOC
4. Prepared periodic progress and schedule reports, field change reports, radiation survey overcheck reports, and waste shipment summaries

5. Exercised control of the work via his authority to cease operations if the work is not being performed in accordance with approved [illegible]cedures

6. As[illegible]C where possible to ensure sa[illegible]ient performance of the pr[illegible]

4.2 Decommiss[illegible] [illegible]ractor (CWM NRS)

Th[illegible] aration of detailed work [illegible]ring and control of his [illegible] radioactive materials, including demol[illegible] and shipping; performance of the final radi[illegible]: preparation of the final report in support of the license termination application to the U.S. Nuclear Regulatory Commission. The DOC's organizational chart can be found in Figure 4.2.

4.2.1 Project Manager

The Project Manager maintained the overall responsibility for CWM NRS performance of project operations. He reported to the Executive Engineer for all project related activities and to the CWM NRS Corporate Office for all project oversight, management direction and resolution of any company related matters. He kept the Executive Engineer (EE) informed of all significant activities and progress.

Assisted by the assigned on-site and off-site forces of CWM RSG, he assured the accomplishment of the following:

- Maintenance of a single point of contact for University of Kansas liaison on all project related schedule, cost safety and technical matters, including any required communications, meetings or updates.

- Coordination of the CWM RSG project staff to assure that adequate safety and radiological control plans and procedures were enforced to assure safe and efficient conduct of project operations in compliance with the appropriate regulatory requirements.

- Provided sufficient staffing to support the scheduled completion of project tasks.

- Coordination of appropriate procurement and subcontract activities to support project goals and schedules.

- Continuous monitoring of project status and performance and the initiation of any required corrective actions of reassignment of forces.

- Accurate reporting on a weekly basis to University of Kansas of up-to-date schedule status.

- Resolution of any cost or status related discrepancies or questions.

- Compliance with all required procedures, operating requirements, permits or other restrictions.

- Maintenance of all appropriate project data, documents and records and the compilation of a final report which accurately reflects the work performed and the final releasability of the project site.

4.2.2 Project Health Physicist/Technical Director-(PhP/TD)

The PHP/TD had the overall responsibility for conduct of radiological monitoring, surveys, protection and conduct of final release activities. He participated in project planning and final reporting activities to assure regulatory compliance, adequacy of the formal decommissioning plan and appropriate development of project plans and procedures. The Project Health Physicist Technical Director reported to the Project Manager for all project related matters including the safe and adequate performance of radiologically related tasks.

4.2.3 Project Radiological Control Supervisor (RCS)

The RCS reported directly to the Project Manager for the day-to-day conduct of project radiological activities.

He received direction from the Project Health Physicist/Technical Director to assure appropriate administration of the project radiological control programs, final release activities, maintenance of all appropriate documentation and compliance with all appropriate plans, procedures, practices and regulatory requirements. He was responsible for the following:

- Assistance to the Project Manager and project staff in preparation of work plans and procedures.

- Conduct of appropriate surveys and inspections to assure that the radiological and industrial safety hazards were appropriately identified and that necessary precautionary actions were in place prior to the initiation of work activities.

- Specifications of appropriate safety and radiological controls for work permits and work procedures.

- Day-to-day direction of the activities of radiological controls personnel in the conduct of project operations, selection of instrumentation of decontamination techniques appropriate for protection of personnel and reduction of exposures. Review of time sheets for accuracy and appropriateness.

- Monitoring of work in progress to assure compliance to project plans and procedures, regulatory requirements, and good radiological work practices.

- Prevention of conduct of work activities which may jeopardize the safety of personnel, violation of approved plans, procedures or practices, or the potential release of contamination.

- Review and maintenance of all appropriate project personnel and radiological records, including survey data, training, certification and qualification records, release surveys, permits, licenses and instrument records.

- Communication with the Project Manager and the Project Health Physicist/Technical Director to assure identification of problems, initiation of required corrective actions and compliance to plans, procedures and regulations.

- Management of radiological supplies and instrument inventories, including assurance of compliance with specifications and standards.

- Inspection and assistance in the preparation of waste materials for shipment, including appropriate radiological survey and assay activities.

5.0 Decommissioning Scope of Work

5.1 Decommissioning Work Scope Summary

In general, the scope of work was to remove all residual radioactive materials from the site, verify the absence of residual radioactivity, terminate the Possession-Only License and release the site for unrestricted use.

The major tasks of this program include:

1. Initial radiation survey of equipment, structures and areas

2. Removal of reactor aluminum tank

3. Removal of activated concrete in the biological shield

4. Removal of activated portions of the beam ports and pneumatic tube

5. Packaging, shipping and disposal of irradiated and contaminated material, equipment and rubble at the Barnwell, South Carolina low level radioactive waste repository

6. Final radiation survey of facility

7. Final report submittal

6.0 Decommissioning Activities

6.1 Mobilization

On 9/10/92 site mobilization began. The office trailer, operational equipment and office supplies were delivered to the site. On 9/14/92, all personnel mobilized on site. This included the project manager, radiological controls supervisor (RCS), operations supervisor, 3 health/physics technicians (HP) and 2 decontamination technicians.

On-site orientation and training was conducted. This included procedure review, emergency response, confined space procedures and lock and tagout procedures.

6.2 Site Setup and Baseline Survey

On 9/16/92, site setup began. Containments were constructed at the ope ng to the thermal column and at the top of the biological shield. A 2000 CFM HEPA system was connected to both containments. Three shipping boxes (96 cubic feet each) were staged next to the biological shield. All openings and accesses to the reactor room were isolated using herculite barriers. All electrical connections to the monolith were disconnected and tagged.

In addition, on 9/16/92, the baseline survey was initiated. The survey covered all areas inside the reactor room, the executive engineer's office and inside the thermal column and tank.

On 9/24/92, the baseline survey and all other site preparations were completed.

6.3 Miscellaneous Material

On 9/25/92, operations commenced to remove all miscellaneous material. This included control rod tubes from the core, polyethylene shielding, lead bricks, graphite moderator blocks and assorted bagged waste.

This material was removed, surveyed and released or packaged for burial as radioactive waste.

6.4 Aluminum Tank and Concrete Coring

On 9/28/92, most of the graphite had been removed from the thermal column except for the sections wedged behind the beam tubes. The beam tube sections in the thermal column were removed by using a plasma arc torch. This allowed access to the last of the graphite blocks. They were then removed and surveyed.

Removal of the tank bench (area where the core and ion chambers were located) began.

On 9/29/92, removal of the aluminum bench was completed. The material was size reduced and packaged for disposal. On 9/30/92, the bottom of the aluminum tank was removed and scaffolding was then placed in the tank.

On 10/1/92, removal of the cylindrical section of the tank began. Because of a cork and tar material used between the aluminum and the concrete, a problem of high carbon monoxide concentrations occurred. The existence of the tar and cork material was not indicated on any of the plans provided. Additional ventilation was used to dissipate the carbon monoxide. Although this was helpful, it did not alleviate the problem.

On 10/2/92, coring operations commenced. Per the Decontamination and Demolition plan, 9 cores were to be taken (3 cores at 3 different levels). The cores were to be taken by coring from the inside of the tank to the outside of the tank. The concrete on the inside of the tank was not strong enough to hold the pins of the coring equipment. Because of this, the coring had to be conducted from the outside of the tank. Three cores were taken from the bottom section of the biological shield. An additional core was taken at the second level. The additional samples were taken from the inside of the tank at 4" and 6" depths using drills and jack hammers.

Coring and sampling was completed on 10/7/92.

On 10/8/92, aluminum tank removal continued using a MSA pressure demand system with full face respirators. The bottom 4 feet of the tank was removed and packaged for disposal. The rest of the tank was removed, surveyed and released. On 10/13/92, all of the aluminum had been removed from the circular section of the tank. Removal of aluminum from the thermal column then began. On 10/15/92, aluminum removal operations were complete.

6.5 Concrete Removal

On 10/16/92, concrete removal operations commenced. The activated concrete was removed using a hydraulic splitter and jack hammers. In between removal operations, radiological surveys were conducted to indicate where additional concrete needed to be removed. The activated rebar was removed using a torch.

Activated concrete and rebar removal operations were complete on 10/29/92.

6.6 Beam Tubes and Pneumatic Tube

While the concrete was being removed, the activated portions of the beam tubes and the pneumatic tube were removed. Approximately 18 inches of each tube was activated.

6.7 Lead

All of the lead bricks will be transferred to Kansas State University.

6.8 Disposal of Radioactive Material

The radioactive material was packaged in (4) four 96 cubic foot steel containers and (10) ten DOT 17(C) containers. This material was shipped and disposed of at the CNSI Low-Level Disposal Facility in Barnwell, South Carolina.

TYPE AND QUANTITY OF RADIOACTIVE MATERIAL

ITEM	AMOUNT (Cubic Feet)
GRAPHITE	148.5 (In place)
CONCRETE	123.6 (In place)
ALUMINUM	6.91 (In place)
SECONDARY	40
MISCELLANEOUS	40

6.9 Final Survey

The final survey commenced on 10/31/92.
The survey was completed on 11/07/92. Details on the survey can be found in section 9.0 of this report.

7.0 Identity of Potential Contaminants and Release Guidelines

Based on the knowledge of site operations and the preliminary assessment and characterization survey the significant radiological contaminants were determined to be Co-58, Co-60, Eu-152 and Eu-154. The average activity ratios of the isotopes are:

Co-58 0.29%
Co-60 10.50%
Eu-152 85.00%
Eu-154 4.20%

On the basis of this combination of contaminants the surface contamination guideline values for the site are:

5000 dpm/100 cm^2, average over 1 m^2*
15000 dpm/100 cm^2, maximum over 100 cm^2*
1000 dpm/100 cm^2, removable*

In addition, Exposure Rates were not to exceed 5 μR/hr above background at 1 meter from each surface.

8.0 Site Conditions at Time of Final Survey

As stated in the Decommissioning Activities, all miscellaneous materials including tubes, racks and bagged waste were removed and packaged as radioactive waste. The activated portions of the beam tubes, pneumatic tube and aluminum tank were removed and packaged. Activated portions of the concrete monolith were removed using jackhammers and a hydraulic splitter. The activated concrete was packaged for disposal as radioactive waste.

All of the lead bricks will be transferred to the Kansas State University.

9.0 Final Status Survey Overview

9.1 Survey Objectives

The purpose of the final status survey was to demonstrate that the radiological conditions satisfy the NRC guidelines and that the plant site can, therefore, be released from licensing restrictions for future use without radiological controls. The specific objectives of the survey were to show that:

9.1.1 Surface Activity of Buildings and Structures

9.1.1.1 Average surface activity levels (total of fixed and removable activity) are at or below guideline values established as acceptable by NRC.

9.1.1.2 Reasonable efforts have been made to identify, evaluate, remove, if necessary, areas of residual activity exceeding the guideline value, known as elevated areas, may be acceptable, provided the activity levels are less than three times the guideline values, when averaged over a surface region of 100 cm^2,

and provided the average level within a 1 m^2 area containing the elevated area is within the guideline value.

9.1.2 Volume Activity of Building Materials

9.1.2.1 Average radionuclide concentrations are at or below guideline values, established as acceptable by NRC.

9.1.2.2 Reasonable efforts have been made to identify, evaluate, and remove, if necessary, areas of residual activity exceeding guideline values. Areas of residual activity exceeding the guideline value, known as elevated areas, may be acceptable, provided they do not exceed the guideline value by greater than a factor of (100/A)1/2, where A is there is dual activity in m^2, and provided the activity level at any location does not exceed three times the guideline value.

9.1.3 Exposure Rate

9.1.3.1 Exposure rates do not exceed 5 μR/hr above background at 1 m above the surface. Exposure rates may be averaged over a 10 m^2 grid area. Maximum exposure rates over any discrete area may not exceed 10 μR/hr above background.

9.1.3.2 The objective of the survey was to demonstrate at a 95% minimum level of confidence that the above conditions have been met. For the purpose of this demonstration, each survey unit (grid) was independently evaluated.

9.2 Organizational Responsibilities

The survey was performed by a team composed of qualified personnel of the Chemical Waste Management Nuclear Remedial Services, Inc. and its sub-contractors. This is the same organizational structure which conducted the baseline survey activities; the Survey Plan contains further details on this organization.

Analytical services for gross alpha/beta levels on smears and air samples were performed by Chemical Waste Management and their personnel in accordance with standard operating procedures, "Radiological Controls Procedure for Field Projects" ENWD-RP-001. Samples of concrete and other special samples, requiring gamma spectrometry or other chemistry analyses were conducted by a contract laboratory. QA/QC programs for both in-house and contractor laboratory services were monitored by the KU/Exc. Eng.

9.3 Instrumentation

Table 9.3 lists the instrumentation used for the survey activities, along with parameters and detection sensitivities for the instrumentation and survey technique. The combination of instrumentation and technique were chosen to provide a detection sensitivity of 25% or less of the guideline limits. All instruments were calibrated a minimum of once every 6 months, using NIST-traceable standards. Calibration was for similar radiation energies expected to be present at the site. Operational and background checks were performed at least once each day of instrument use, in accordance with the company's "Procedure for Field Projects" ENWD-RP-002.

9.4 Survey Procedures

Survey planning and procedures were in accordance with the Manual for Conducting Radiological Surveys in Support of License Termination, NUREG/CR5849. Procedures are briefly described in this section; further detail of survey procedures is presented in "Baseline and Release Survey at University of Kansas" WI-ENWD-0892-079.

9.4.1 Area Classification

For purposes of establishing the sampling and measurement frequency and pattern, the site was divided into suspect and non-suspect areas. The basis for these classifications are:

- Suspect areas: Areas that have potential radioactive contamination (based on plant operating history) or known radioactive contamination (based on past or preliminary radiological surveillance).

This includes areas where radioactive materials were used and stored, where records indicate spills or other unusual occurrences that could have resulted in spread of contamination. Areas immediately surrounding or adjacent to locations where radioactive materials were used, stored, or spilled, were included in this classification because of the potential for inadvertent spread of contamination.

Non-suspect areas: All areas not classified as suspect. These areas are not expected to contain residual radioactivity, based on a knowledge of site history and previous survey information.

Figure 9.4 lists the various site areas in each classification category.

9.4.2 Reference Grids

Grids were established for the purpose of referencing locations of samples and measurements, relative to buildings and other site features. The gridding intervals were based on the potential for residual contamination in the various plant areas. (See Table 9.4). All suspect building area floor and wall surfaces were gridded at 1 m intervals. Building surfaces in non-suspect areas or those upper surfaces in suspect areas that were not contaminated as a result of prior activities were gridded in 3 m intervals.

This grid system is identical to the one used during the baseline survey. A total of 4 suspect areas and 8 non-suspect areas was established.

9.4.3 Surface Scans

Scanning of surfaces to identify locations of residual surface and near-surface activity was performed according to the following schedule:

9.4.3 Surface Scans

Scanning of surfaces to identify locations of residual surface and near-surface activity was performed according to the following schedule:

Suspect Area Surfaces - 100% of surface.

Non-suspect Area - 20% upper surfaces.

Non-suspect Area - 50% lower surfaces.

Instrumentation for scanning is listed in Table 9.3. The instruments having the lowest detection sensitivity were used for the scans wherever physical surface conditions and measurement locations permitted.

Scanning speeds were 1 detector width per second for alpha and beta detection instruments and 0.5m per second for gamma instruments. Audible indicators (speakers) were used to identify locations, having elevated (<1.5 to 3 times ambient) levels of direct radiation. These locations were noted as maximum level on survey sheets.

9.4.4 Surface Activity Measurements
Direct Measurements

Direct measurements of alpha, beta, and/or beta-gamma surface activity were performed at selected locations using instrumentation described in Table 9.3. Unless precluded by surface conditions or physical parameters, the most sensitive of the instruments listed for surface measurements were used.

Measurements (6 per grid) were conducted by scaler counts over a 1 minute period. Appendix B contains facility drawings showing the locations of measurements.

Grid spacings were as follows:

Suspect Areas - 1m intervals floor and walls

Non-suspect Areas - 1m intervals floor and lower walls

Non-suspect Areas - 3m intervals upper walls and ceilings.

Building Interiors

Building interior surface scans were conducted for alpha, beta and gamma radiation. Scans of exterior building and paved surfaces were for gamma radiation only.

Other Surfaces

Non-suspect Areas - 1m intervals storage tank and reactor platform/stairs.

Pemovable Contamination Measurements

A single smear covering 100 cm^2 was taken on each surveyed grid unit. Contamination surveys conducted during the decommissioning indicated no removable contamination in excess of 500 dpm/100cm^2. Therefore, a single smear was considered adequate.

9.4.5 Exposure Rate Measurements

Gamma exposure rates were measured at 1m above ground or floor surfaces using a gamma scintillation instrument, calibrated for low gamma energies. Measurements were uniformly spaced according to the following pattern:

Suspect Areas: 1 measurement per grid unit

Non-suspect Areas: 1 measurement per surveyed grid unit

Grounds

Non-suspect Areas: 20 measurements at randomly selected locations.

9.4.6 Background Level Determinations

Background exposure rates were determined for the building interior by taking 8 measurements (using Micro R Meter) at locations of similar construction but without history of radioactive material use.

9.4.7 Data Interpretation

Data conversions and evaluations were performed following the guidance in NUREG/CR-5849. Measurement data were converted to dpm/100cm^2 for comparisor with guidelines.

*Note: Elevated dose rates in the Release Surveys (North wall, West wall, North/West portion of floor) are due to radioactive material stored within vaults located in the Lab which is adjacent to the reactor room. This material was not moved to perform the release survey because of exposure considerations (ALARA).

9.4.8 Records

All original survey data have been archived at the Chemical Waste Management-Nuclear Remedial Services, Inc. corporate office and will be held until such time as authorized by the NRC for disposal.

9.4.9 Survey Finding and Results

Appendix B contains a complete copy of the Final Release Survey. All measurements were below NRC guideline values. Therefore, the facility may have its license terminated.

9.4.10 Personnel Exposure

All personnel who entered the radiologically controlled area (RCA) were assigned thermoluminescent dosimetry (TLD) and self-reading pocket dosimetry (SRPD). TLD's were collected monthly and sent out for analysis to Chem-Nuclear System, Inc. SRPD's were read prior to entering the RCA and upon exiting the RCA. The SRPD readings were logged on the radiation work permits (RWP). Table 9.4.10 contains project exposures records.

9.4.11 Release of Equipment and Material

All equipment used in, or material removed from the RCA (during the decommissioning project) was surveyed prior to its release for unrestricted use. Release surveys consisted of both loose and fixed contamination surveys as well as a radiation survey. All release surveys shall be stored in accordance with the "Records Management Procedure" ENWD-AD-02.

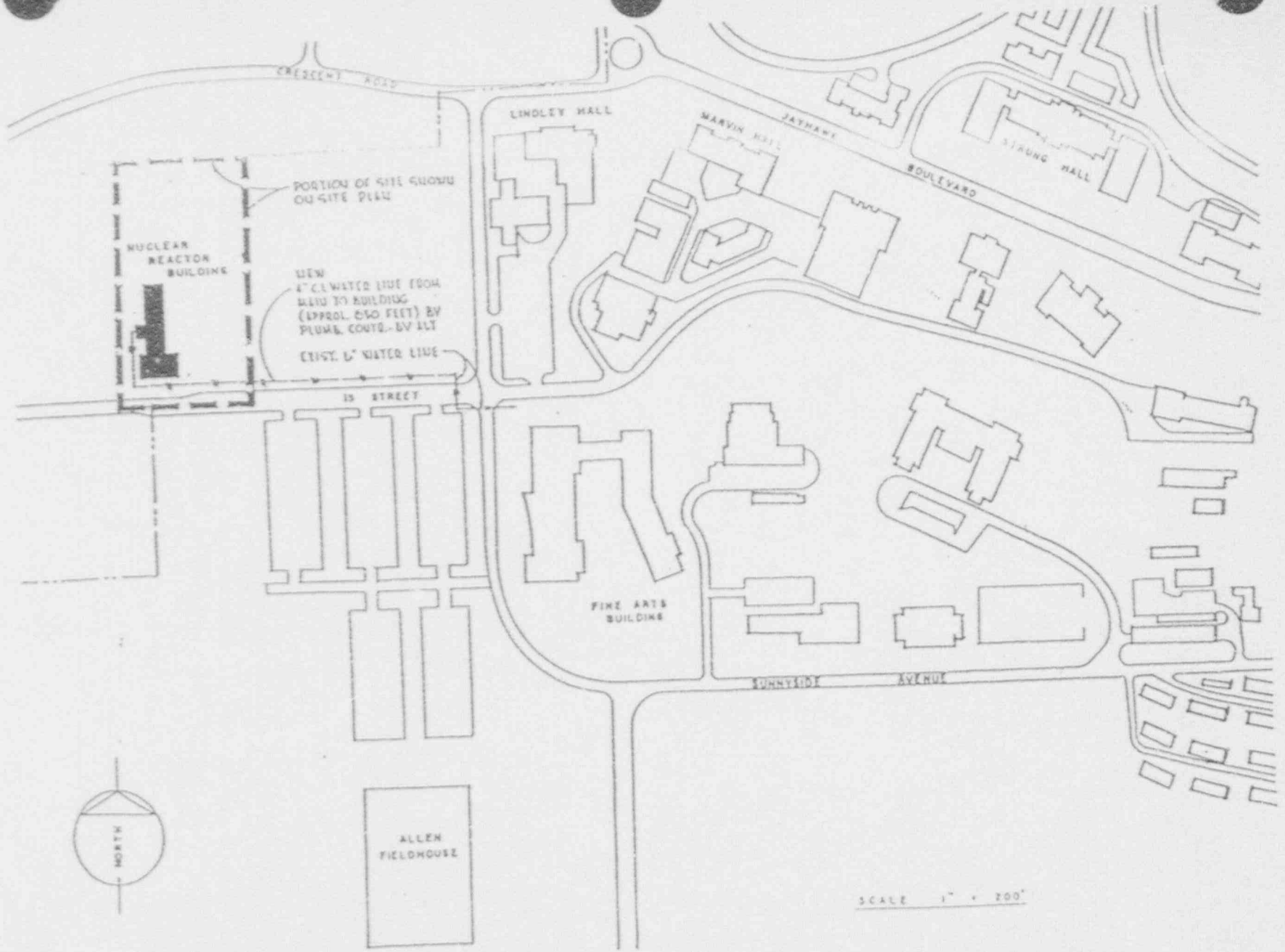
9.4.12 Summary

During the month of November 1992, surveys of the University of Kansas Training Reactor and Reactor Room were conducted. Results of the survey demonstrate that the decommissioning actions were effective in reducing residual activity at the site to meet the NRC limits for release for unrestricted use.

APPENDIX A

KUTR FIGURES AND TABLES

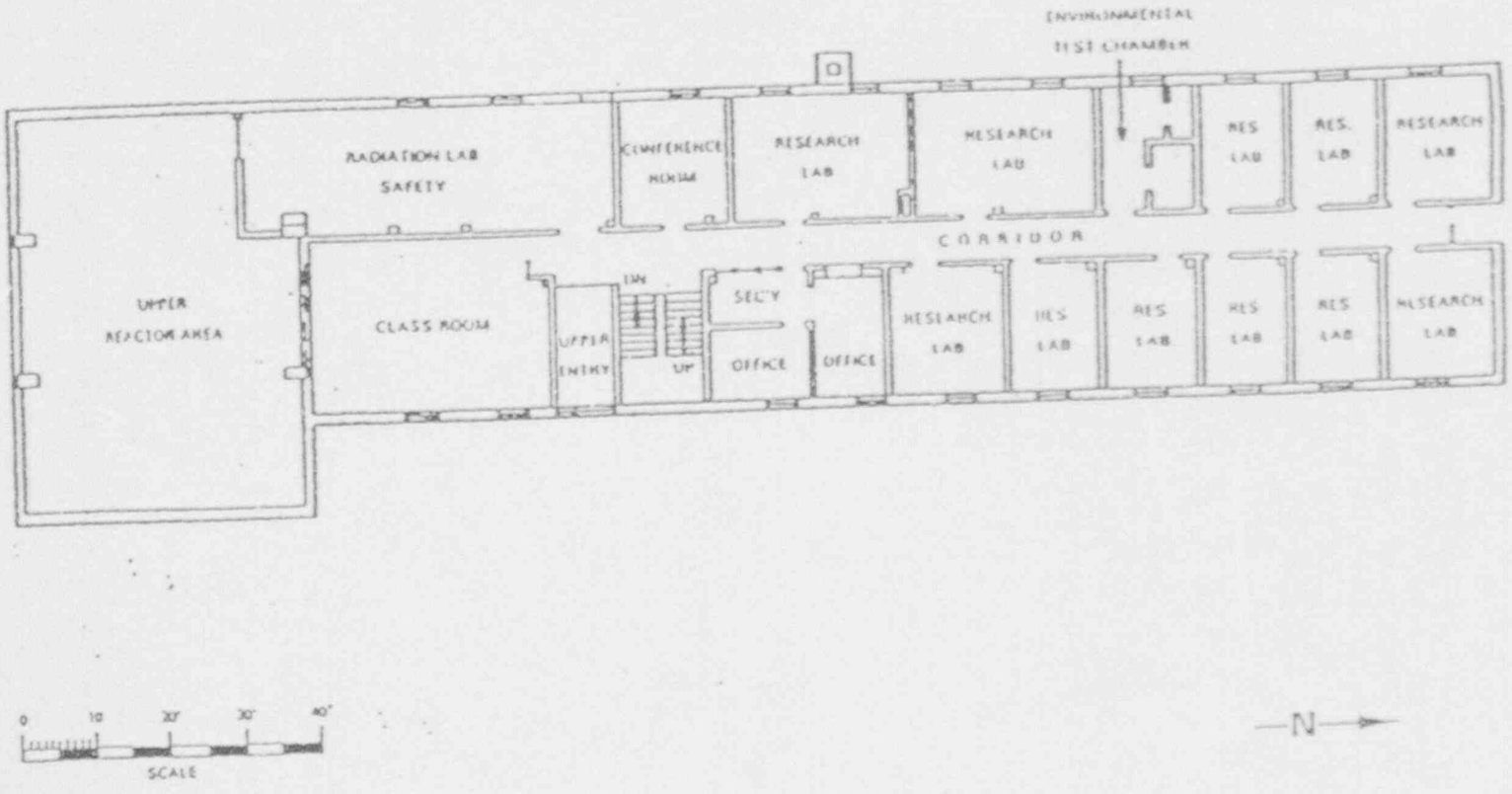
(12 pages)



REACTOR SITE K U CAMPUS

FIGURE 2-1

NUCLEAR REACTOR BUILDING



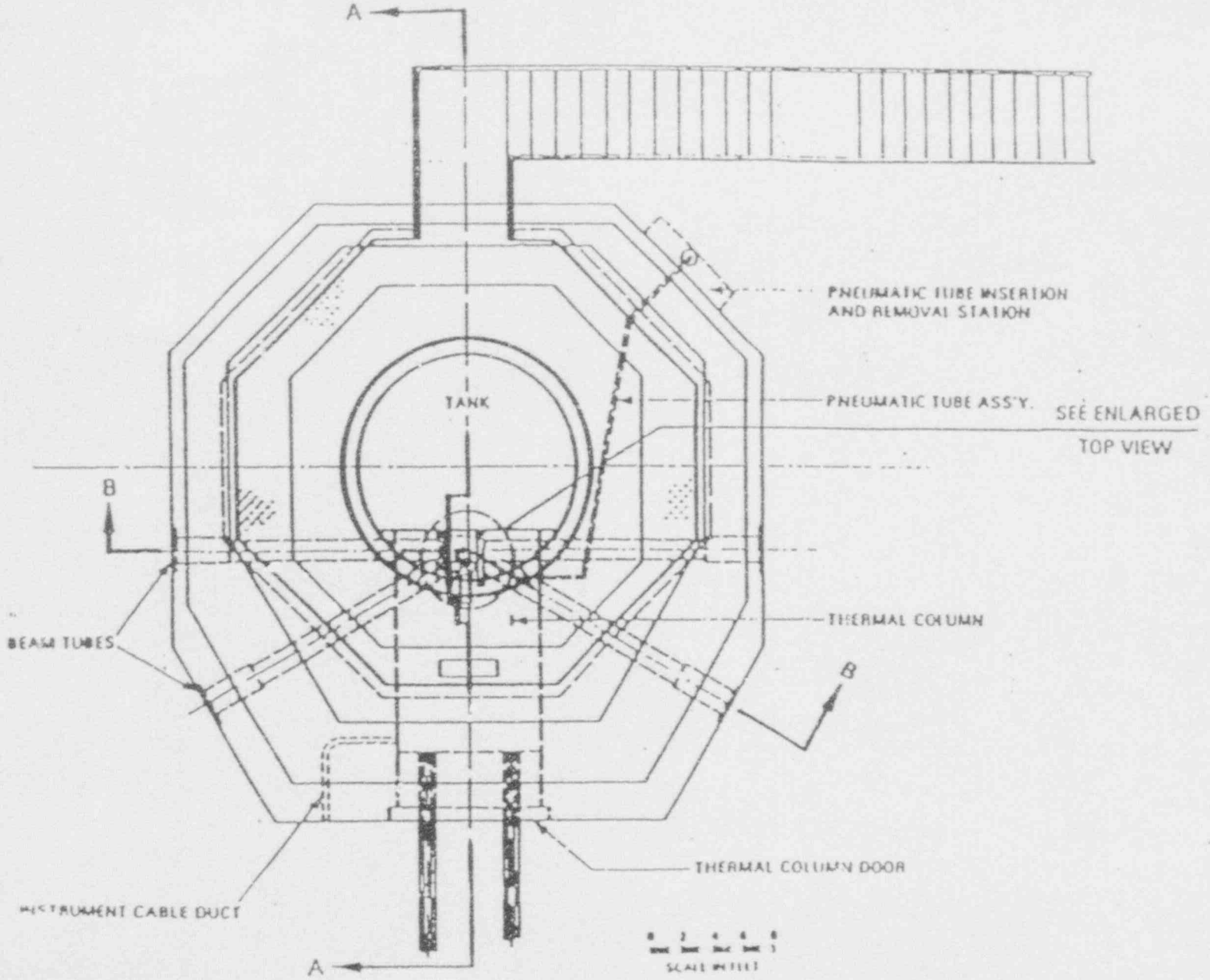
NUCLEAR REACTOR BUILDING
LOWER-LEVEL FLOOR PLAN

FIGURE 2-2

NUCLEAR REACTOR BUILDING

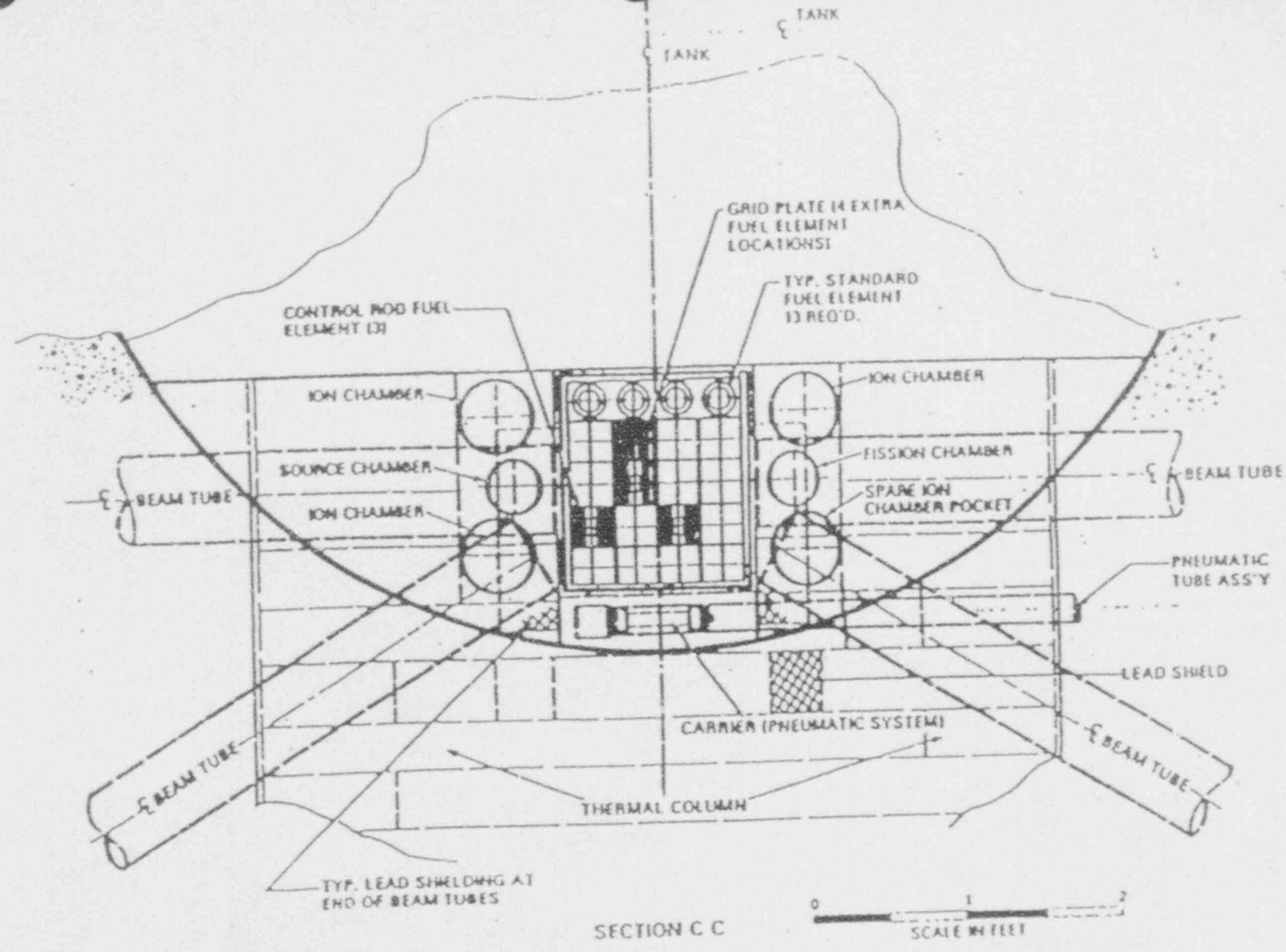
NUCLEAR REACTOR BUILDING
UPPER-LEVEL FLOOR PLAN

FIGURE 2-3



TOP VIEW OF THE REACTOR

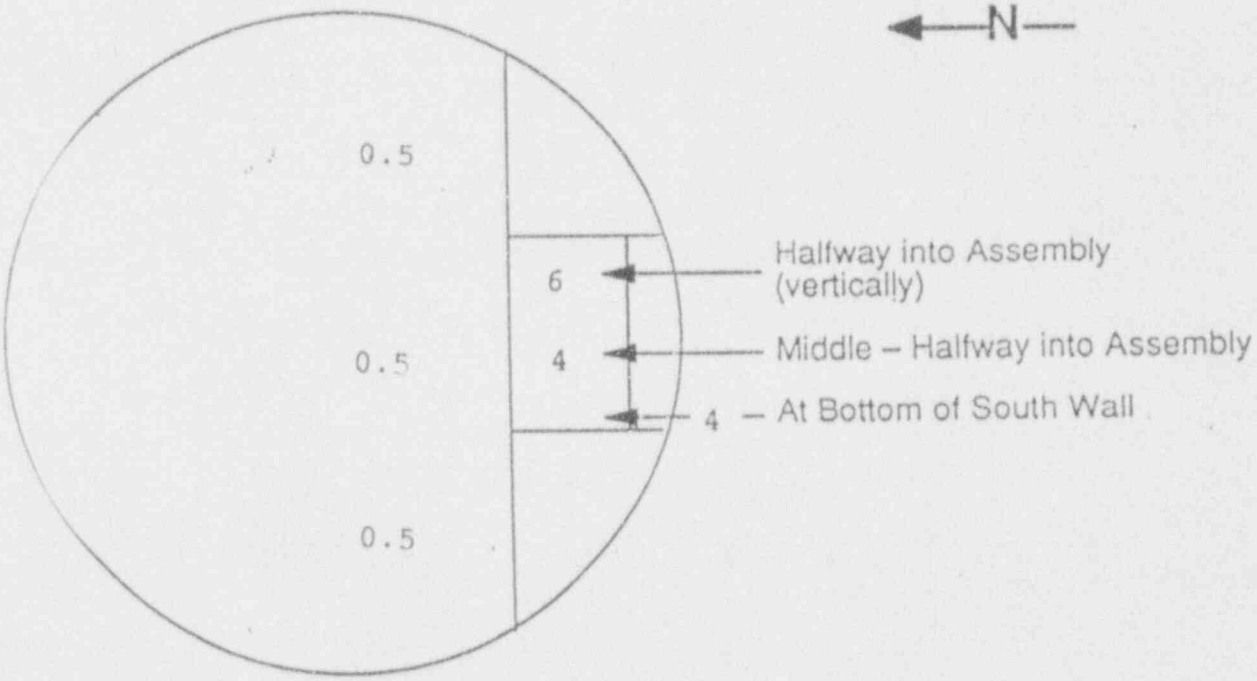
FIGURE 3-1



ENLARGED TOP VIEW OF THE REACTOR

FIGURE 3-2

MAP OF REACTOR TANK FLOOR LEVEL



PLAN VIEW

All Dose Rate Readings in mR/hr

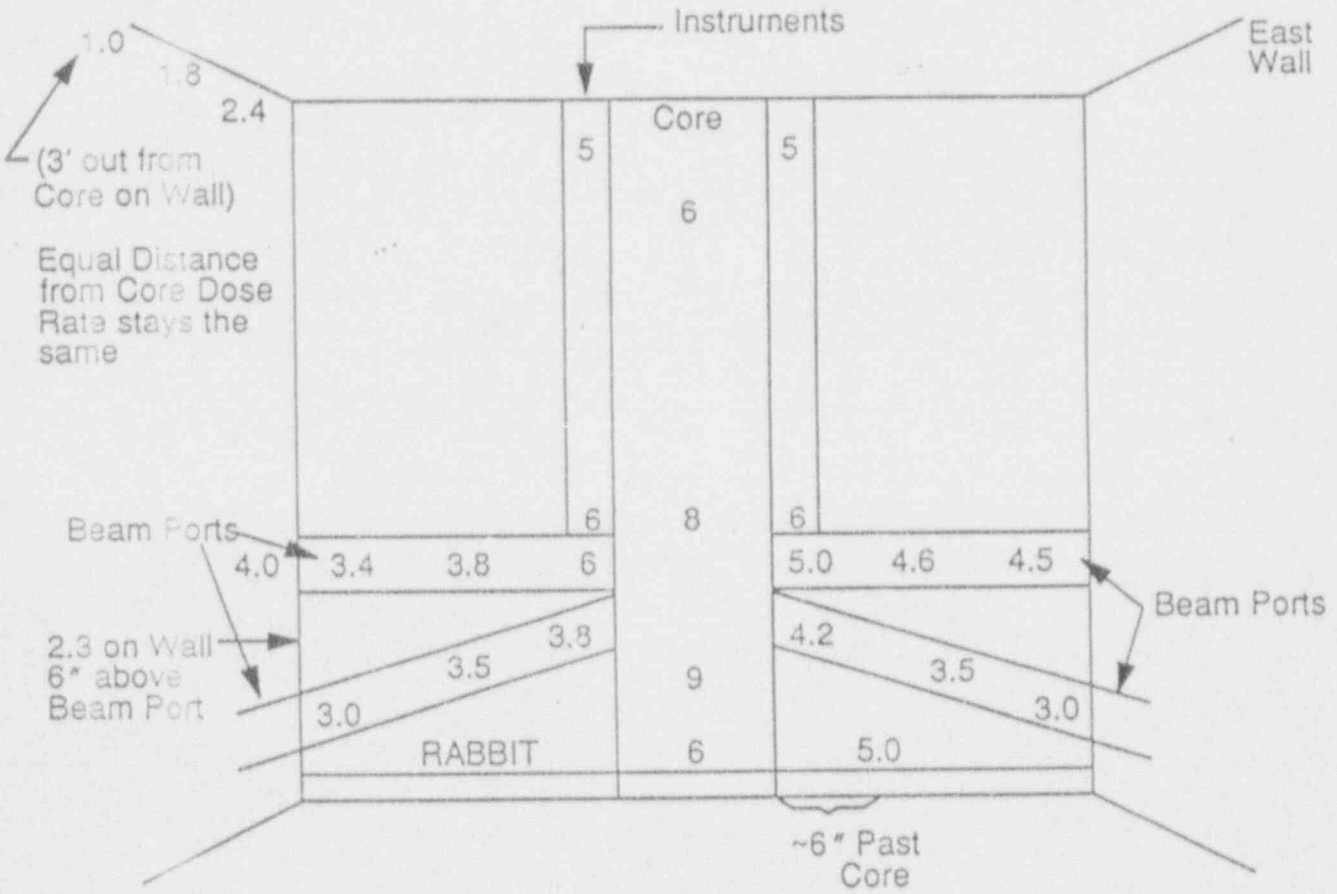
Survey Instrument –

Measurements taken with an Eberline Ionization Chamber, Model R02.

AREA DOSE RATES WITHIN THE DRY REACTOR TANK AT FLOOR LEVEL

FIGURE 3-3

MAP OF THERMAL COLUMN



PLAN VIEW

All Dose Readings in mR/hr

Survey Instrument-

Measurements taken with an Eberline Ionization Chamber, Model R02.

CONTACT DOSE RATES WITHIN THE REGION OF THE THERMAL COLUMN EXTERNAL TO THE REACTOR TANK AND THE CONTACT DOSE RATES ON OUTER SURFACE OF THE BEAM TUBES

FIGURE 3-4

UNIVERSITY OF KANSAS
ORGANIZATION

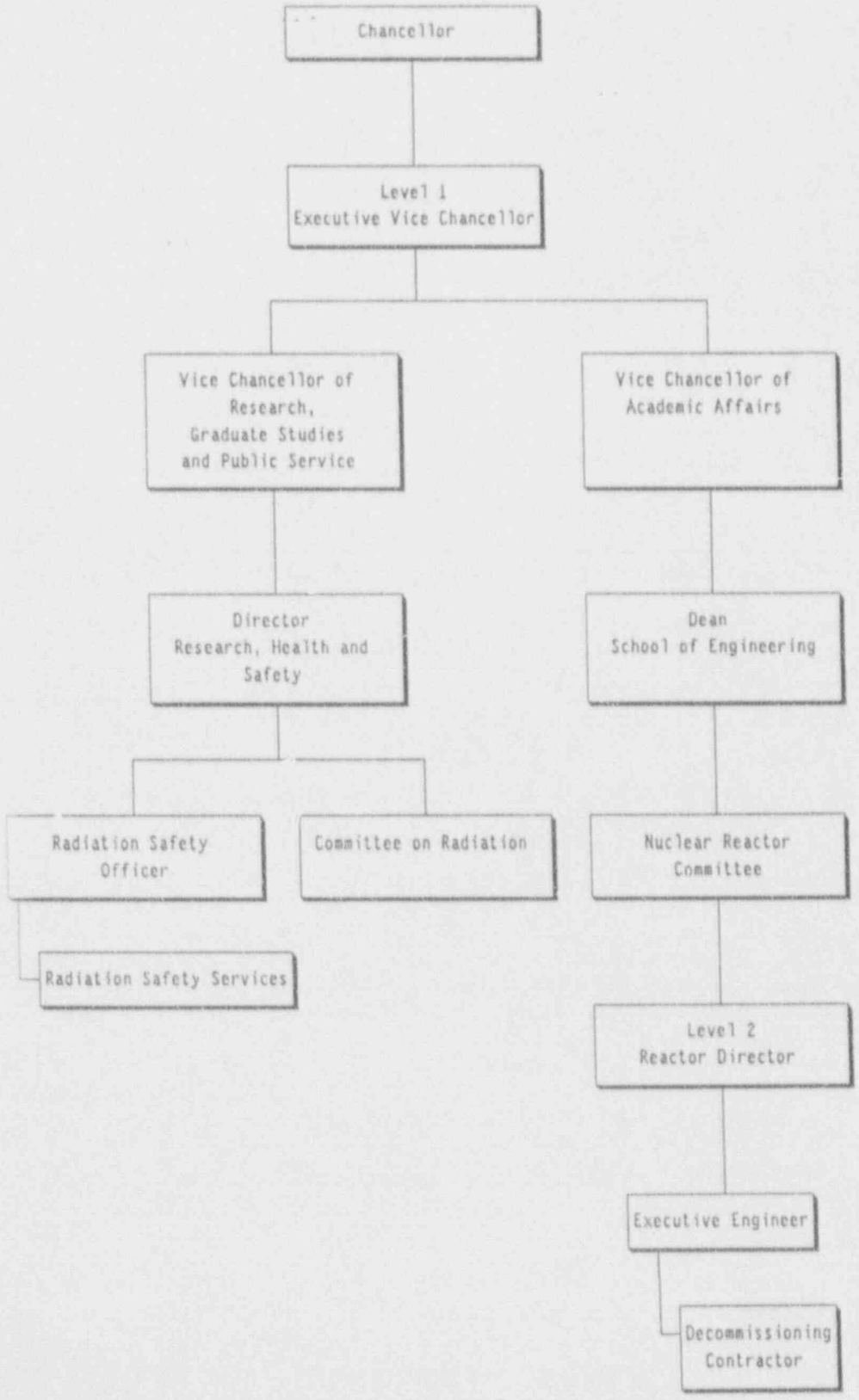


Figure 4.1

CWM
ORGANIZATION

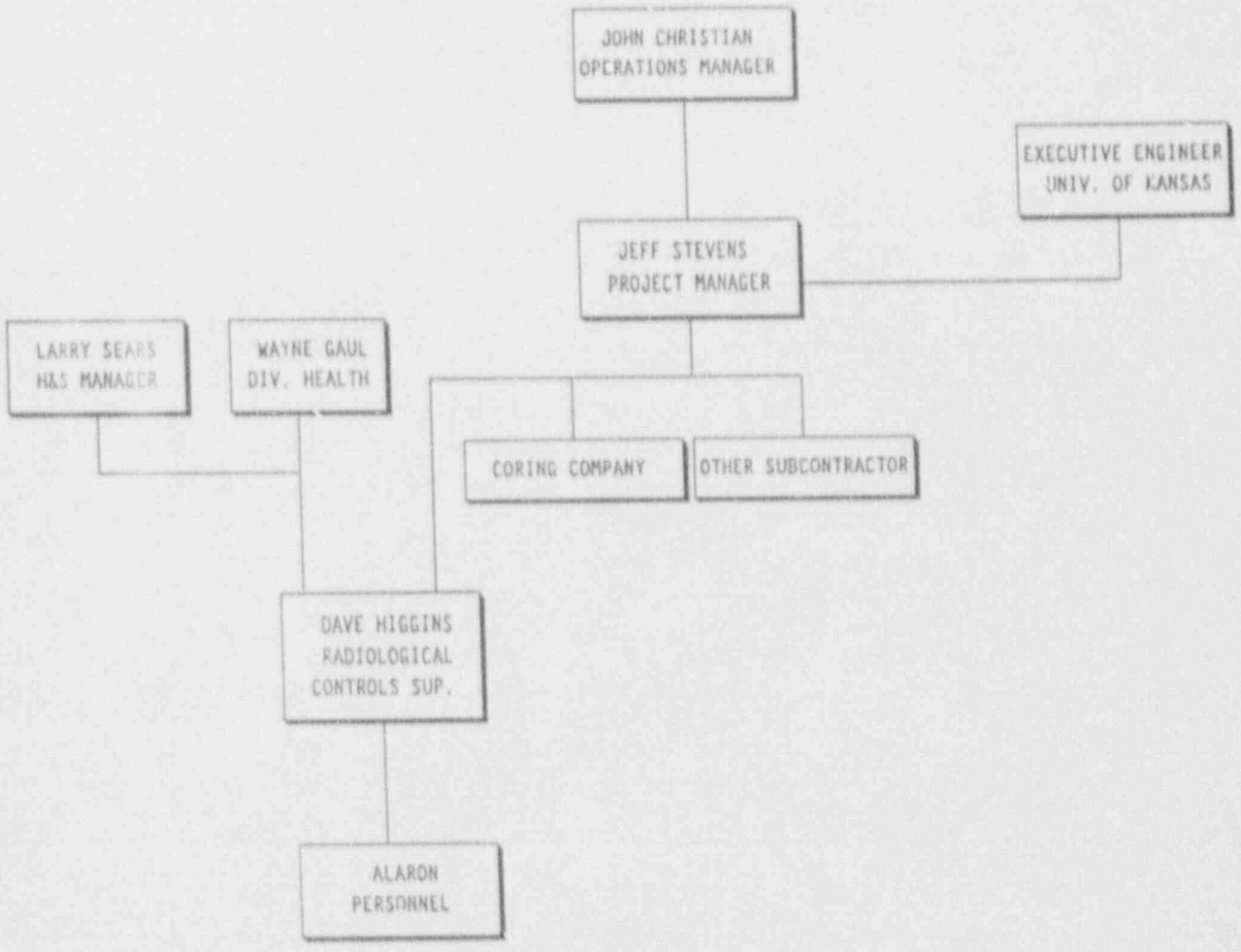


Figure 4.2

INSTRUMENTATION FOR RADIOLOGICAL SURVEYS

Type of Measurement	ID #	Detector	Meter	Bkgd'	4 pi eff(%)	Detection Sensitivity MDA dpm/ $100cm^2$
Surface Scan Surface Activity (alpha)	1	$50cm^2$ NAI Scintillation Ludlum Model 43-65	Count rate digital scaler Ludlum Model 2221	1 cpm	0.16	92
Surface Scan Surface Activity (alpha)	2	$75cm^2$ NAI Scintillation Ludlum Model 43-1-1	Count rate digital scaler Ludlum Model 2223	0 cpm	0.24	38
Surface Scan Surface Activity (beta)	3	$50cm^2$ NAI Scintillation Ludlum Model 43-65-1	Count rate digital scaler Ludlum Model 2221	65 cpm	0.12	670
Surface Scan Surface Activity (beta)	4	$75cm^2$ NAI Scintillation Ludlum Model 43-1-1	Count rate digital scaler Ludlum Model 2223	135 cpm	0.042	1764
Exposure rates	5	Ludlum model 19 Scintillation NAI internal mounted 1"x1"	Micro R Meter Ludlum Model 19	Varies N/A	NA	NA
Gross alpha Smears	6	Scintillation model 43-10-1	Dual channel scaler Model 2929 Ludlum	0 cpm	0.30	17
Gross beta Smears	7	Scintillation model 43-10-1	Dual channel scaler Model 2929 Ludlum	58 cpm	0.18	211
Exposure rates	8	Ionization Chamber	Eberline RO-2	Varies NA	NA	NA

Table 9.3

KU REACTOR ROOM
CLASSIFICATION OF SURFACES
AND AREAS ACCORDING TO CONTAMINATION POTENTIAL

PLANT AREA	BLDG. OR FACILITY	ROOM OR AREA	CLASSIFICATION OF CONTAMINATION POTENTIAL
Reactor Room	Burt Hall	Inside Reactor	Suspect
Reactor Room	Burt Hall	Outside Reactor Vessel	Suspect
Reactor Room	Burt Hall	Floor-Surrounding Reactor Vessel	Suspect
Reactor Room	Burt Hall	Thermal Column	Suspect
Reactor Room	Burt Hall	Reactor Room Floor	Non-Suspect
Reactor Room	Burt Hall	Lower Reactor Room Walls <3m high	Non-Suspect
Reactor Room	Burt Hall	Upper Reactor Room Walls >3m high	Non-Suspect
Reactor Room	Burt Hall	Ceiling Reactor Room	Non-Suspect
Reactor Room	Burt Hall	Ventilation Duct Inlet/outlet	Non-Suspect
Reactor Room	Burt Hall	Storage Tank	Non-Suspect
Reactor Room	Burt Hall	Grounds Surrounding Area Outside Reactor Bldg.	Non-Suspect
Reactor Room	Burt Hall	Reactor Platform/stairs	Non-Suspect

TABLE 9.4

CHEM-NUCLEAR SYSTEMS, INC.
SPECIAL PROJECT EXPOSURE REPORT

PROJECT: UNIVERSITY OF KANSAS
NUCLEAR REACTOR CENTER
LAWRENCE, KS 66045

MANAGER: JEFF STEVENS

SUPERVISOR: DAVE HIGGINS

PROJECT DATES: 92-09-16 to 92-10-31

PROJ.#/UNIT: 46899/572

TLD NO.	EMPLOYEE NAME	SOCIAL SECURITY NO.	DATE OF BIRTH	DATES OF EXPOSURE	WHOLE BODY
		CHEM-NUCLEAR PERSONNEL			
3930	HIGGINS, D.	049-54-5407	01-05-51	92-10-01/92-10-31	0.000
				92-09-16/92/09-30	0.000
4101	GAUL, W.	459-80-4185	09-11-50	92-10-01/92-10-31	0.000
4966	STEVENS, J.	585-30-4016	08-01-60	92-10-01/92-10-31	0.000
		ALARON PERSONNEL			
4782	QUEST, T.	172-58-2856	09-26-62	92-10-01/92-10-31	0.026
				92-09-16/92-09-30	0.000
4962	CHRETIEN, E.	321-94-8093	05-13-73	92-10-01/92-10/31	0.000
				92-08-16/92-09-30	0.000
4964	JOHNSON, J.	330-66-2328	06-22-63	92-10-01/92-10-31	0.019
				92-09-16/92-09-30	0.000
4955	BECKETT, D.	207-54-0820	08-04-60	92-10-01/92-10-31	0.000
				92-09-16/92-09-30	0.000
4957	CARPENTER, D.	467-83-1269	12-17-70	92-10-01/92-10-24	0.000
				92-09-16/92-09-30	0.000
4963	CHRETIEN, R.	016-46-9076	05-13-70	92-10-01/92-10-31	0.015
				92-09-16/92-09-30	0.000
		NUCLEAR ENERGY SERVICES PERSONNEL			
4994	REHMANN, F.	098-26-3605	04-08-32	92-10-01/92-10-30	0.000

TABLE 9.4.10

APPENDIX B

WORK INSTRUCTION
FOR
BASELINE AND RELEASE SURVEY
AT THE
UNIVERSITY OF KANSAS

(8 pages)

CWM Remedial Services

Nuclear Remedial Services, Inc.

Work Instruction Title/Approval

Baseline and Release Survey at
the University of Kansas

Instruction No. WI-ENWD-0892-079 Revision: 1

Stan Knowles for Jeff Stevens Prepared by	10/9/92 Date
Wayne C. Paul Health and Safety	10/15/92 Date
N/A Stan Knowles Engineering	10/9/92 Date
Jack A. Williams ALARA	10/9/92 Date
Stan Knowles Quality Assurance	10/14/92 Date
for Jeff Stevens Project Manager Approval	10/15/92 Date
Unit Manager Approval	15 Oct 92 Date

Sheet 1

LIST OF EFFECTIVE PAGES
(Revision Level 0 = Original Document)

Page #	Revision Level	Page #	Revision Level	Page #	Revision Level
1	1				
2	1				
3	1				
4	1				
5	1				
6	1				
7	1				
8	1				

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1.0 SCOPE

1.1 Perform radiological surveys for loose radioactive contamination before and after decontamination. These surveys will primarily consist of smear surveys for loose contamination on surfaces inside the reactor room and biological shield. The initial survey will meet the requirements as a baseline survey. The final survey will meet the requirements as a release survey.

2.0 REFERENCES

2.1 FS-RP-001, Radiological Control Procedure for Field Projects

2.2 FS-RP-002, Portable Instrument Procedure for Field Projects

2.3 ENWD-RP-007, Access Control Point

2.4 ENWD-RP-009, Surface Contamination Surveys

2.5 ENWD-RP-011, Airborne Particulate Monitoring

2.6 ENWD-RP-012, Radiation Work Permits, Application and Use

2.7 ENWD-SF-002, Minimum Industrial Safety Standards

2.8 ENWD-AD-002, Records Management Procedure

2.9 FS-AD-009, Field Project Records Procedure

2.10 PL-ENWD-1191-001, ENWD Health and Safety Plan

2.11 WI-ENWD-0892-078, Surface Decontamination Procedure

3.0 REQUIREMENTS

3.1 Prerequisites

3.1.1 A Radiological Work Permit (RWP) shall be prepared and approved in accordance with reference 2.6 prior to performing any radiological work.

3.1.2 Chemical Waste Management, uclear Waste Division (CWM-NWD) personnel shall become familiar with the Kansas University Training Reactor (KUTR) facilities before beginning work. During facility orientation, NWD personnel shall learn the locations of emergency equipment, washrooms, restrooms, lunch/break areas, communication equipment and first aid accommodations.

3.1.3 All NWD on-site personnel shall read this work instruction prior to performing work described in this instruction. ENWD personnel shall make an entry in the Project Supervisor's log indicating that each has read and understands this instruction.

3.2 Precautions and Limitations

3.2.1 Where applicable, detailed, approved NWD safety procedures shall be used to support reference 2.7.

4.0 DETAILED INSTRUCTION

4.1 Baseline Survey

4.1.1 Review the University of Kansas survey information. Prepare a RWP based on the radiological survey data.

4.1.2 Establish a controlled access/egress area (access control point) at an entrance to the pool in accordance with references 2.1 and 2.3 (If required). Personnel, materials and equipment must be monitored for contamination at the control point upon exiting the pool.

4.1.3 Perform airborne radionuclide monitoring of the reactor room in accordance with references 2.1 and 2.5. The latest available data provided by the Executive Engineer will be used as the basis for radiological decisions until initial radiological conditions are determined or confirmed by NWD personnel. Any safety hazards or potential hazards discovered shall be reported to the Radiological Control Supervisor (RCS). The RCS shall document the existence of these unexpected hazards in his log and shall brief all project personnel on these hazards at the earliest opportunity.

4.1.4 In preparation for performing an initial survey of the KUTR, grid the floor, ceiling and walls of the KUTR into one meter by one meter square grids using a chalk line or similar methods to physically mark the surfaces. Inevitably, some grids will be smaller than one square meter due to the physical dimensions of the wall, floor or ceiling. These areas which are smaller than one square meter will be surveyed as if they were full-sized in order to be conservative.

4.1.5 The RCS shall establish a convention for referring to the individual grid squares and document an explanation of this convention in the project files and his log. Each grid shall be uniquely identifiable in order to facilitate management of radiological survey data.

4.1.6 Perform a radiological survey inside the KUTR to determine and document initial loose and fixed contamination levels before performing any decontamination. This survey for loose and fixed radioactive contamination shall include the floor, ceiling, walls, piping and any other equipment or fixtures inside the KUTR. The percentage of grids to be surveyed will be as follows:

%	AREA
100	-Grids on the outside of the reactor unit -Floor grids surrounding the test reactor unit
50	-All other floor grids -Wall grids from the floor up two meters
20	-Wall grids above two meters and ceiling grids

Each grid survey shall consist of one direct alpha and beta reading, one smear counted for alpha and beta, and one radiation measurement taken 1 meter away from the surface of the grid.

Grids smaller than one square meter shall be surveyed in the same manner as the full-sized grids in order to be conservative.

4.1.7 Survey equipment and fixtures inside the KUTR by performing a sufficient number of smears to adequately assess the amount of loose radioactive contamination present based upon surface area of the fixture or piece of equipment.

4.1.8 Obtain several measurements of general area gamma radiation levels inside the KUTR to verify the absence of significant quantities of gamma-emitting radionuclides and to verify the adequacy of personnel dosimetry.

4.1.9 Inside the tank, take one general area gamma radiation level measurement and 2 swipes every five feet (vertically). When the thermal column is open, take one general area gamma radiation measurement and 2 swipes(one on each side). The surveys in the thermal column will be conducted before and after the lead is removed.

4.1.10 If contamination is found outside of the biological shield, additional grids will be surveyed as determined by the RCS.

4.1.11 All accesses (doorways and windows), vents and other openings will be surveyed by taking a general area gamma measurement, a single swipe on the exterior (it should be taken at the hot spot if one is found) and a fixed alpha measurement. If contamination is found in these areas, additional surveys will be taken as directed by the RCS.

4.1.12 General area gamma radiation surveys will be conducted around the outside perimeter of the reactor building. If hot spots are found, additional surveys will be taken as directed by the RCS.

4.1.13 All information will be recorded in accordance with reference 2.4.

4.2 Release Survey

4.2.1 If needed, re-establish the one meter square grids layed out in section 4.1 of this instruction in the exact same location as they were above. In addition, grids will now have to be made inside the biological shield and the thermal column. These grids will be constructed in a similar manner as mentioned above.

4.2.2 The RCS will divide the areas to be surveyed into zones based on their potential to be contaminated and information obtained from the initial survey. Zone 1 will be areas where 100% of the grids are surveyed, zone 2 will be areas where 50% of the grids area surveyed and zone 3 will be areas where 20% of the grids are surveyed.

4.2.3 Perform a radiological survey inside the reactor room and the biological shield. This survey for loose and fixed radioactive contamination shall include the floor, ceiling, walls, piping and any other equipment or fixtures inside the KUTR. Every grid surveyed during the baseline survey shall be surveyed with smears in order to determine the average loose surface contamination. Grids smaller than one square meter shall be surveyed in the same manner as the full-sized grids in order to be conservative. In addition to the smears, a fixed measurement for fission product

contamination survey of alpha and beta/gamma will be performed using proper instrumentation. Six fixed readings will be taken in each grid and a gamma measurement one meter from the surface.

4.2.4 Survey equipment and fixtures inside the KUTR by performing a sufficient number of smears to adequately assess the amount of loose radioactive contamination present based upon surface area of the fixture or piece of equipment.

4.2.5 Surveys will be performed inside the biological shield. The survey will consist of six (6) direct measurements of both alpha and beta, one (1) smear (100cm) counted for alpha and beta, and a gamma measurement taken 1 meter from the surface.

4.2.6 All areas surveyed in section 4.1.11 will have similar surveys conducted for the release.

4.2.7 Any areas found to have contamination will be decontaminated in accordance with reference 2.11. Additional grid surveys will then be conducted as directed by the RCS.

5.0 RECORDS

5.1 Information required to be recorded during the performance of this instruction shall be recorded in the project logs.

5.2 Project files will be maintained in accordance with references 2.1, 2.8 and 2.9.

APPENDIX C

KUTR FINAL RELEASE SURVEY

(211 pages)

FINAL RELEASE SURVEY

FOR

UNIVERSITY OF KANSAS TRAINING REACTOR
POSSESSION ONLY LICENSE NO. R-78

TABLE OF CONTENTS

*Note: Elevated dose rates in the Release Surveys (North Wall, West Wall, North/West portion of floor) are due to radioactive material stored within vaults located in the Lab which is adjacent to the reactor room. This material was not moved because of exposure considerations (ALARA).

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: Thermal Column

SURVEYOR: E CHRETIEN, R CHRETIEN, D. HIGGINS

DATE: 11/2/92

METERS: #97276 Ludlum 2221 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm² / EFF=0.16, BKG=14cpm 43-65 MDA=92 DPM/100cm²

#95511 Ludlum 19 BKG=15uR/hr

#74076 Ludlum 2929 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: Concrete Surface

ND = NOT DETECTABLE

SURVEY # = 110292-1R

NOTES:

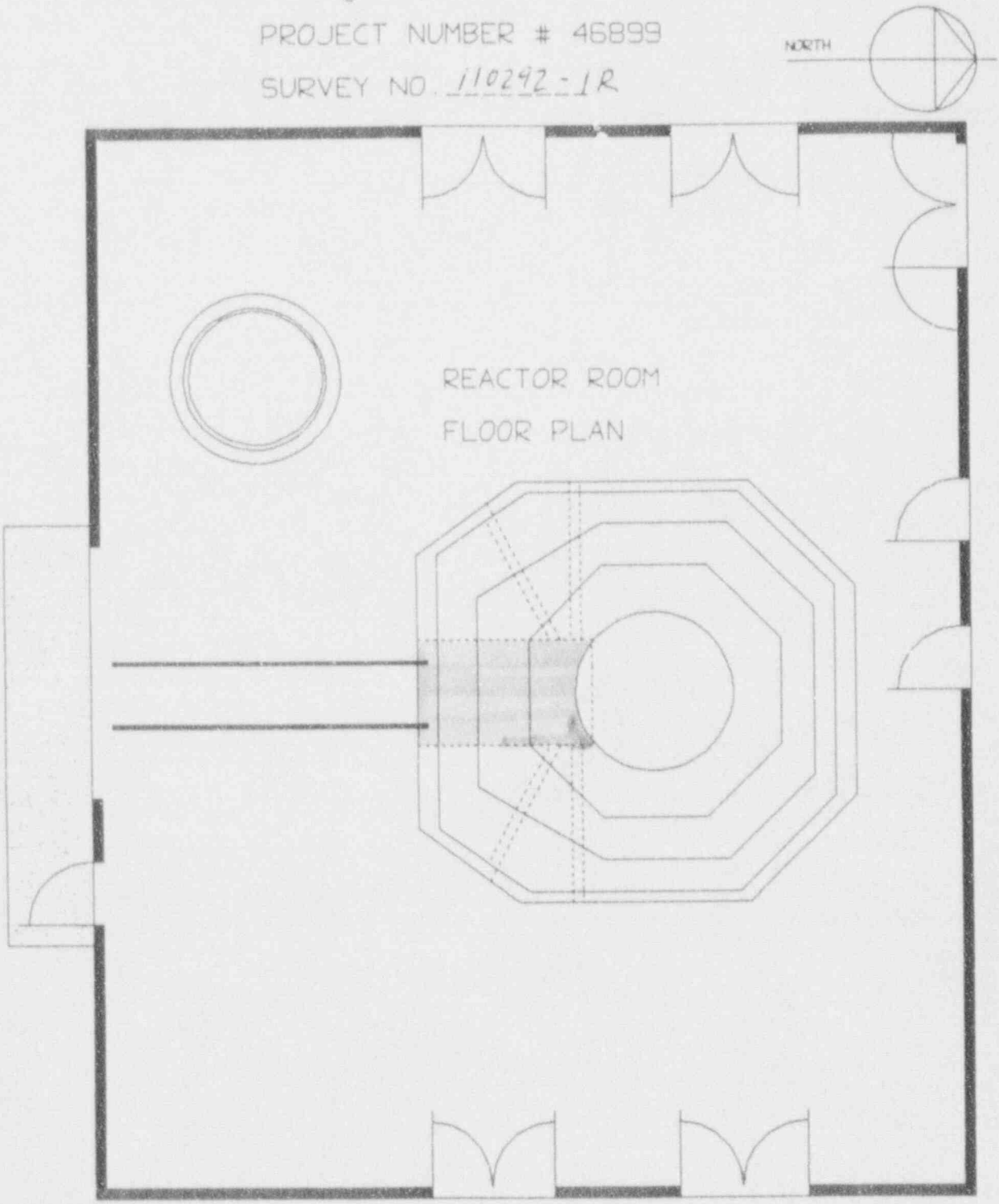
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: [signature] DATE: 11/2/92

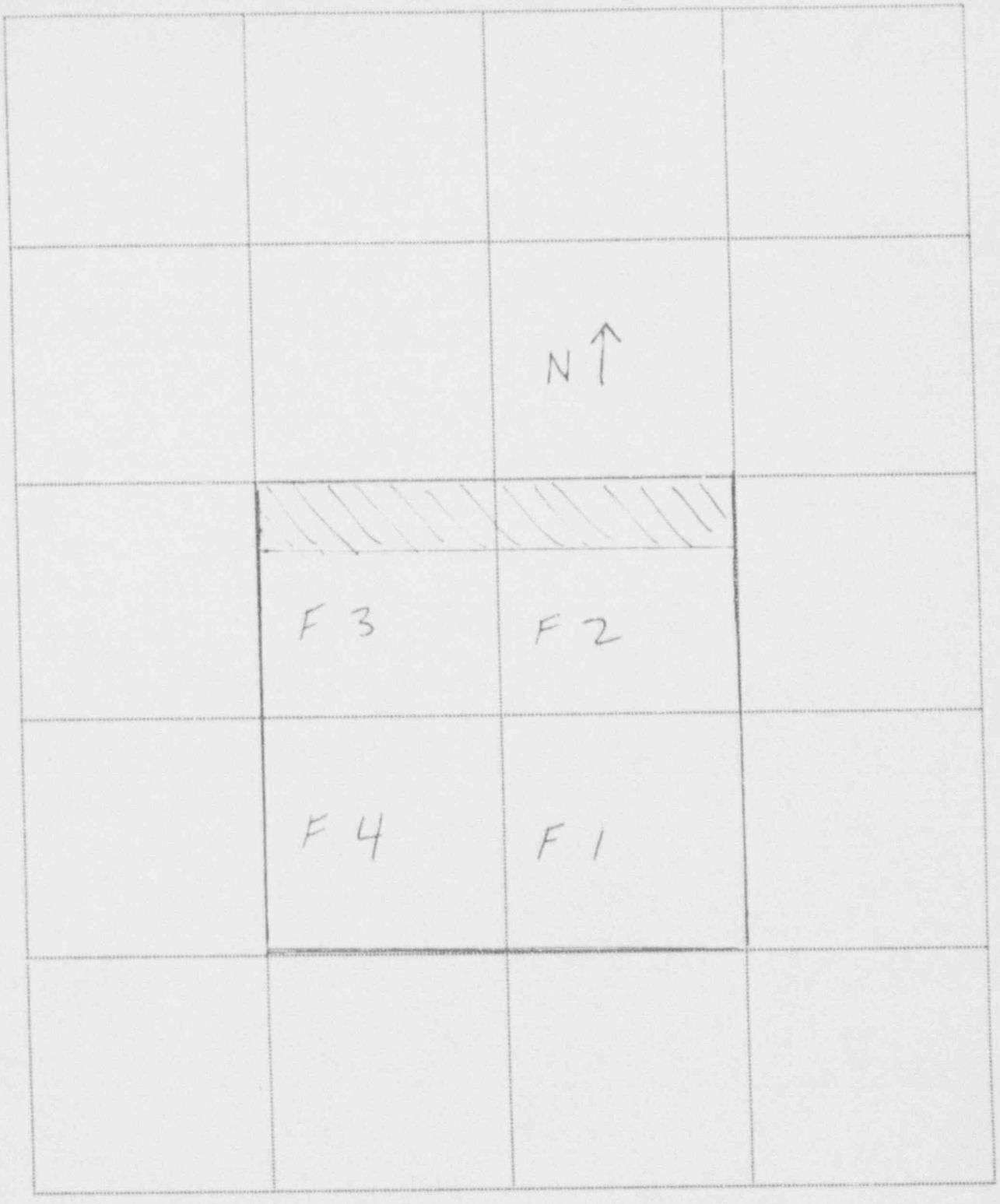
UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT
(SURVEY LOCATION)

PROJECT NUMBER # 46899

SURVEY NO. 110292-1R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD

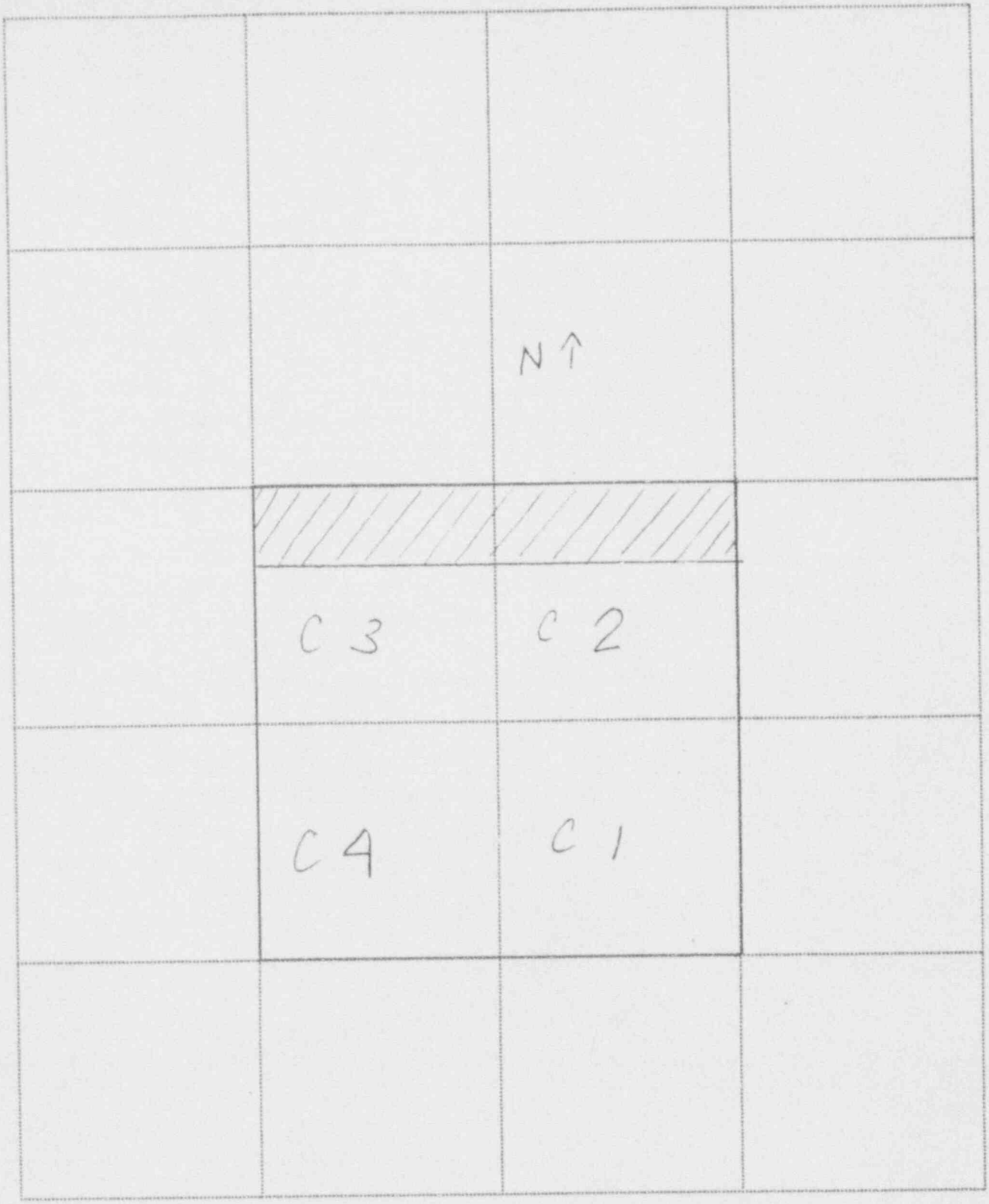


Concrete Removed

Thermal Column

DATE: 11/2/92 ITEM: Floor PAGE 3 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

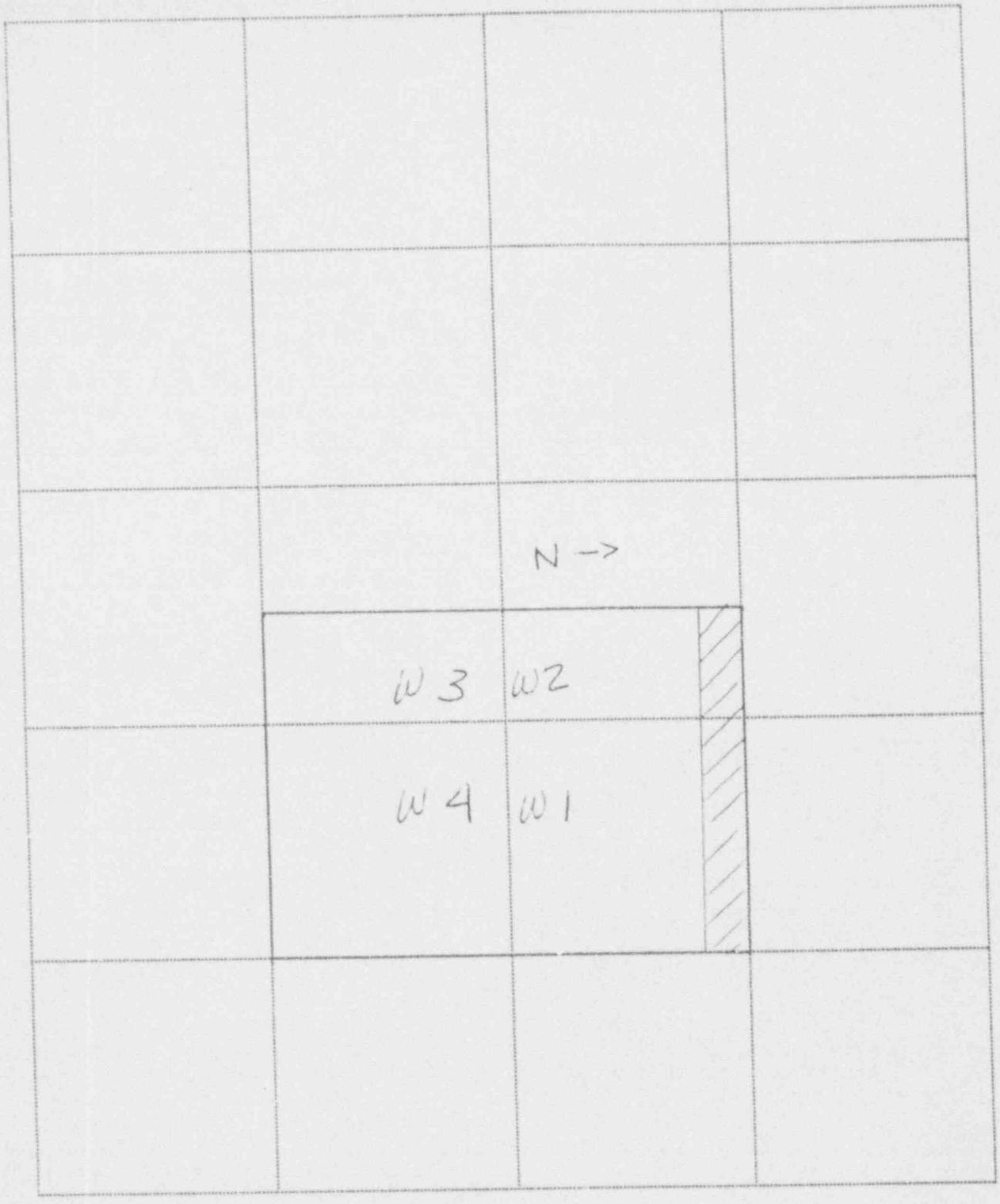


Concrete Removed

Thermal Column

DATE: 11 02 92 ITEM: CEILING PAGE 4 OF 10

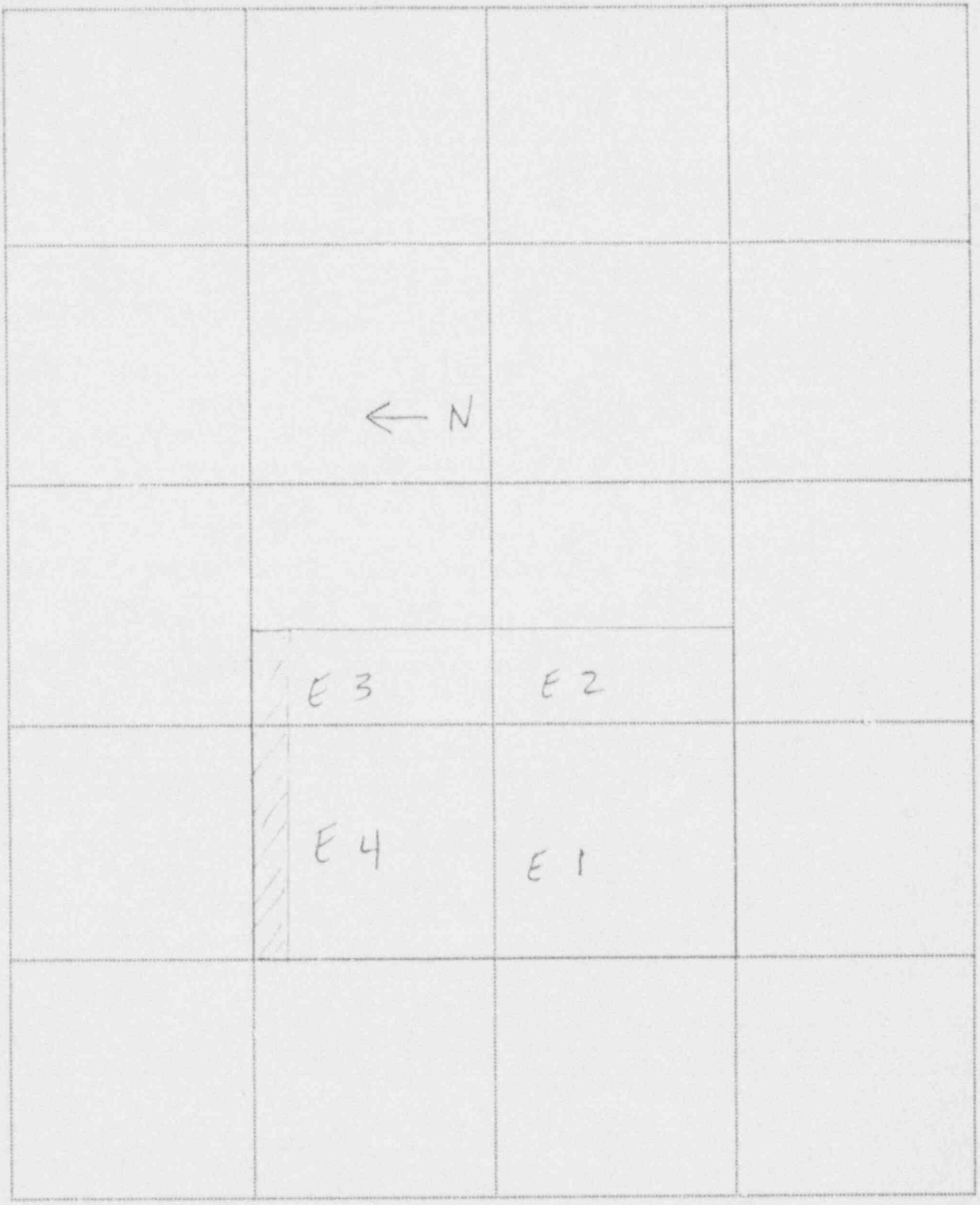
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



Concrete Removed

DATE: 11 02 92 ITEM: Thermal Column West Wall PAGE 5 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



Concrete Removed

Thermal Column

DATE: 11/2/92 ITEM: East Wall PAGE 6 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F1	MAX LEVEL	26	1784	18	
	1	6	1784		
	2	ND	1416	SMEAR	
	3	12	584	ALPHA DPM	BETA DPM
	4	26	584	ND	ND
	5	12	1200		
	AVERAGE	13	1225	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F2	MAX LEVEL	26	1916	18	
	1	26	700		
	2	ND	934	SMEAR	
	3	12	1916	ALPHA DPM	BETA DPM
	4	6	1834	ND	ND
	5	ND	1416		
	AVERAGE	12	1453	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F3	MAX LEVEL	26	2250	18	
	1	ND	1216		
	2	26	834	SMEAR	
	3	ND	2250	ALPHA DPM	BETA DPM
	4	ND	1916	ND	33
	5	6	584		
	AVERAGE	10	1505	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F4	MAX LEVEL	26	1416	18	
	1	ND	1050		
	2	ND	1416	SMEAR	
	3	6	834	ALPHA DPM	BETA DPM
	4	26	1300	ND	ND
	5	12	584		
	AVERAGE	12	1100	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
C1	MAX LEVEL	26	700	18	
	1	ND	250		
	2	26	425	SMEAR	
	3	ND	700	ALPHA DPM	BETA DPM
	4	ND	550	3	50
	5	12	600		
	AVERAGE	8	505	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
C2	MAX LEVEL	26	1100	18	
	1	ND	966		
	2	26	500	SMEAR	
	3	12	816	ALPHA DPM	BETA DPM
	4	26	~~634~~ 834 11-2-92	ND	39
	5	ND	1100		
	AVERAGE	13	803	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
C3	MAX LEVEL	26	1950	18	
	1	26	1950		
	2	ND	634	SMEAR	
	3	ND	1484	ALPHA DPM	BETA DPM
	4	26	1100	ND	61
	5	26	866		
	AVERAGE	16	1207	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
C4	MAX LEVEL	26	550	18	
	1	ND	284		
	2	12	184	SMEAR	
	3	26	550	ALPHA DPM	BETA DPM
	4	ND	300	ND	ND
	5	26	466		
	AVERAGE	13	389	DECON REQ	YES/NO

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
W1	MAX LEVEL	38	434	20	
	1	ND	116		
	2	38	300	SMEAR	
	3	ND	184	ALPHA DPM	BETA DPM
	4	26	434	3	28
	5	12	366		
	AVERAGE	15	280	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
W2	MAX LEVEL	50	1016	20	
	1	ND	350		
	2	12	766	SMEAR	
	3	ND	284	ALPHA DPM	BETA DPM
	4	50	1016	ND	44
	5	26	650		
	AVERAGE	18	613	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
W3	MAX LEVEL	26	700	20	
	1	ND	366		
	2	26	84	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	12	700	3	28
	5	ND	450		
	AVERAGE	10	440	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
W4	MAX LEVEL	26	766	20	
	1	ND	484		
	2	26	766	SMEAR	
	3	12	400	ALPHA DPM	BETA DPM
	4	ND	666	ND	44
	5	ND	300		
	AVERAGE	8	523	DECON REQ	YES (NO)

DATE: 11 02 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
E1	MAX LEVEL	26	434	18	
	1	26	50		
	2	12	366	SMEAR	
	3	ND	216	ALPHA DPM	BETA DPM
	4	12	434	ND	ND
	5	26	34		
	AVERAGE	15	220	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
E2	MAX LEVEL	26	434	18	
	1	26	16		
	2	12	216	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	ND	434	ND	ND
	5	26	334		
	AVERAGE	13	220	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
E3	MAX LEVEL	26	1016	18	
	1	12	1016		
	2	ND	834	SMEAR	
	3	26	284	ALPHA DPM	BETA DPM
	4	26	766	3	17
	5	ND	684		
	AVERAGE	13	717	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
E4	MAX LEVEL	26	734	18	
	1	26	284		
	2	26	534	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	26	734	7	ND
	5	26	600		
	AVERAGE	21	520	DECON REQ	YES/NO

DATE: 11-02-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: INSIDE REACTOR VESSEL

SURVEYOR: E. CHRETIEN, R CHRETIEN, D. HIGGINS

DATE: 11/2/92

METERS: Ludlum 2221 #97276 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm^2 / 43-65 EFF=0.16, BKG=1cpm MDA=92 DPM/100cm^2

Ludlum 19 #95511 BKG = 13 uR/hr

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm^2 ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm^2

ADDITIONAL INFORMATION: Concrete Surface

IRW = inner Reactor Wall   ND = NOT DETECTABLE

IRF = inner Reactor Floor   SURVEY # 110292-2R

NOTES:

1. All measurements recorded in DPM are equivalent to DPM/100cm^2.
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m^2 unless otherwise noted.

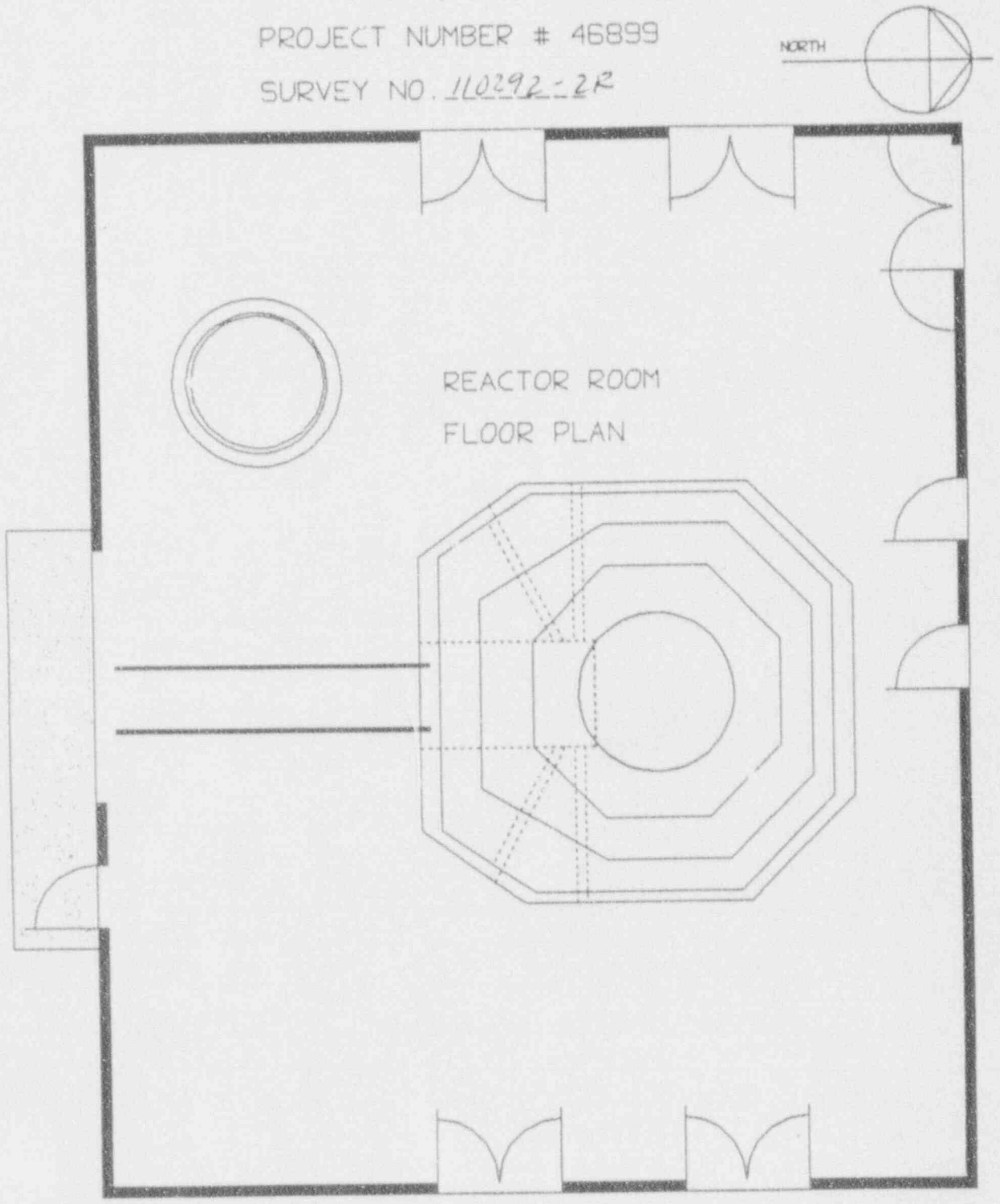
RCS REVIEW: [signature] / F.E. Robinson   DATE: 11/2/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

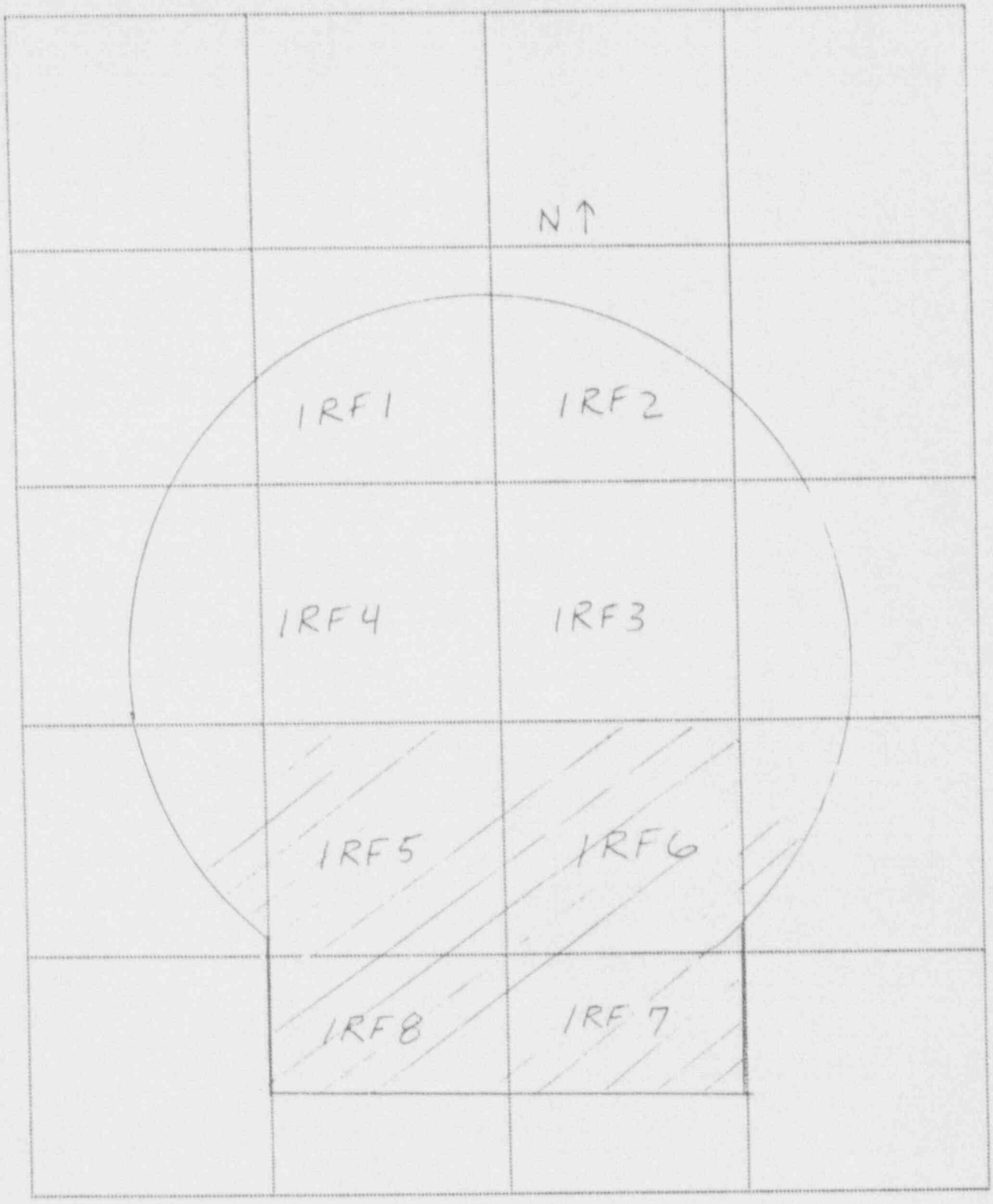
(SURVEY LOCATION)

PROJECT NUMBER # 46899

SURVEY NO. 110292-2R



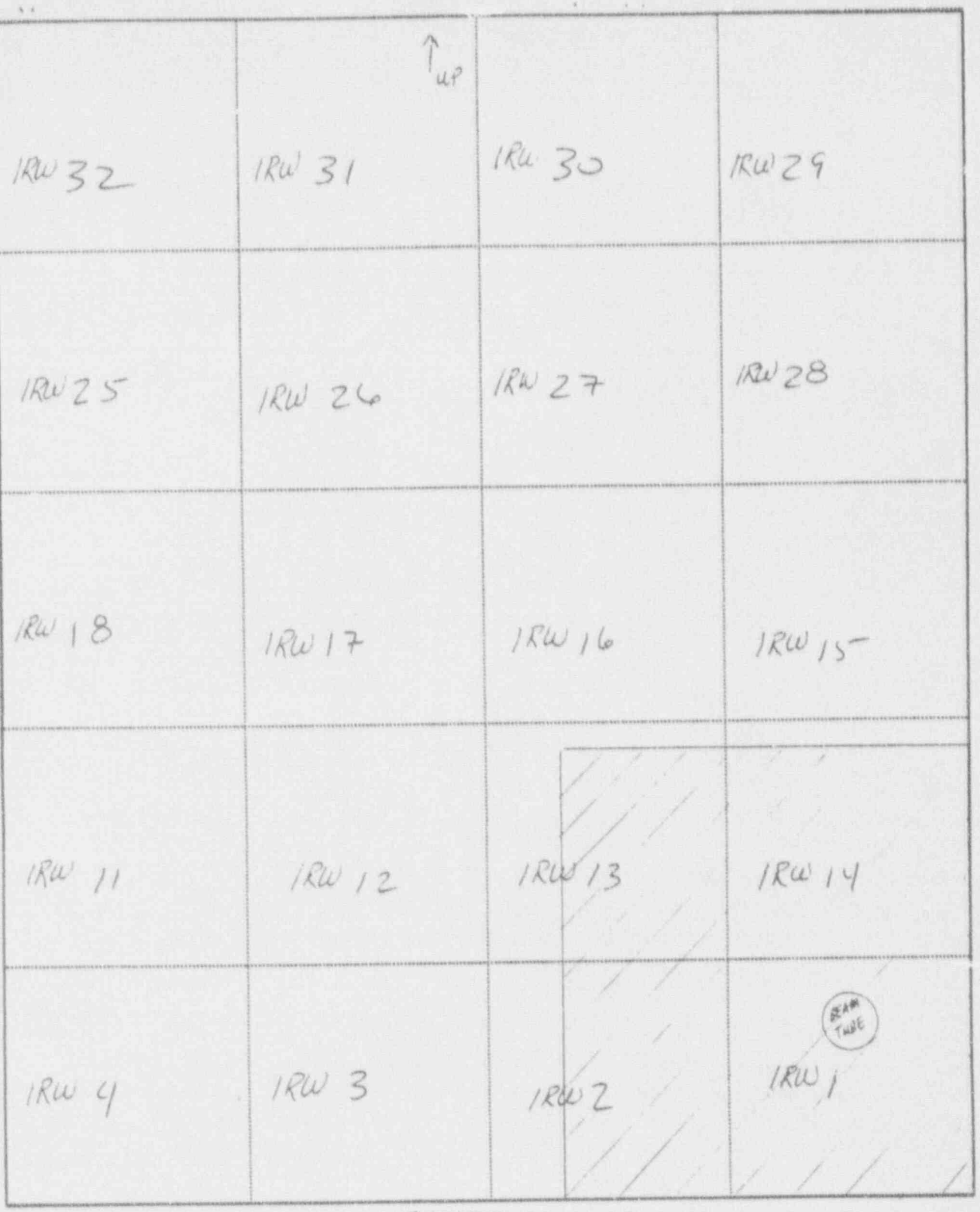
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



CONCRETE REMOVED

DATE: 11-02-92 ITEM: INNER REACTOR FLOOR PAGE 3 OF 20

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



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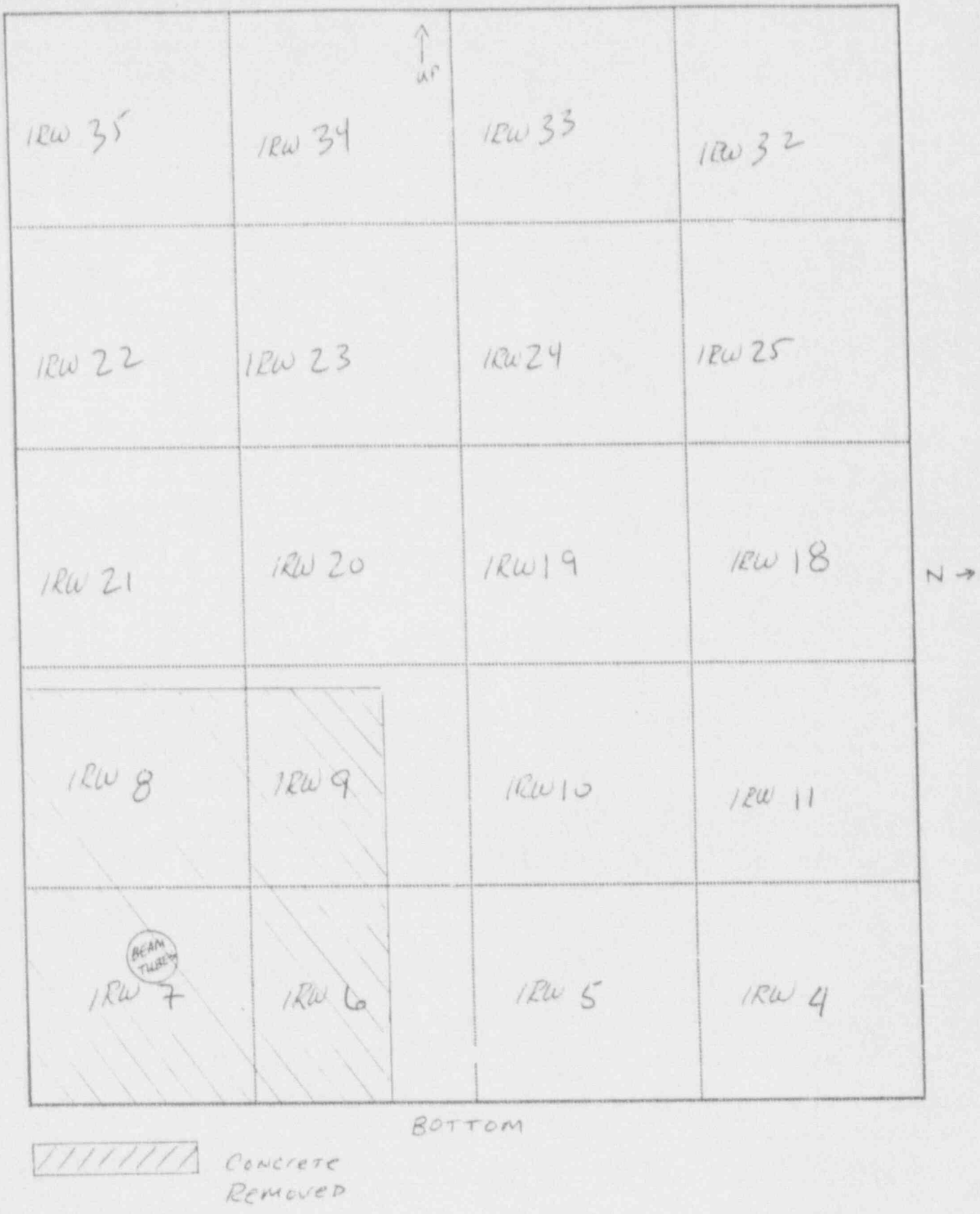
DATE: 11.02.92 ITEM: INNER REACTOR WALL PAGE 4 OF 20

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11-02-92 ITEM: INNER REACTOR WALL PAGE 5 OF 20

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11.02.92 ITEM: INNER REACTOR WALL PAGE 6 OF 20

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11·02·92 ITEM: INNER Reactor WALL PAGE 7 OF 20

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 1	MAX LEVEL	26	484	14	
	1	12	416		
	2	ND	484	SMEAR	
	3	26	284	ALPHA DPM	BETA DPM
	4	12	250	~~ND~~ ND	ND
	5	ND	334		
	AVERAGE	10	354	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 2	MAX LEVEL	38	384	16	
	1	24	234		
	2	ND	200	SMEAR	
	3	38	384	ALPHA DPM	BETA DPM
	4	12	350	ND	ND
	5	ND	284		
	AVERAGE	15	290	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 3	MAX LEVEL	38	1284	17	
	1	ND	950		
	2	24	1284	SMEAR	
	3	12	800	ALPHA DPM	BETA DPM
	4	38	1084	ND	50
	5	ND	716		
	AVERAGE	15	967	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 4	MAX LEVEL	24	1034	15	
	1	24	716		
	2	ND	300	SMEAR	
	3	ND	916	ALPHA DPM	BETA DPM
	4	12	1034	3	ND
	5	24	750		
	AVERAGE	12	743	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 5	MAX LEVEL	38	2450	17	
	1	26	2250		
	2	38	1834	SMEAR	
	3	26	2450	ALPHA DPM	BETA DPM
	4	12	2016	ND	56
	5	12	2134		
	AVERAGE	23	2137	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 6	MAX LEVEL	26	2150	17	
	1	26	1816		
	2	ND	1934	SMEAR	
	3	26	1600	ALPHA DPM	BETA DPM
	4	12	1834	ND	100
	5	ND	2150		
	AVERAGE	13	1867	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 7	MAX LEVEL	26	1134	18	
	1	ND	1000		
	2	ND	766	SMEAR	
	3	26	1134	ALPHA DPM	BETA DPM
	4	12	888	3	ND
	5	12	1066		
	AVERAGE	10	971	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRF 8	MAX LEVEL	38	1266	18	
	1	38	1266		
	2	ND	866	SMEAR	
	3	12	1084	ALPHA DPM	BETA DPM
	4	26	1000	ND	39
	5	12	1134		
	AVERAGE	18	1070	DECON REQ	YES (NO)

DATE: 11 02 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 1	MAX LEVEL	62	2000	18	
	1	ND	1484		
	2	62	2000	SMEAR	
	3	ND	1216	ALPHA DPM	BETA DPM
	4	26	1800	ND	ND
	5	12	916		
	AVERAGE	20	1483	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 2	MAX LEVEL	26	716	15	
	1	26	716		
	2	ND	250	SMEAR	
	3	ND	50	ALPHA DPM	BETA DPM
	4	12	350	3	ND
	5	12	466		
	AVERAGE	10	366	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 3	MAX LEVEL	12	550	16	
	1	ND	116		
	2	12	550	SMEAR	
	3	ND	366	ALPHA DPM	BETA DPM
	4	ND	300	12	ND
	5	ND	134		
	AVERAGE	2	293	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 4	MAX LEVEL	38	666	15	
	1	26	600		
	2	12	466	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	38	666	3	ND
	5	ND	400		
	AVERAGE	15	496	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 5	MAX LEVEL	26	450	16	
	1	ND	450		
	2	12	350	SMEAR	
	3	ND	266	ALPHA DPM	BETA DPM
	4	ND	150	ND	ND
	5	26	366		
	AVERAGE	8	316	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 6	MAX LEVEL	38	1200	14	
	1	ND	900		
	2	12	850	SMEAR	
	3	ND	934	ALPHA DPM	BETA DPM
	4	38	1200	ND	22
	5	26	1100		
	AVERAGE	15	997	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 7	MAX LEVEL	62	1550	18	
	1	ND	1550		
	2	62	1850	SMEAR	
	3	26	1616	ALPHA DPM	BETA DPM
	4	12	1700	ND	ND
	5	50	1250		
	AVERAGE	30	1593	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 8	MAX LEVEL	26	1100	16	
	1	24	1000		
	2	ND	784	SMEAR	
	3	ND	1100	ALPHA DPM	BETA DPM
	4	12	866	7	ND
	5	12	1016		
	AVERAGE	10	953	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 9	MAX LEVEL	26	600	13	
	1	ND	600		
	2	ND	484	SMEAR	
	3	12	466	ALPHA DPM	BETA DPM
	4	26	533	3	11
	5	ND	684		
	AVERAGE	8	553	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 10	MAX LEVEL	26	450	14	
	1	ND	350		
	2	26	450	SMEAR	
	3	12	366	ALPHA DPM	BETA DPM
	4	ND	284	3	ND
	5	12	166		
	AVERAGE	10	323	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 11	MAX LEVEL	38	566	14	
	1	ND	284		
	2	26	350	SMEAR	
	3	ND	416	ALPHA DPM	BETA DPM
	4	38	566	ND	44
	5	12	450		
	AVERAGE	15	413	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 12	MAX LEVEL	26	516	15	
	1	26	516		
	2	12	416	SMEAR	
	3	ND	150	ALPHA DPM	BETA DPM
	4	ND	250	ND	ND
	5	12	332		
	AVERAGE	10	333	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 13	MAX LEVEL	38	834	17	
	1	12	600		
	2	12	450	SMEAR	
	3	26	366	ALPHA DPM	BETA DPM
	4	ND	516	ND	33
	5	38	834		
	AVERAGE	18	553	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 14	MAX LEVEL	26	1616	16	
	1	12	1266		
	2	ND	1616	SMEAR	
	3	12	1184	ALPHA DPM	BETA DPM
	4	ND	550	ND	ND
	5	26	734		
	AVERAGE	10	1070	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 15	MAX LEVEL	26	450	14	
	1	ND	450		
	2	12	84	SMEAR	
	3	12	300	ALPHA DPM	BETA DPM
	4	ND	166	3	ND
	5	26	400		
	AVERAGE	10	280	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 16	MAX LEVEL	38	466	14	
	1	38	466		
	2	12	334	SMEAR	
	3	12	184	ALPHA DPM	BETA DPM
	4	ND	116	ND	33
	5	26	300		
	AVERAGE	18	280	DECON REQ	YES/NO

DATE: 11 02 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 17	MAX LEVEL	38	666	13	
	1	38	600		
	2	ND	216	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	450	3	22
	5	26	666		
	AVERAGE	15	456	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 18	MAX LEVEL	26	600	13	
	1	26	600		
	2	12	466	SMEAR	
	3	ND	284	ALPHA DPM	BETA DPM
	4	12	350	ND	ND
	5	ND	284		
	AVERAGE	10	397	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 19	MAX LEVEL	12	534	14	
	1	12	534		
	2	ND	234	SMEAR	
	3	12	184	ALPHA DPM	BETA DPM
	4	12	350	ND	11
	5	ND	416		
	AVERAGE	7	344	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 20	MAX LEVEL	38	768	14	
	1	12	566		
	2	38	768	SMEAR	
	3	12	516	ALPHA DPM	BETA DPM
	4	24	350	ND	78
	5	ND	416		
	AVERAGE	17	523	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 21	MAX LEVEL	12	450	13	
	1	ND	34		
	2	12	350	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	ND	150	ND	ND
	5	ND	266		
	AVERAGE	5	250	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 22	MAX LEVEL	26	450	13	
	1	26	366		
	2	ND	450	SMEAR	
	3	ND	250	ALPHA DPM	BETA DPM
	4	12	200	7 ~~6~~ DA 1-142	44
	5	ND	100		
	AVERAGE	8	273	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 23	MAX LEVEL	12	416	13	
	1	ND	416		
	2	ND	34	SMEAR	
	3	12	300	ALPHA DPM	BETA DPM
	4	ND	150	ND	6
	5	12	384		
	AVERAGE	5	257	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
1RW 24	MAX LEVEL	12	300	13	
	1	ND	300		
	2	ND	184	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	34	ND	ND
	5	12	250		
	AVERAGE	2	154	DECON REQ	YES/NO

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 25	MAX LEVEL	12	284	13	
	1	ND	134		
	2	ND	ND	SMEAR	
	3	12	284	ALPHA DPM	BETA DPM
	4	ND	66	ND	61
	5	ND	250		
	AVERAGE	2	147	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 26	MAX LEVEL	26	434	13	
	1	ND	300		
	2	ND	200	SMEAR	
	3	26	384	ALPHA DPM	BETA DPM
	4	ND	334	ND	ND
	5	12	434		
	AVERAGE	8	348	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 27	MAX LEVEL	12	534	13	
	1	ND	534		
	2	ND	ND	SMEAR	
	3	12	266	ALPHA DPM	BETA DPM
	4	12	ND	3	28
	5	12	200		
	AVERAGE	7	200	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 28	MAX LEVEL	26	550	14	
	1	12	550		
	2	ND	300	SMEAR	
	3	26	450	ALPHA DPM	BETA DPM
	4	12	216	ND	ND
	5	ND	366		
	AVERAGE	10	376	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 29	MAX LEVEL	12	334	13	
	1	ND	66		
	2	12	250	SMEAR	
	3	ND	334	ALPHA DPM	BETA DPM
	4	ND	184	ND	17
	5	12	200		
	AVERAGE	6	228	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 30	MAX LEVEL	38	284	13	
	1	12	150		
	2	ND	284	SMEAR	
	3	ND	50	ALPHA DPM	BETA DPM
	4	38	250	ND	ND
	5	26	134		
	AVERAGE	15	174	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 31	MAX LEVEL	26	250	13	
	1	ND	66		
	2	ND	250	SMEAR	
	3	12	134	ALPHA DPM	BETA DPM
	4	26	150	ND	22
	5	12	34		
	AVERAGE	10	127	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 32	MAX LEVEL	ND	366	13	
	1	ND	300		
	2	ND	16	SMEAR	
	3	ND	366	ALPHA DPM	BETA DPM
	4	ND	116	3	ND
	5	ND	266		
	AVERAGE	ND	213	DECON REQ	YES (NO)

DATE: 11 02 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 33	MAX LEVEL	26	[illegible]	13	
	1	12	567		
	2	ND	300	SMEAR	
	3	ND	367	ALPHA DPM	BETA DPM
	4	ND	467	ND	ND
	5	26	600		
	AVERAGE	8	460	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 34	MAX LEVEL	12	267	13	
	1	ND	ND		
	2	ND	133	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	12	233	ND	ND
	5	12	267		
	AVERAGE	5	127	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 35	MAX LEVEL	12	417	13	
	1	12	417		
	2	ND	233	SMEAR	
	3	12	333	ALPHA DPM	BETA DPM
	4	12	300	ND	17
	5	ND	33		
	AVERAGE	7	263	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 36	MAX LEVEL	12	217	13	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	12	217	ALPHA DPM	BETA DPM
	4	ND	67	ND	ND
	5	12	150		
	AVERAGE	5	87	DECON REQ	YES/NO

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 37	MAX LEVEL	26	400	13	
	1	ND	333		
	2	ND	33	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	12	400	ND	ND
	5	26	217		
	AVERAGE	8	217	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 38	MAX LEVEL	12	117	13	
	1	ND	ND		
	2	12	117	SMEAR	
	3	ND	67	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	28		
	AVERAGE	2	42	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 39	MAX LEVLL	ND	100	13	
	1	ND	67		
	2	ND	ND	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	ND	17	3	33
	5	ND	ND		
	AVERAGE	ND	37	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRW 40	MAX LEVEL	12	117	13	
	1	ND	ND		
	2	ND	117	SMEAR	
	3	ND	33	ALPHA DPM	BETA DPM
	4	12	ND	ND	ND
	5	ND	ND		
	AVERAGE	2	30	DECON REQ	YES/NO

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRw 41	MAX LEVEL	26	250	13	
	1	ND	33		
	2	12	250	SMEAR	
	3	ND	117	ALPHA DPM	BETA DPM
	4	26	217 2+7 DPM 11-2-92	NA	NA
	5	ND	133		
	AVERAGE	8	150	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
IRw 42	MAX LEVEL	12	283	13	
	1	ND	67		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	12	283	NA	NA
	5	ND	150		
	AVERAGE	2	100	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE	N/A		DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11-02-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: *Reactor Platform / Stairs*

SURVEYOR: E CHRETIEN, R CHRETIEN, D. HIGGINS

DATE: 11/4/92

METERS: Ludlum 2221 #97276 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100 cm² / 43-65 EFF=0.16, BKG=1cpm MDA=92 DPM/100cm²

Ludlum 19 #95511 BKG = 12 uR/hr

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=58CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: *metal surfaces*

RP = REACTOR PLATFORM ~~B~~ ND = NOT DETECTABLE

STAIRS SURVEYED 50% OF #ED GRIDS, SURVEY # 110392-1R

NOTES:

1. All measurements recorded in DPM are equivalent to DPM/100cm².

2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.

3. All smears are taken at the location indicating the maximum level of contamination.

4. Map orientation arrows point North.

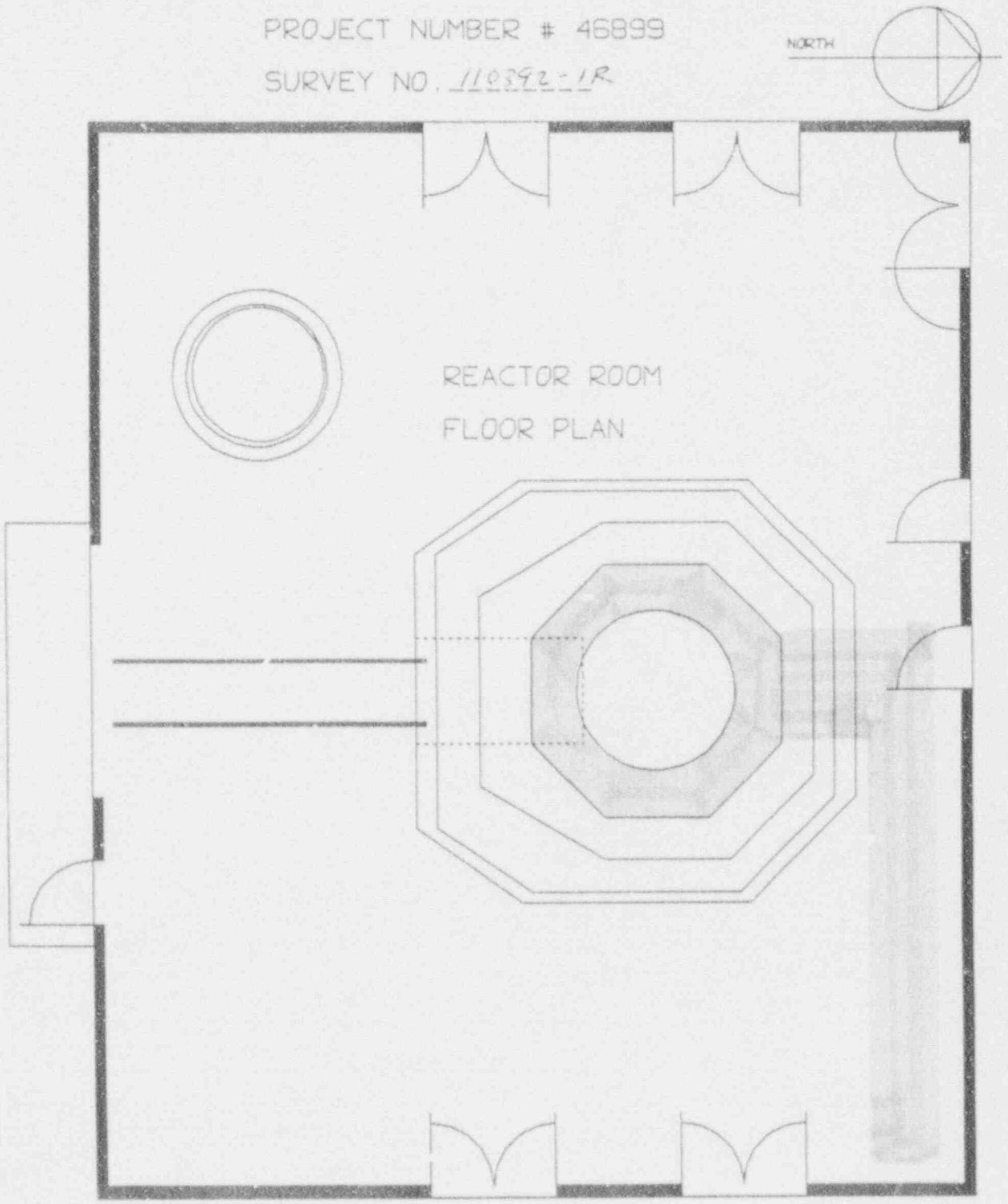
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: [illegible] DATE: 11/4/92

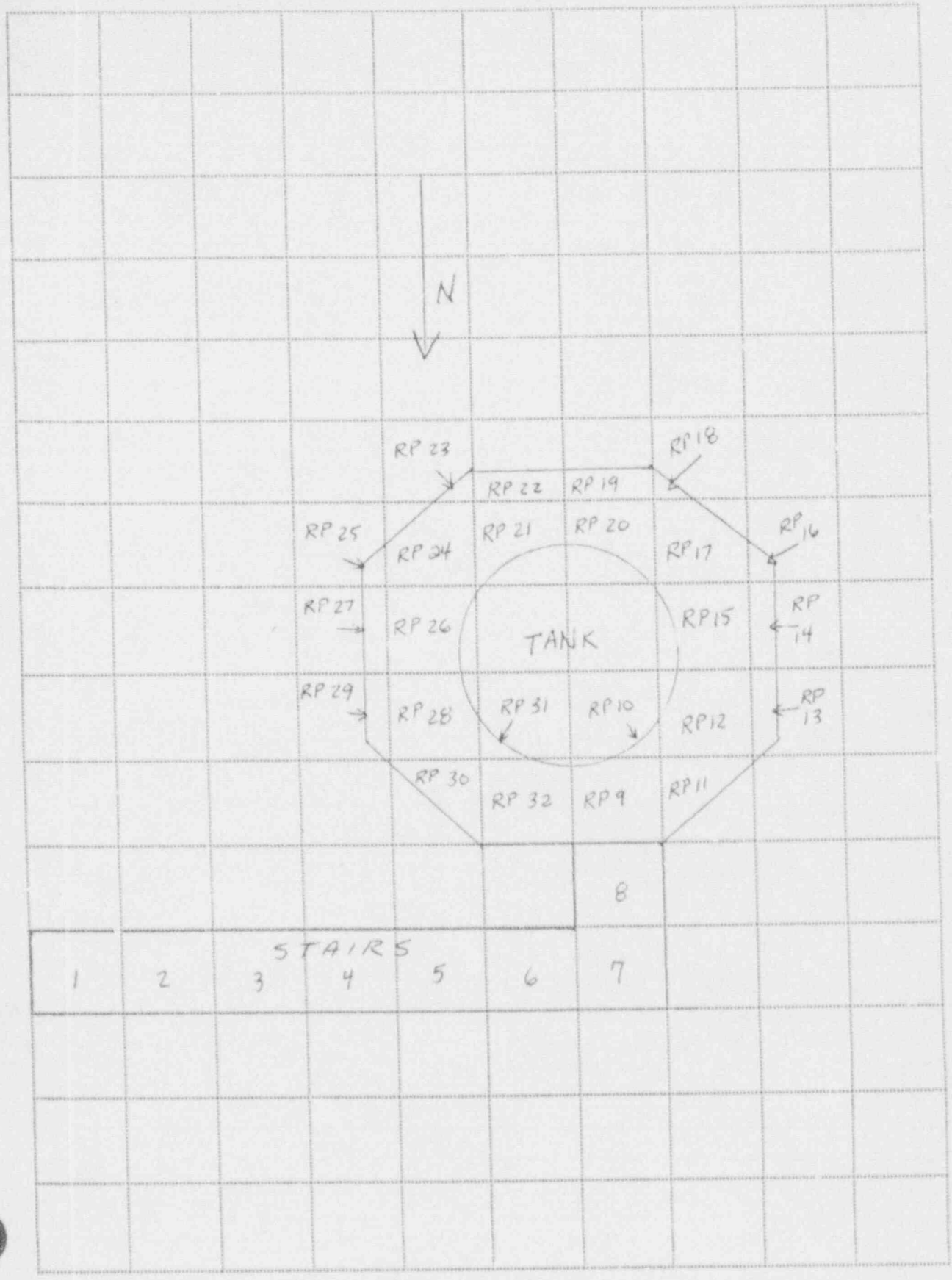
UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

PROJECT NUMBER # 46899

SURVEY NO. 110392-1R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11/4/92 (FLOOR/CEILING) PAGE 3 OF 11

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 1	MAX LEVEL	ND	167	12	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	ND	167	ND	ND
	5	ND	67		
	AVERAGE	ND	67	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 2	MAX LEVEL				
	1				
	2		NA	SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 3	MAX LEVEL	12	117	12	
	1	ND	117		
	2	ND	ND	SMEAR	
	3	12	50	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	83		
	AVERAGE	2	50	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 4	MAX LEVEL				
	1				
	2		NA	SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 5	MAX LEVEL	12	133	12	
	1	ND	133		
	2	ND	67	SMEAR	
	3	ND	83	ALPHA DPM	BETA DPM
	4	12	ND	ND	ND
	5	12	ND		
	AVERAGE	5	57	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 6	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 7	MAX LEVEL	26	200	11	
	1	26	100		
	2	ND	ND	SMEAR	
	3	12	200	ALPHA DPM	BETA DPM
	4	12	50	3	ND
	5	ND	133		
	AVERAGE	10	97	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
STAIRS 8	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 9	MAX LEVEL	12	533	14	
	1	ND	533		
	2	12	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	12	233	ND	44
	5	12	83		
	AVERAGE	7	170	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 10	MAX LEVEL	26	600	14	
	1	ND	ND		
	2	ND	600	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	26	ND	3	28
	5	ND	267		
	AVERAGE	5	173	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 11	MAX LEVEL	12	667	14	
	1	ND	667		
	2	12	ND	SMEAR	
	3	12	50	ALPHA DPM	BETA DPM
	4	ND	150	ND	11
	5	ND	483		
	AVERAGE	5	270	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 12	MAX LEVEL	ND	617	14	
	1	ND	617		
	2	ND	67	SMEAR	
	3	ND	550	ALPHA DPM	BETA DPM
	4	ND	183	ND	ND
	5	ND	ND		
	AVERAGE	ND	283	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 13	MAX LEVEL	26	550	15	
	1	12	550		
	2	26	533	SMEAR	
	3	ND	17	ALPHA DPM	BETA DPM
	4	12	183	ND	ND
	5	ND	ND		
	AVERAGE	10	257	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 14	MAX LEVEL	12	467	14	
	1	ND	ND		
	2	12	400	SMEAR	
	3	ND	467	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	133		
	AVERAGE	2	200	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 15	MAX LEVEL	26	667	14	
	1	26	633		
	2	ND	ND	SMEAR	
	3	12	667	ALPHA DPM	BETA DPM
	4	ND	100	3	39
	5	ND	83		
	AVERAGE	8	297	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 16	MAX LEVEL	12	650	15	
	1	ND	67		
	2	12	650	SMEAR	
	3	ND	50	ALPHA DPM	BETA DPM
	4	ND	467	ND	ND
	5	12	567		
	AVERAGE	5	360	DECON REQ	YES (NO)

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 17	MAX LEVEL	38	650	15	
	1	12	650		
	2	ND	350	SMEAR	
	3	38	516	ALPHA DPM	BETA DPM
	4	ND	ND	3	ND
	5	ND	17		
	AVERAGE	10	307	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 18	MAX LEVEL	12	650	15	
	1	ND	300		
	2	12	50	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	ND	650	3	ND
	5	12	500		
	AVERAGE	7	420	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 19	MAX LEVEL	26	583	15	
	1	12	450		
	2	26	230	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	33	ND	39
	5	ND	583		
	AVERAGE	10	330	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 20	MAX LEVEL	12	550	15	
	1	ND	483		
	2	ND	550	SMEAR	
	3	ND	433	ALPHA DPM	BETA DPM
	4	ND	267	7	ND
	5	12	250		
	AVERAGE	2	396	DECON REQ	YES (NO)

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 21	MAX LEVEL	26	667	15	
	1	ND	333		
	2	24	500	SMEAR	
	3	ND	167	ALPHA DPM	BETA DPM
	4	ND	667	ND	ND
	5	12	ND		
	AVERAGE	8	273	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 22	MAX LEVEL	12	700	14	
	1	12	33		
	2	12	700	SMEAR	
	3	ND	367	ALPHA DPM	BETA DPM
	4	12	517	ND	39
	5	ND	517		
	AVERAGE	7	427	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 23	MAX LEVEL	26	633	15	
	1	ND	317		
	2	26	450	SMEAR	
	3	12	67	ALPHA DPM	BETA DPM
	4	12	633	ND	ND
	5	ND	550		
	AVERAGE	10	403	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 24	MAX LEVEL	12	600	15	
	1	12	50		
	2	12	517	SMEAR	
	3	ND	367	ALPHA DPM	BETA DPM
	4	12	300	ND	ND
	5	12	600		
	AVERAGE	10	313	DECON REQ	YES (NO)

DATE: 11.03 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 25	MAX LEVEL	26	617	14	
	1	ND	617		
	2	12	517	SMEAR	
	3	ND	317	ALPHA DPM	BETA DPM
	4	26	ND	ND	ND
	5	12	333		
	AVERAGE	10	357	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 26	MAX LEVEL	26	550	15	
	1	12	333		
	2	ND	ND	SMEAR	
	3	26	517	ALPHA DPM	BETA DPM
	4	26	550	ND	ND
	5	ND	533		
	AVERAGE	13	387	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 27	MAX LEVEL	12	517	15	
	1	12	183		
	2	ND	517	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	12	150		
	AVERAGE	5	170	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 28	MAX LEVEL	ND	583	14	
	1	ND	217		
	2	ND	550	SMEAR	
	3	ND	133	ALPHA DPM	BETA DPM
	4	ND	583	ND	ND
	5	ND	283		
	AVERAGE	ND	353	DECON REQ	YES (NO)

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 29	MAX LEVEL	12	267	14	
	1	ND	17		
	2	ND	267	SMEAR	
	3	12	ND	ALPHA DPM	BETA DPM
	4	ND	ND	3	ND
	5	ND	ND		
	AVERAGE	2	57	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 30	MAX LEVEL	12	300	14	
	1	ND	ND		
	2	12	ND	SMEAR	
	3	12	50	ALPHA DPM	BETA DPM
	4	ND	300	9	ND
	5	ND	100		
	AVERAGE	5	90	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 31	MAX LEVEL	26	600	15	
	1	ND	100		
	2	26	467	SMEAR	
	3	12	500	ALPHA DPM	BETA DPM
	4	ND	567	ND	ND
	5	12	600		
	AVERAGE	10	447	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RP 32	MAX LEVEL	12	633	15	
	1	12	167		
	2	12	633	SMEAR	
	3	12	117	ALPHA DPM	BETA DPM
	4	12	67	ND	44
	5	12	450		
	AVERAGE	12	345	DECON REQ	YES (NO)

DATE: 11.03.92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: OUTSIDE REACTOR WALLS

SURVEYOR: E CHRETIEN, R CHRETIEN, D. HIGGINS

DATE: 11/4/92

METERS: Ludlum 2221 #97276 EFF=0.12 BKG=65cpm w/43-65-1 MDA=670 DPM/100cm² / EFF=0.16, BKG=1cpm 43-65 MDA=92 DPM/100cm²

Ludlum 19 #95511 BKG=13

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: CONCRETE WALLS

OR = OUTER WALL (REACTOR VESSEL) Survey # 110492-01R

NOTES:

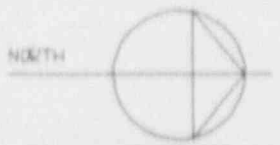
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

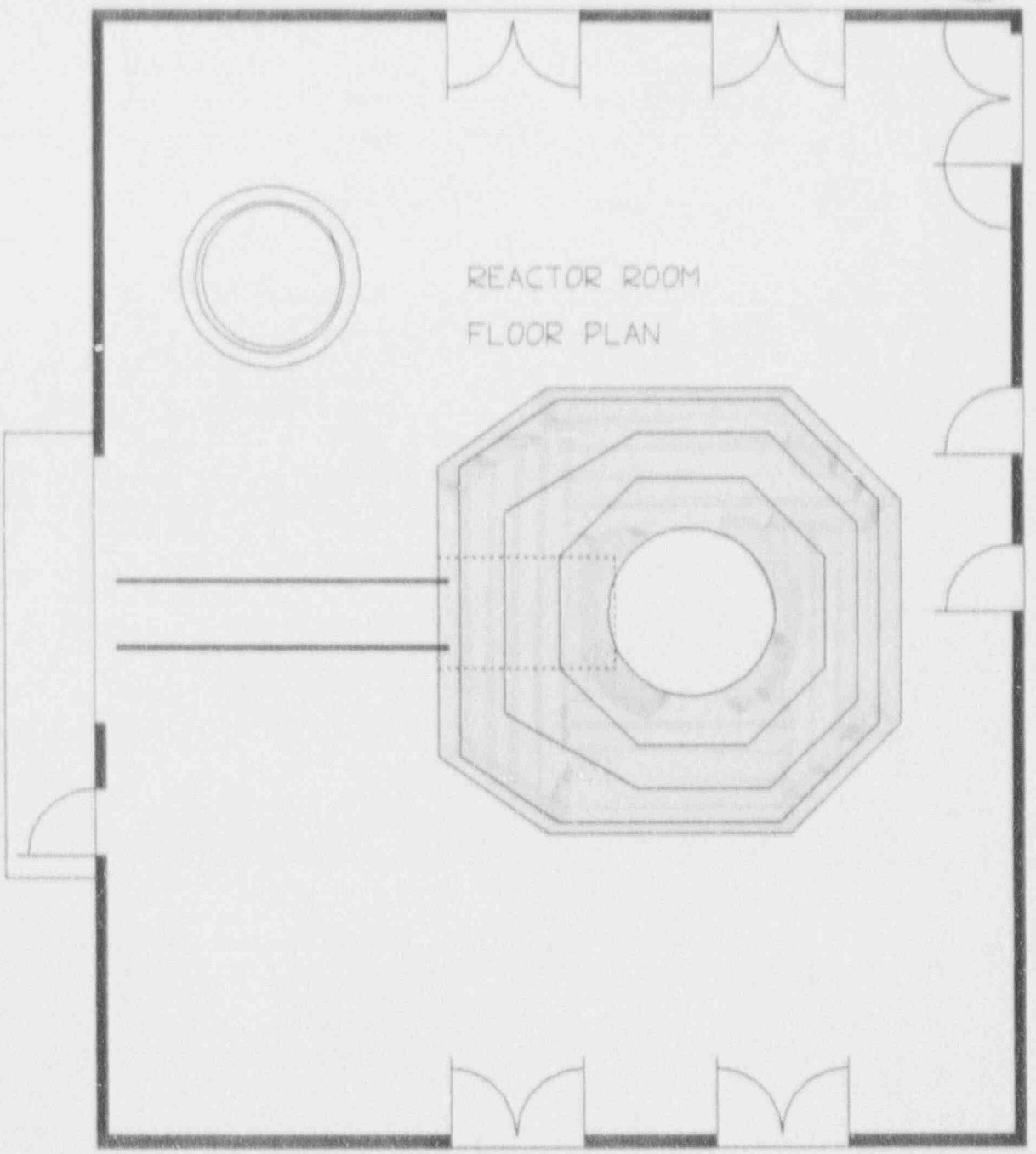
RCS REVIEW: [signature] DATE: 11/5/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

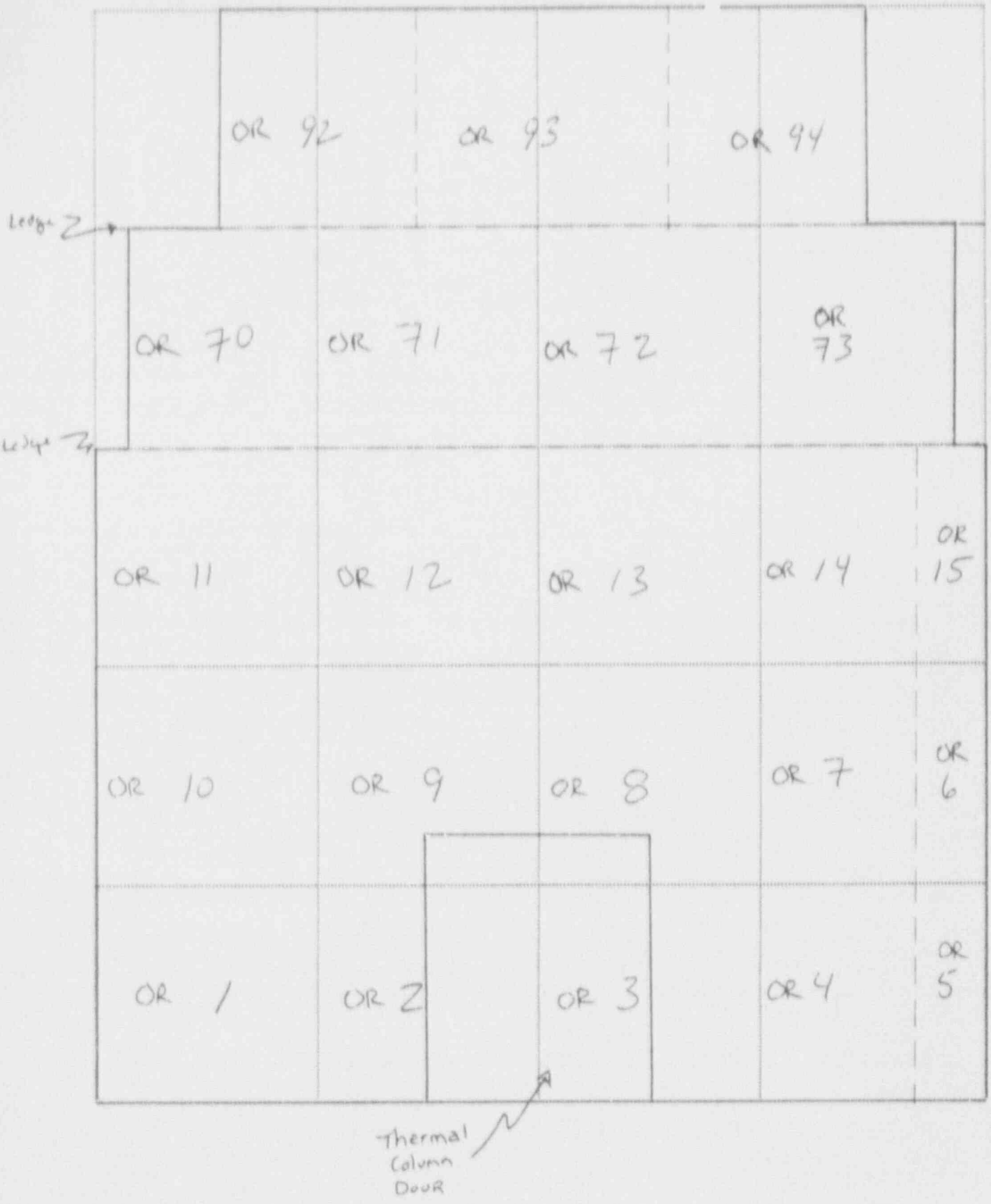
PROJECT NUMBER # 46899

SURVEY NO. 110492-01R



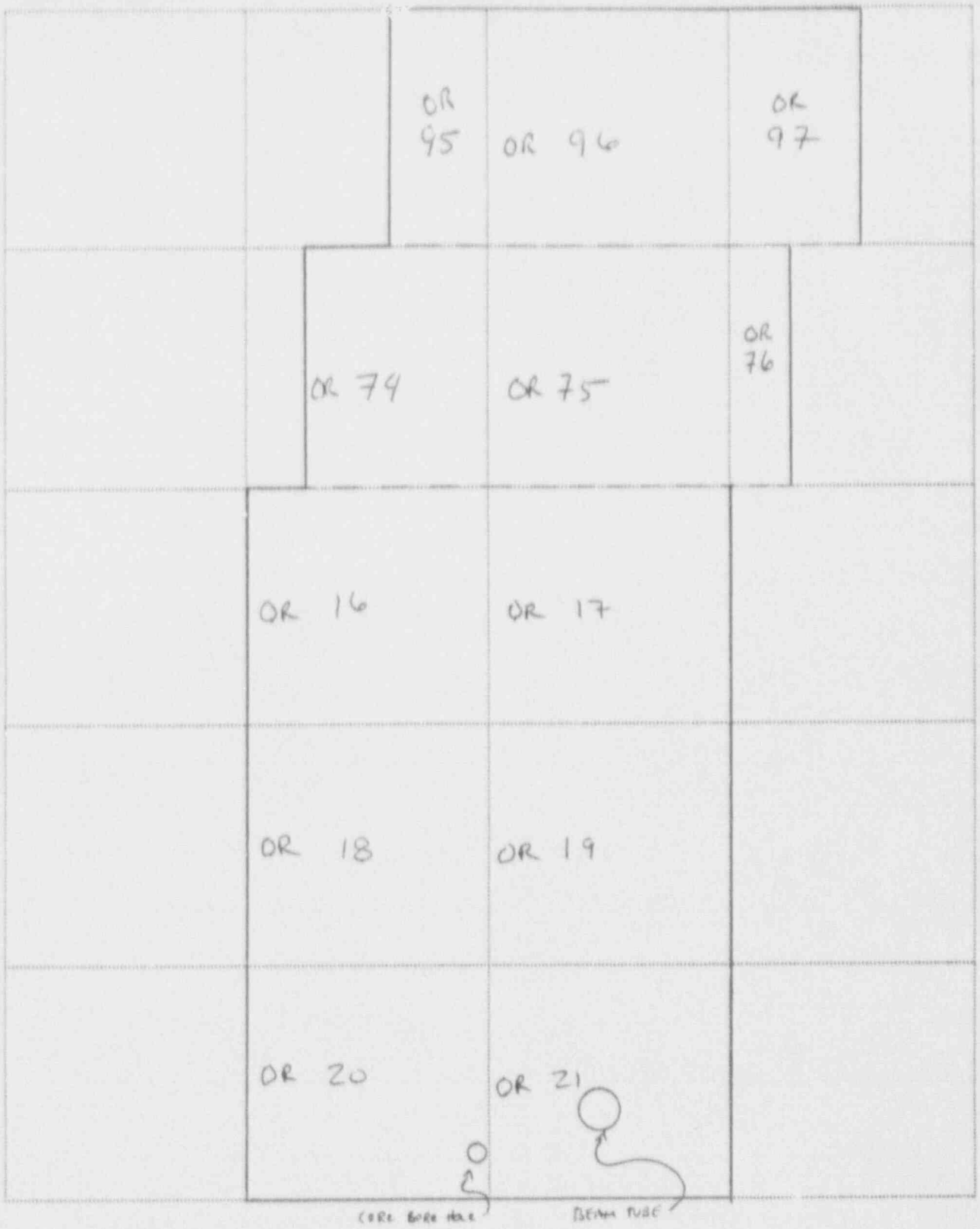


KUTR DECOMMISSIONING PROJECT SURVEY RECORD



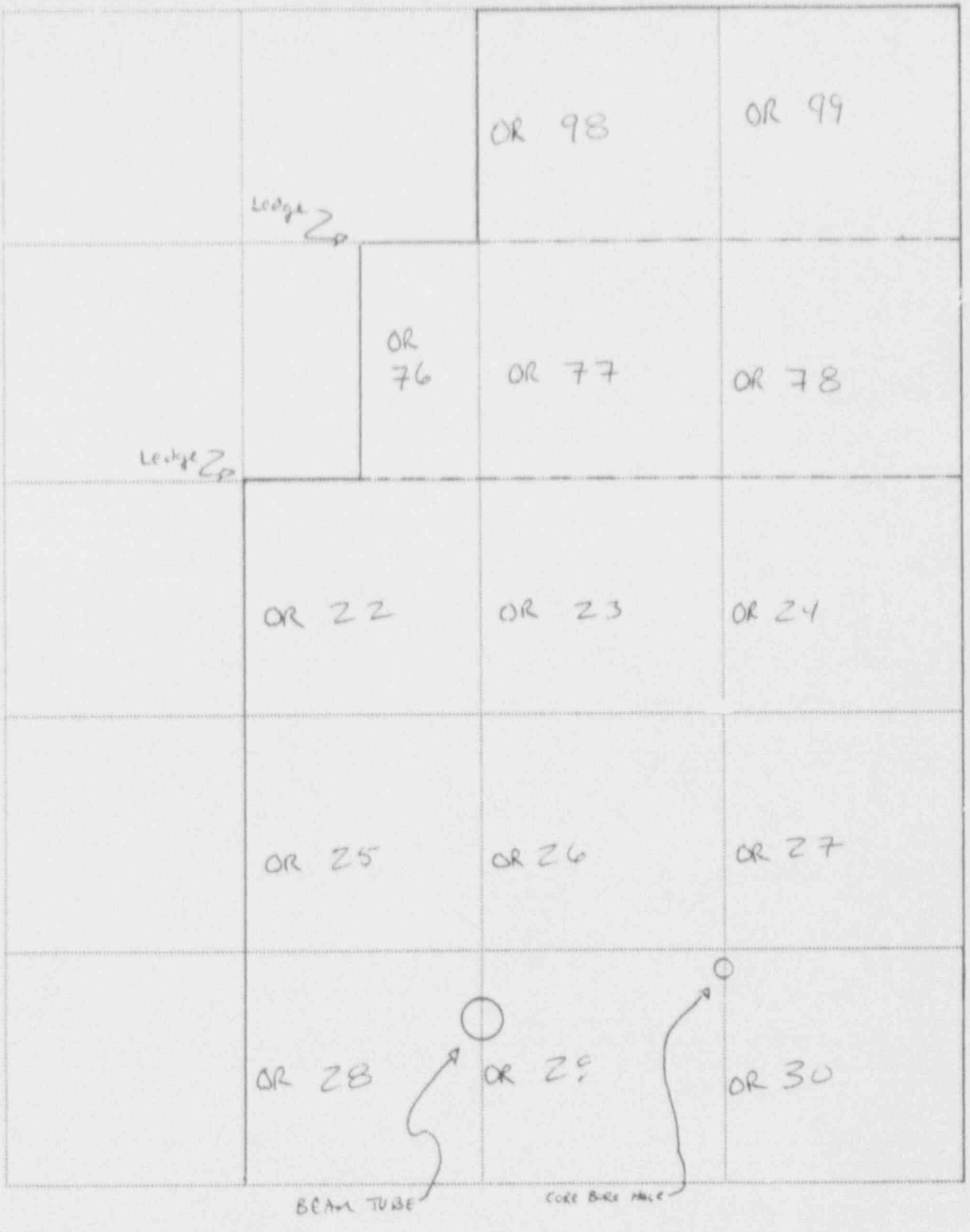
DATE: 11-03-92 ITEM: S OR PAGE 3 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



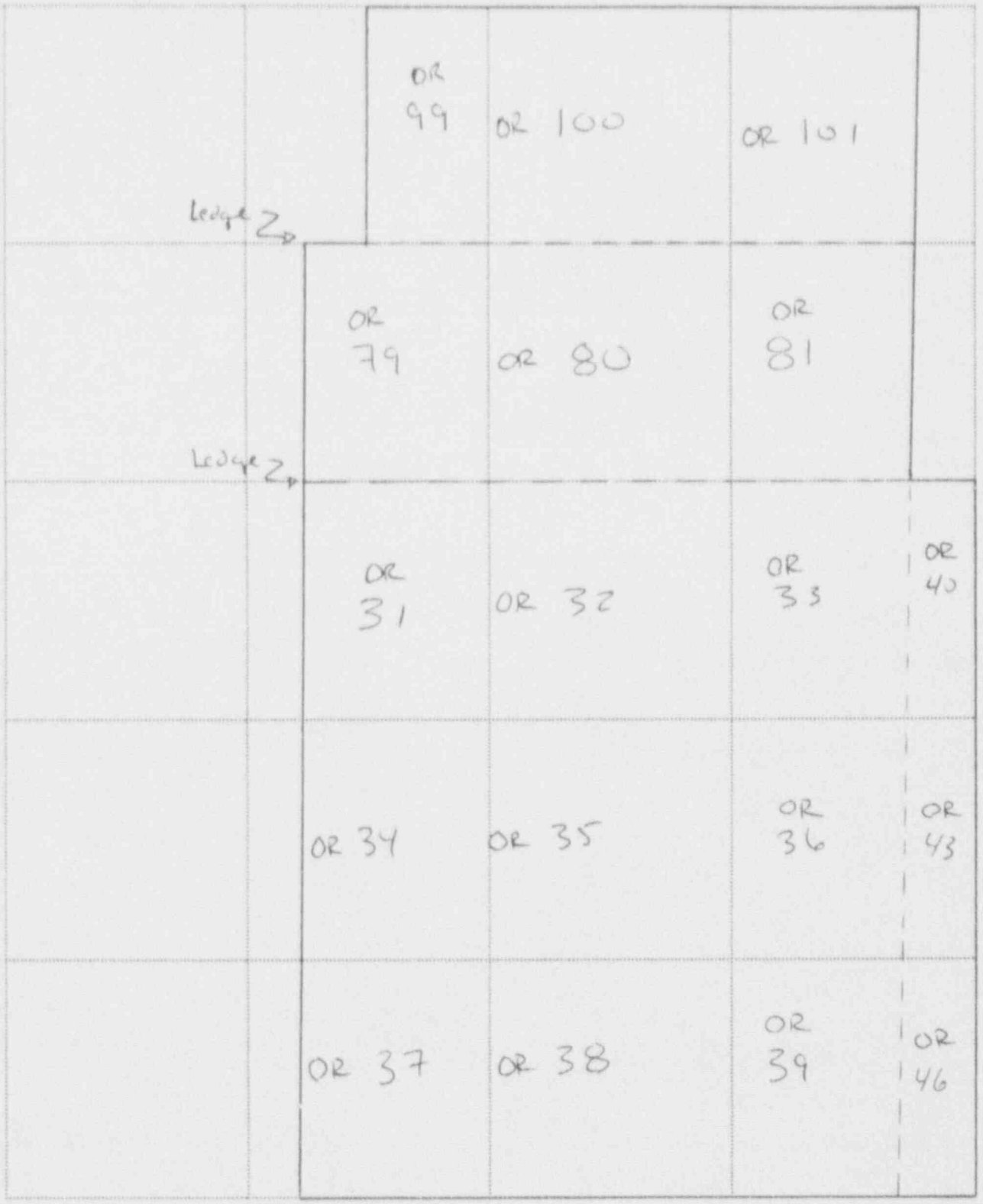
DATE: 11·03·92 ITEM: SE OR PAGE 4 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



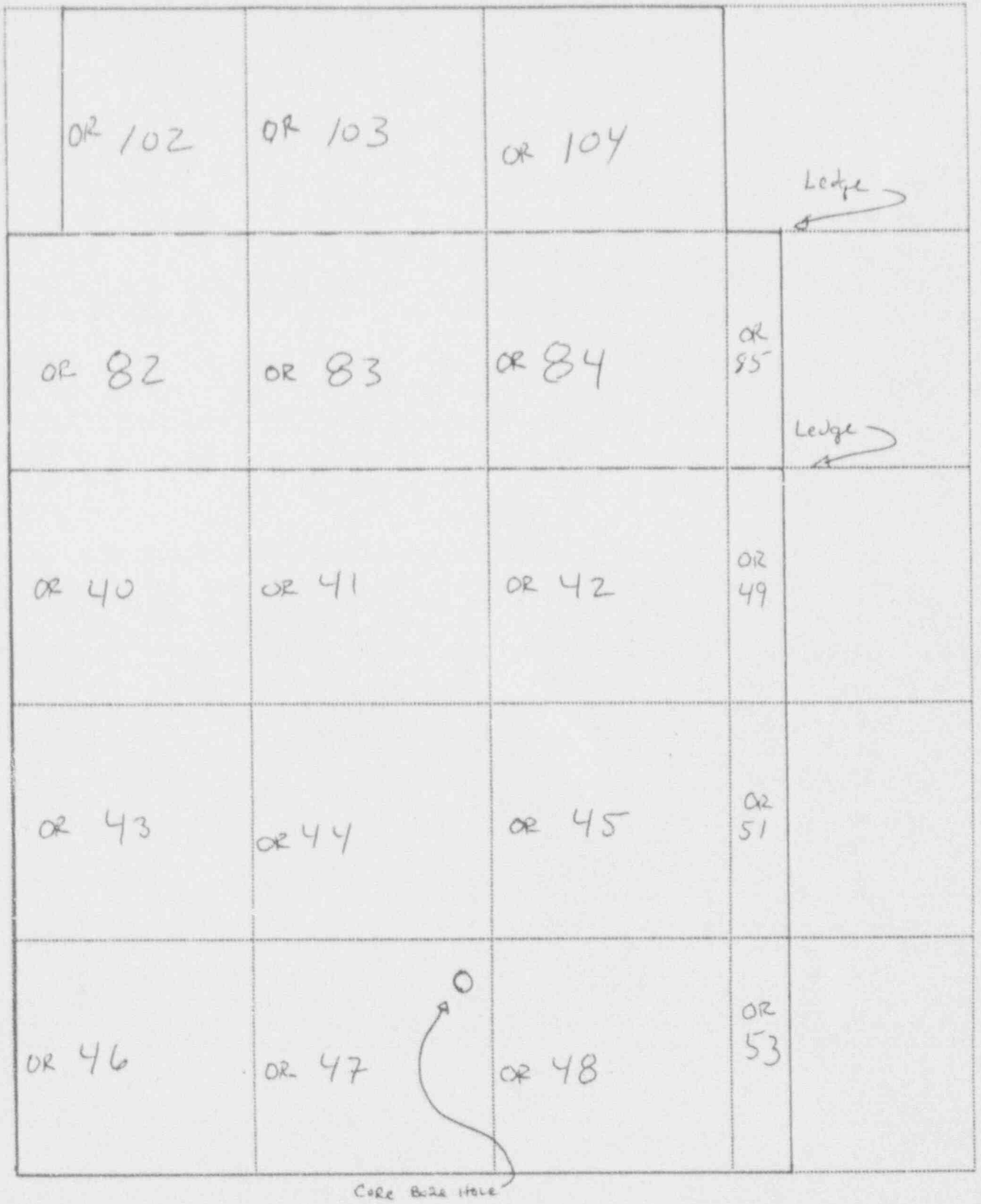
DATE: 11 03 92 ITEM: E ~~RO~~ OR E 11 03 92 PAGE 5 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



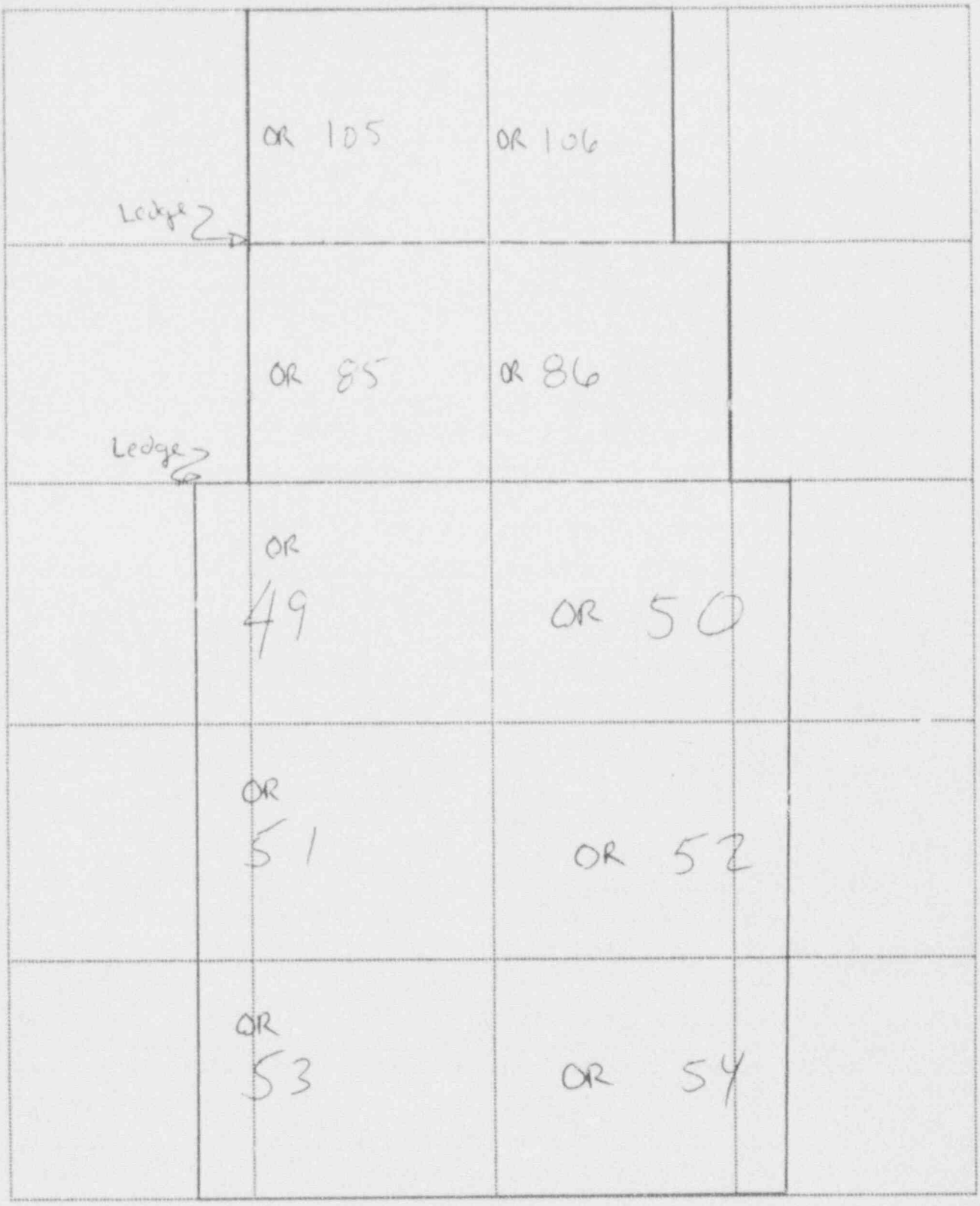
DATE: 11 03 92 ITEM: NE OR PAGE 6 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



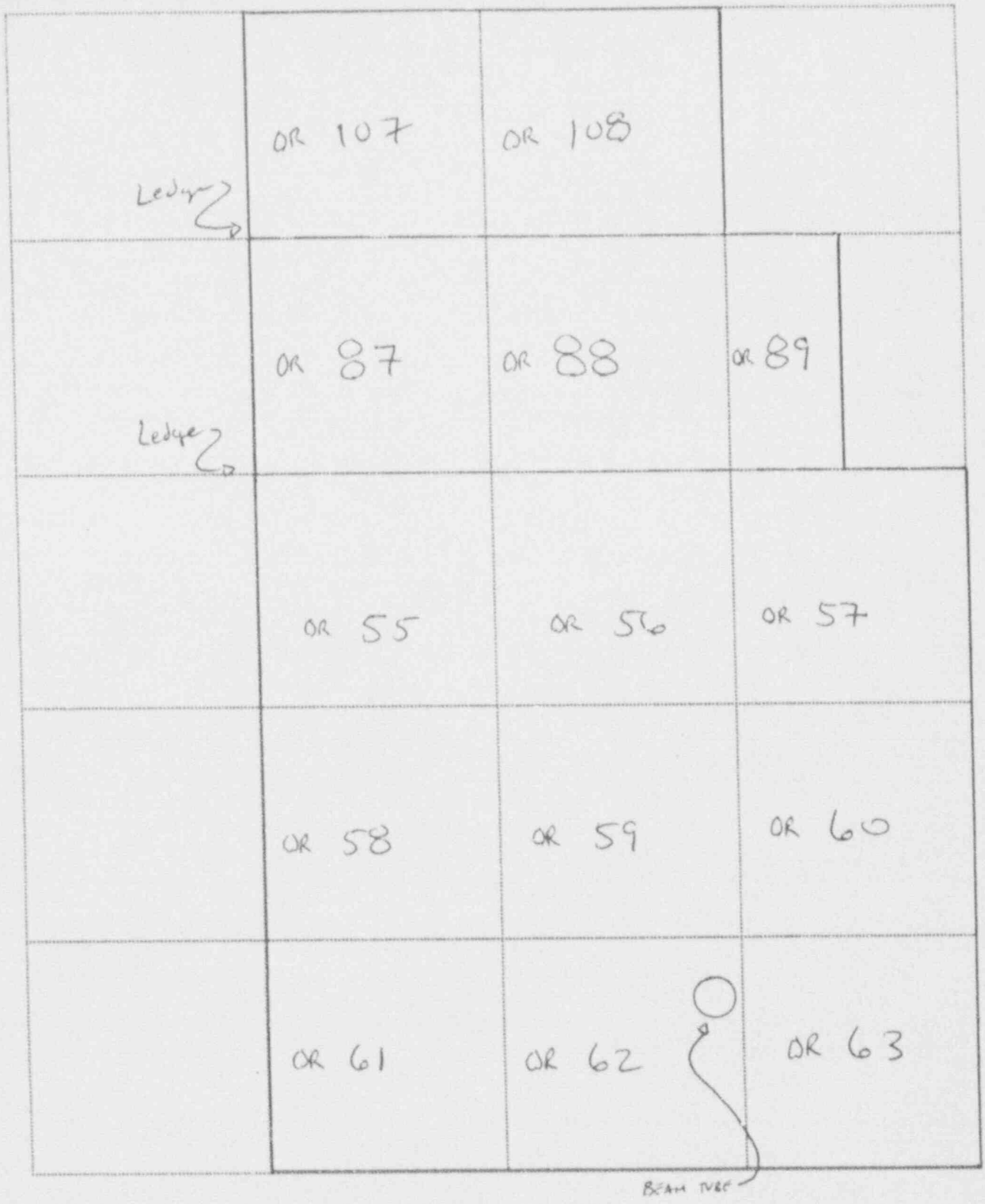
DATE: 11-03-92 ITEM: N OR PAGE 7 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



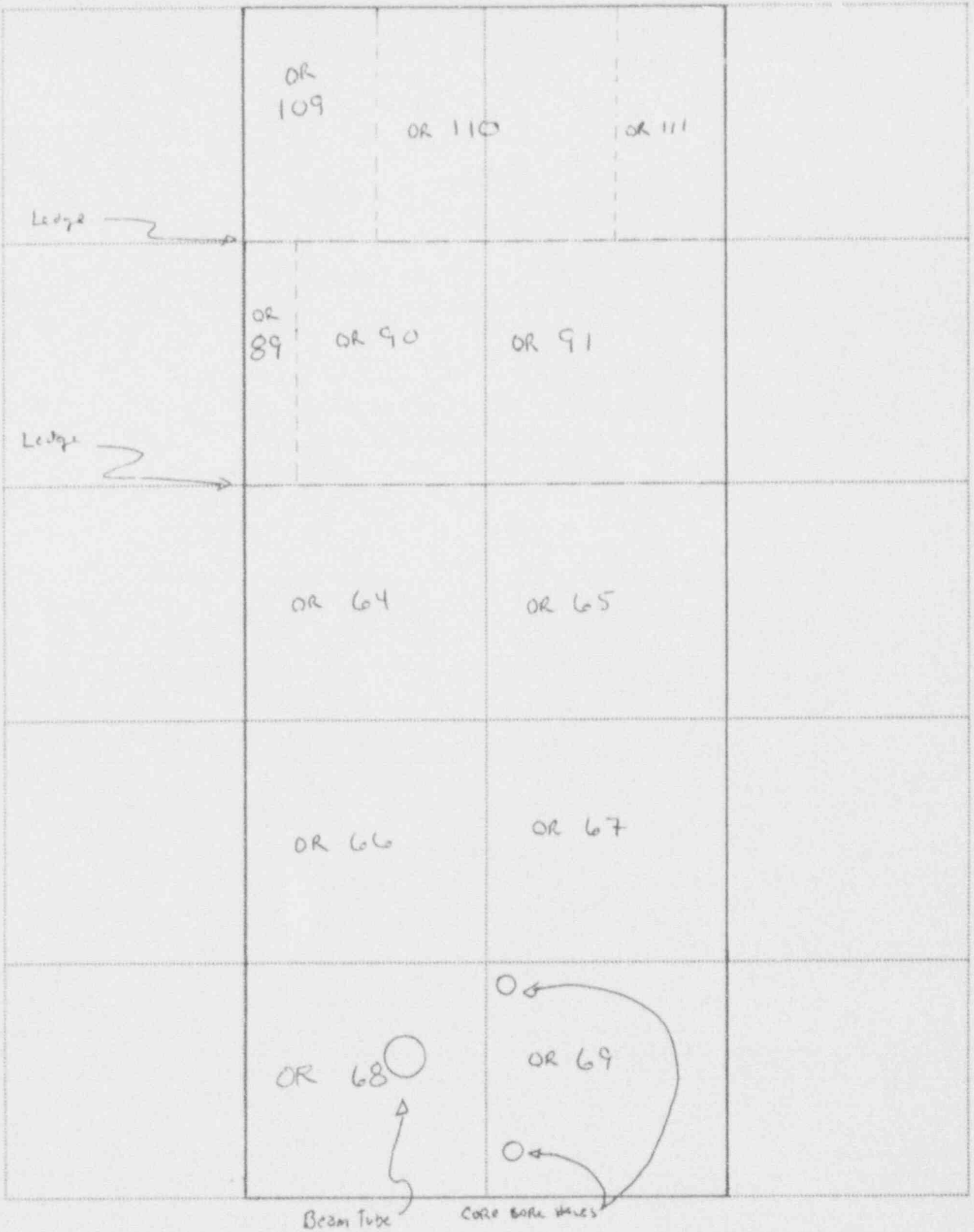
DATE: 11.03.92 ITEM: NW OR PAGE 8 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11.03.92 ITEM: W OR PAGE 9 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11 03 92 ITEM: SW OR PAGE 10 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11 04 92 ITEM: TOP OR S PAGE 11 OF 57

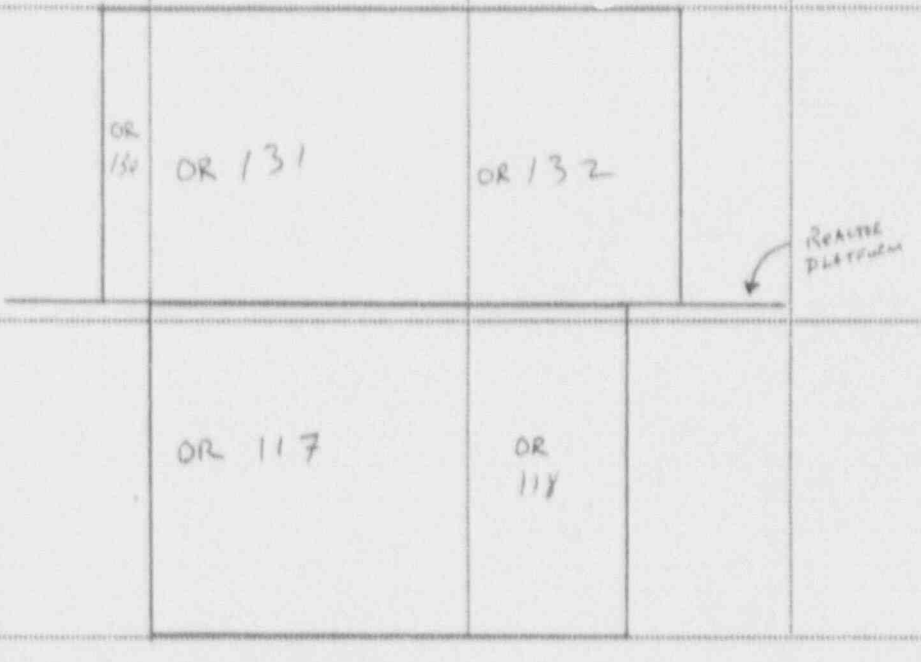
KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11 04 92 ITEM: TOP OR SE PAGE 12 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

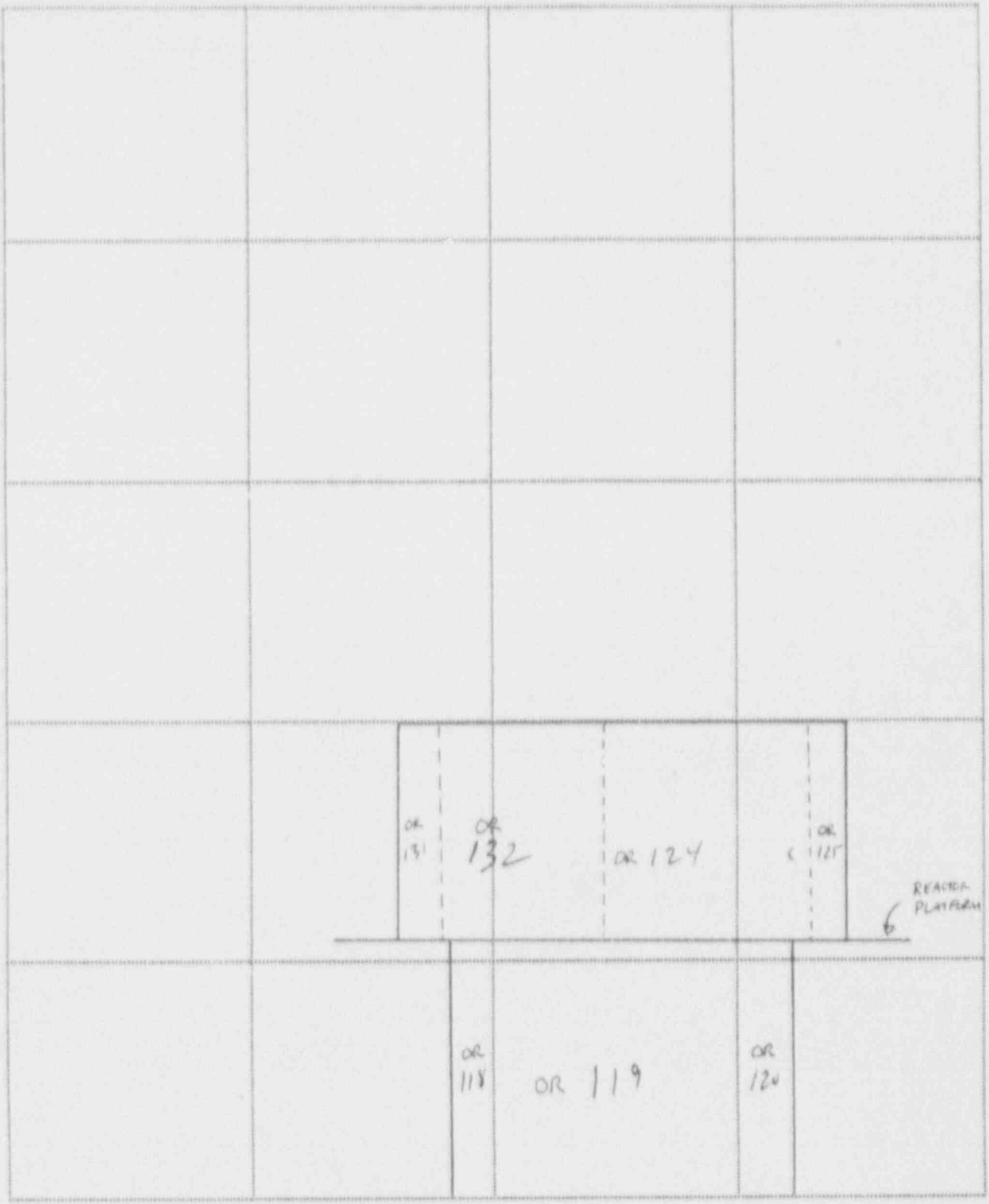
DATE: 11-04-92 ITEM: TD2 OR E PAGE 13 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



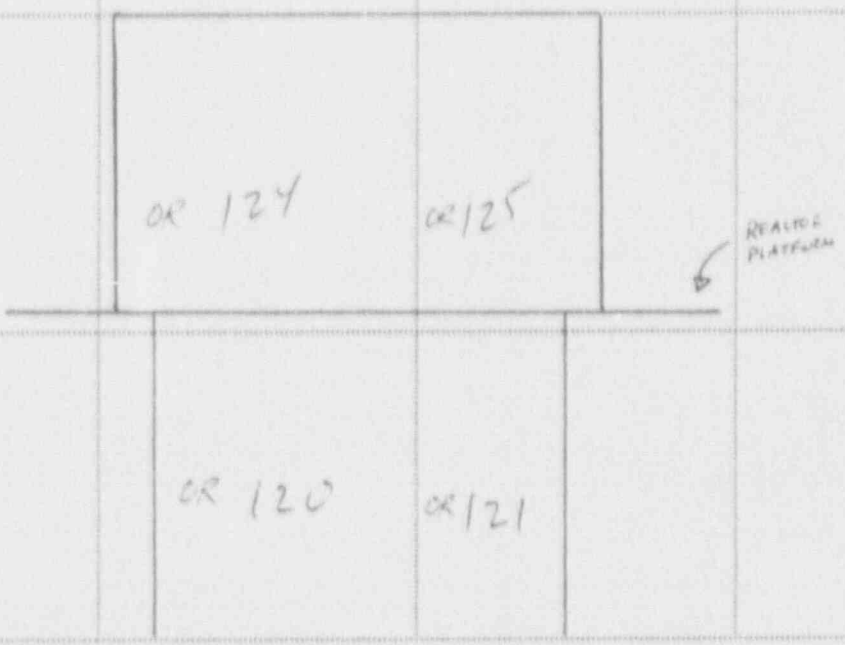
DATE: 11 04 92 ITEM: TOP OR N PAGE 14 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11 04 92 ITEM: Top OR NE PAGE 15 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

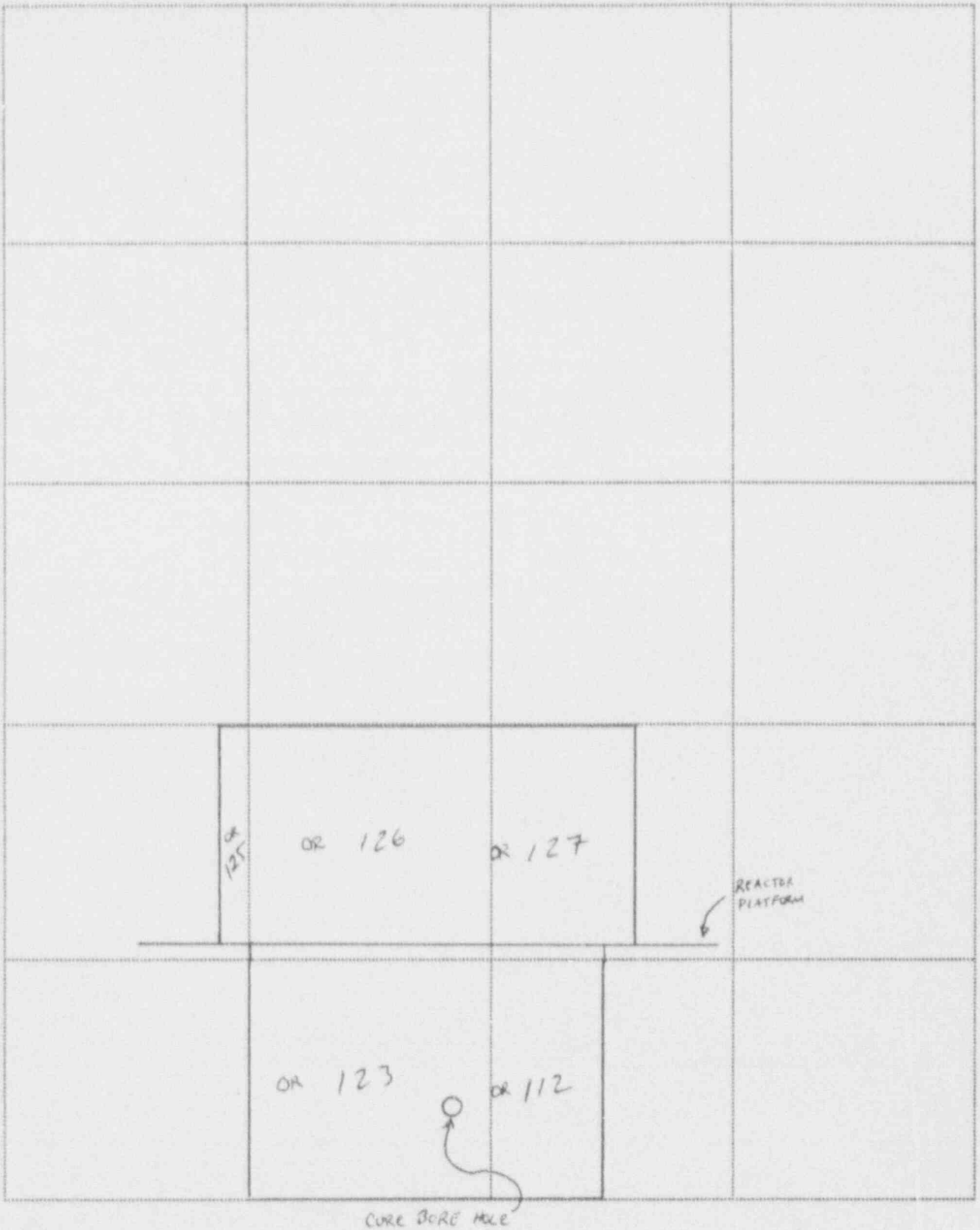


DATE: 11/4/92 ITEM: TOP OR NW PAGE 16 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11 04 92 ITEM: TOP OR W PAGE 17 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11 04 92 ITEM: TOP OR SW PAGE 18 OF 51

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 1	MAX LEVEL	26	583	13	
	1	12	583		
	2	ND	217	SMEAR	
	3	26	300	ALPHA DPM	BETA DPM
	4	12	533	ND	ND
	5	ND	450		
	AVERAGE	10	417	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 2	MAX LEVEL	ND	ND	13	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 3	MAX LEVEL	12	ND	13	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	11
	5	12	ND		
	AVERAGE	2	ND	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 4	MAX LEVEL	26	1033	14	
	1	26	1033		
	2	ND	217	SMEAR	
	3	12	533	ALPHA DPM	BETA DPM
	4	12	450	ND	ND
	5	ND	300		
	AVERAGE	10	507	DECON REQ	YES (NO)

DATE: 11-2-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 5	MAX LEVEL	26	1033	14	
	1	12	400		
	2	12	617	SMEAR	
	3	ND	733	ALPHA DPM	BETA DPM
	4	26	1033	ND	72
	5	ND	800		
	AVERAGE	10	817	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 6	MAX LEVEL	26	567	15	
	1	ND	567		
	2	12	317	SMEAR	
	3	ND	617	ALPHA DPM	BETA DPM
	4	ND	450	ND	ND
	5	26	467		
	AVERAGE	8	484	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 7	MAX LEVEL	12	467	14	
	1	ND	ND		
	2	ND	183	SMEAR	
	3	12	467	ALPHA DPM	BETA DPM
	4	ND	267	ND	ND
	5	12	400		
	AVERAGE	5	263	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 8	MAX LEVEL	12	583	13	
	1	ND	ND		
	2	12	583	SMEAR	
	3	12	ND	ALPHA DPM	BETA DPM
	4	12	400	ND	ND
	5	ND	150		
	AVERAGE	7	227	DECON REQ	YES/NO

DATE: 11-2-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 9	MAX LEVEL	26	300	13	
	1	26	300		
	2	ND	ND	SMEAR	
	3	12	133	ALPHA DPM	BETA DPM
	4	ND	67	ND	ND
	5	ND	ND		
	AVERAGE	8	100	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 10	MAX LEVEL	12	250	13	
	1	ND	183		
	2	ND	33	SMEAR	
	3	12	167	ALPHA DPM	BETA DPM
	4	ND	250	ND	11
	5	ND	67		
	AVERAGE	2	140	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 11	MAX LEVEL	26	767	14	
	1	12	617		
	2	26	700	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	12	500	ND	ND
	5	ND	767		
	AVERAGE	10	607	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 12	MAX LEVEL	26	267	13	
	1	ND	50		
	2	26	267	SMEAR	
	3	ND	150	ALPHA DPM	BETA DPM
	4	ND	217	ND	ND
	5	ND	67		
	AVERAGE	5	150	DECON REQ	YES/NO

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 13	MAX LEVEL	38	667	14	
	1	ND	583		
	2	26	400	SMEAR	
	3	ND	633	ALPHA DPM	BETA DPM
	4	38	667	ND	ND
	5	12	450		
	AVERAGE	15	547	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 14	MAX LEVEL	26	617	14	
	1	12	567		
	2	ND	433	SMEAR	
	3	26	533	ALPHA DPM	BETA DPM
	4	12	617	3	11
	5	ND	450		
	AVERAGE	10	520	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 15	MAX LEVEL	26	600	16	
	1	ND	527		
	2	26	500	SMEAR	
	3	12	517	ALPHA DPM	BETA DPM
	4	ND	583	ND	ND
	5	26	600		
	AVERAGE	13	553	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 16	MAX LEVEL	12	867	13	
	1	ND	400		
	2	12	283	SMEAR	
	3	ND	867	ALPHA DPM	BETA DPM
	4	12	767	ND	11
	5	ND	550		
	AVERAGE	5	573	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 17	MAX LEVEL	26	683	14	
	1	ND	233		
	2	26	567	SMEAR	
	3	12	283	ALPHA DPM	BETA DPM
	4	ND	683	ND	ND
	5	ND	600		
	AVERAGE	8	473	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 18	MAX LEVEL	26	600	14	
	1	ND	600		
	2	26	283	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	26	450	ND	ND
	5	ND	350		
	AVERAGE	10	450	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 19	MAX LEVEL	12	583	13	
	1	ND	583		
	2	12	400	SMEAR	
	3	12	317	ALPHA DPM	BETA DPM
	4	ND	467	ND	11
	5	ND	500		
	AVERAGE	5	453	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 20	MAX LEVEL	38	317	13	
	1	ND	317		
	2	38	ND	SMEAR	
	3	ND	250	ALPHA DPM	BETA DPM
	4	ND	167	3	ND
	5	26	100		
	AVERAGE	13	167	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 21	MAX LEVEL	26	483	13	
	1	12	433		
	2	26	33	SMEAR	
	3	12	133	ALPHA DPM	BETA DPM
	4	ND	483	ND	ND
	5	ND	266		
	AVERAGE	10	270	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 22	MAX LEVEL	12	550	13	
	1	ND	117		
	2	12	483	SMEAR	
	3	12	350	ALPHA DPM	BETA DPM
	4	ND	550	3	ND
	5	12	233		
	AVERAGE	7	347	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 23	MAX LEVEL	12	533	14	
	1	12	533		
	2	12	183	SMEAR	
	3	ND	233	ALPHA DPM	BETA DPM
	4	12	317	3	39
	5	ND	500		
	AVERAGE	7	353	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 24	MAX LEVEL	12	650	13	
	1	ND	533		
	2	12	183	SMEAR	
	3	12	650	ALPHA DPM	BETA DPM
	4	ND	566	3	ND
	5	ND	600		
	AVERAGE	5	506	DECON REQ	YES (NO)

DATE: 11-03 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 25	MAX LEVEL	26	533	13	
	1	12	483		
	2	ND	533	SMEAR	
	3	26	517	ALPHA DPM	BETA DPM
	4	12	183	ND	11
	5	ND	217		
	AVERAGE	10	387	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 26	MAX LEVEL	26	533	13	
	1	12	450		
	2	ND	400	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	367	3	50
	5	26	533		
	AVERAGE	10	420	DECON REQ	YES/NO

GR	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 27	MAX LEVEL	12	517	13	
	1	12	433		
	2	ND	167	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	517	ND	11
	5	ND	233		
	AVERAGE	5	340	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 28	MAX LEVEL	26	467	12	
	1	ND	467		
	2	26	100	SMEAR	
	3	ND	233	ALPHA DPM	BETA DPM
	4	ND	317	3	ND
	5	ND	433		
	AVERAGE	5	310	DECON REQ	YES/NO

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 29	MAX LEVEL	12	367	12	
	1	ND	ND		
	2	12	317	SMEAR	
	3	ND	200	ALPHA DPM	BETA DPM
	4	ND	367	3	ND
	5	ND	67		
	AVERAGE	2	190	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 30	MAX LEVEL	26	467	13	
	1	ND	467		
	2	ND	ND	SMEAR	
	3	26	350	ALPHA DPM	BETA DPM
	4	ND	183	ND	ND
	5	12	ND		
	AVERAGE	8	137	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 31	MAX LEVEL	12	350	13	
	1	ND	267		
	2	ND	350	SMEAR	
	3	ND	183	ALPHA DPM	BETA DPM
	4	12	117	ND	50
	5	ND	133		
	AVERAGE	2	210	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 32	MAX LEVEL	ND	317	13	
	1	ND	283		
	2	ND	50	SMEAR	
	3	ND	183	ALPHA DPM	BETA DPM
	4	ND	200	ND	ND
	5	ND	317		
	AVERAGE	ND	207	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 33	MAX LEVEL	26	333	12	
	1	12	333		
	2	ND	ND	SMEAR	
	3	ND	250	ALPHA DPM	BETA DPM
	4	12	250	ND	ND
	5	26	100		
	AVERAGE	10	187	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 34	MAX LEVEL	12	517	12	
	1	ND	517		
	2	12	317	SMEAR	
	3	12	217	ALPHA DPM	BETA DPM
	4	ND	467	ND	11
	5	12	200		
	AVERAGE	7	344	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 35	MAX LEVEL	38	583	13	
	1	12	583		
	2	38	567	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	ND	267	ND	ND
	5	ND	350		
	AVERAGE	10	443	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 36	MAX LEVEL	26	533	13	
	1	26	483		
	2	ND	250	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	26	433	ND	ND
	5	ND	533		
	AVERAGE	10	410	DECON REQ	YES (NO)

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 37	MAX LEVEL	ND	433	12	
	1	ND	433		
	2	ND	ND	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	ND	133	ND	ND
	5	ND	ND		
	AVERAGE	ND	183	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 38	MAX LEVEL	12	533	12	
	1	ND	533		
	2	12	67	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	12	333	3	ND
	5	ND	433		
	AVERAGE	5	273	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 39	MAX LEVEL	26	683	13	
	1	12	683		
	2	ND	483	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	26	400	3	28
	5	26	600		
	AVERAGE	13	500	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 40	MAX LEVEL	26	367	16	
	1	12	333		
	2	12	50	SMEAR	
	3	12	367	ALPHA DPM	BETA DPM
	4	ND	133	3	ND
	5	26	217		
	AVERAGE	12	220	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 41	MAX LEVEL	12	283	15	
	1	12	283		
	2	ND	33	SMEAR	
	3	ND	167	ALPHA DPM	BETA DPM
	4	12	233	ND	22
	5	ND	67		
	AVERAGE	5	157	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 42	MAX LEVEL	26	583	15	
	1	26	567		
	2	ND	267	SMEAR	
	3	26	350	ALPHA DPM	BETA DPM
	4	12	517	ND	ND
	5	12	583		
	AVERAGE	15	457	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 43	MAX LEVEL	12	550	15	
	1	12	533		
	2	12	550	SMEAR	
	3	12	333	ALPHA DPM	BETA DPM
	4	12	283	ND	ND
	5	ND	400		
	AVERAGE	10	420	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 44	MAX LEVEL	38	867	15	
	1	12	350		
	2	ND	750	SMEAR	
	3	38	867	ALPHA DPM	BETA DPM
	4	ND	450	ND	ND
	5	ND	567		
	AVERAGE	10	597	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 45	MAX LEVEL	12	933	15	
	1	12	933		
	2	ND	567	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	ND	917	ND	ND
	5	12	517		
	AVERAGE	5	737	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 46	MAX LEVEL	38	550	15	
	1	12	550		
	2	26	250	SMEAR	
	3	ND	233	ALPHA DPM	BETA DPM
	4	38	400	ND	ND
	5	12	533		
	AVERAGE	18	393	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 47	MAX LEVEL	12	267	14	
	1	ND	67		
	2	ND	167	SMEAR	
	3	12	233	ALPHA DPM	BETA DPM
	4	12	67	ND	6
	5	12	267		
	AVERAGE	7	160	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 48	MAX LEVEL	38	233	15	
	1	38	233		
	2	12	167	SMEAR	
	3	26	50	ALPHA DPM	BETA DPM
	4	12	83	ND	ND
	5	12	167		
	AVERAGE	20	140	DECON REQ	YES (NO)

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 49	MAX LEVEL	26	583	14	
	1	12	567		
	2	12	417	SMEAR	
	3	ND	133	ALPHA DPM	BETA DPM
	4	ND	583	ND	ND
	5	26	333		
	AVERAGE	10	407	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 50	MAX LEVEL	12	300	14	
	1	ND	250		
	2	12	300	SMEAR	
	3	ND	67	ALPHA DPM	BETA DPM
	4	ND	33	ND	ND
	5	12	167		
	AVERAGE	5	163	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 51	MAX LEVEL	12	500	14	
	1	12	233		
	2	ND	183	SMEAR	
	3	12	350	ALPHA DPM	BETA DPM
	4	12	500	ND	28
	5	ND	433		
	AVERAGE	7	340	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 52	MAX LEVEL	38	783	14	
	1	ND	600		
	2	26	783	SMEAR	
	3	38	667	ALPHA DPM	BETA DPM
	4	ND	750	ND	ND
	5	ND	483		
	AVERAGE	13	657	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 53	MAX LEVEL	26	567	14	
	1	26	567		
	2	26	583	SMEAR	
	3	ND	417	ALPHA DPM	BETA DPM
	4	12	350	ND	44
	5	ND	400		
	AVERAGE	13	463	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 54	MAX LEVEL	12	483	14	
	1	ND	350		
	2	12	400	SMEAR	
	3	12	483	ALPHA DPM	BETA DPM
	4	ND	467	ND	122
	5	12	217		
	AVERAGE	7	383	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 55	MAX LEVEL	12	267	15	
	1	ND	233		
	2	ND	17	SMEAR	
	3	ND	83	ALPHA DPM	BETA DPM
	4	ND	267	ND	106
	5	12	167		
	AVERAGE	2	153	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 56	MAX LEVEL	26	500	14	
	1	12	417		
	2	ND	333	SMEAR	
	3	12	283	ALPHA DPM	BETA DPM
	4	ND	400	6	22
	5	26	500		
	AVERAGE	10	387	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 57	MAX LEVEL	26	917	14	
	1	12	600		
	2	ND	467	SMEAR	
	3	26	750	ALPHA DPM	BETA DPM
	4	12	917	ND	ND
	5	ND	500		
	AVERAGE	10	647	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 58	MAX LEVEL	38	983	14	
	1	38	917		
	2	ND	567	SMEAR	
	3	26	767	ALPHA DPM	BETA DPM
	4	ND	733	ND	ND
	5	ND	983		
	AVERAGE	13	793	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 59	MAX LEVEL	26	750	14	
	1	ND	367		
	2	12	567	SMEAR	
	3	12	750	ALPHA DPM	BETA DPM
	4	26	433	ND	ND
	5	ND	667		
	AVERAGE	10	557	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 60	MAX LEVEL	12	617	14	
	1	12	617		
	2	12	583	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	ND	500	ND	6
	5	12	250		
	AVERAGE	7	480	DECON REQ	YES/NO

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 61	MAX LEVEL	26	450	15	
	1	26	450		
	2	12	267	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	ND	200	ND	56
	5	12	367		
	AVERAGE	10	327	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 62	MAX LEVEL	38	417	14	
	1	38	417		
	2	12	333	SMEAR	
	3	ND	267	ALPHA DPM	BETA DPM
	4	ND	333	ND	61
	5	12	67		
	AVERAGE	12	283	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 63	MAX LEVEL	26	450	14	
	1	26	317		
	2	12	167	SMEAR	
	3	ND	367	ALPHA DPM	BETA DPM
	4	26	450	3	ND
	5	12	183		
	AVERAGE	15	297	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 64	MAX LEVEL	38	867	16	
	1	12	467		
	2	12	567	SMEAR	
	3	26	867	ALPHA DPM	BETA DPM
	4	ND	750	ND	28
	5	38	833		
	AVERAGE	18	697	DECON REQ	YES/(NO)

DATE: 11·02·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 65	MAX LEVEL	38	950	16	
	1	12	733		
	2	ND	950	SMEAR	
	3	38	583	ALPHA DPM	BETA DPM
	4	ND	767	ND	ND
	5	ND	900		
	AVERAGE	10	787	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 66	MAX LEVEL	50	900	16	
	1	12	567		
	2	26	450	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	ND	833	ND	67
	5	50	900		
	AVERAGE	18	700	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 67	MAX LEVEL	12	633	16	
	1	12	633		
	2	12	333	SMEAR	
	3	ND	417	ALPHA DPM	BETA DPM
	4	ND	500	ND	ND
	5	12	567		
	AVERAGE	7	490	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 68	MAX LEVEL	26	417	15	
	1	ND	183		
	2	26	417	SMEAR	
	3	ND	233	ALPHA DPM	BETA DPM
	4	ND	350	3	ND
	5	ND	117		
	AVERAGE	5	260	DECON REQ	YES (NO)

DATE: 11.02 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 69	MAX LEVEL	38	767	15	
	1	38	767		
	2	12	533	SMEAR	
	3	ND	433	ALPHA DPM	BETA DPM
	4	12	567	3	11
	5	ND	600		
	AVERAGE	12	540	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 70	MAX LEVEL	26	267	12	
	1	12	50		
	2	ND	67	SMEAR	
	3	26	267	ALPHA DPM	BETA DPM
	4	ND	133	ND	72
	5	ND	183		
	AVERAGE	8	140	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 71	MAX LEVEL	12	550	12	
	1	ND	550		
	2	12	233	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	12	100	ND	ND
	5	12	500		
	AVERAGE	7	343	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 72	MAX LEVEL	26	500	12	
	1	12	500		
	2	ND	417	SMEAR	
	3	ND	217	ALPHA DPM	BETA DPM
	4	26	283	ND	ND
	5	ND	350		
	AVERAGE	8	353	DECON REQ	YES/NO

DATE: 11.02.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 73	MAX LEVEL	26	600	12	
	1	ND	567		
	2	12	383	SMEAR	
	3	26	433	ALPHA DPM	BETA DPM
	4	ND	600	3	ND
	5	ND	467		
	AVERAGE	8	490	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 74	MAX LEVEL	12	933	13	
	1	ND	600		
	2	ND	767	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	ND	567	ND	28
	5	12	933		
	AVERAGE	5	663	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 75	MAX LEVEL	38	683	13	
	1	ND	383		
	2	12	600	SMEAR	
	3	ND	683	ALPHA DPM	BETA DPM
	4	ND	417	ND	ND
	5	38	500		
	AVERAGE	10	517	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 76	MAX LEVEL	26	767	13	
	1	12	767		
	2	ND	600	SMEAR	
	3	26	500	ALPHA DPM	BETA DPM
	4	12	400	ND	ND
	5	ND	416		
	AVERAGE	10	537	DECON REQ	YES (NO)

DATE: 11-02-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 77	MAX LEVEL	12	867	13	
	1	12	750		
	2	ND	517	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	12	767	ND	ND
	5	ND	867		
	AVERAGE	7	670	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 78	MAX LEVEL	26	700	13	
	1	12	433		
	2	26	600	SMEAR	
	3	12	700	ALPHA DPM	BETA DPM
	4	ND	500	ND	28
	5	ND	383		
	AVERAGE	10	523.2	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 79	MAX LEVEL	12	767	12	
	1	ND	600		
	2	ND	767	SMEAR	
	3	12	267	ALPHA DPM	BETA DPM
	4	12	233	~~12~~ 3	22
	5	12	450		
	AVERAGE	7	463	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 80	MAX LEVEL	26	683	12	
	1	12	600		
	2	26	283	SMEAR	
	3	ND	683	ALPHA DPM	BETA DPM
	4	ND	517	3	ND
	5	12	467		
	AVERAGE	10	510	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 81	MAX LEVEL	83	500	11	
	1	ND	500		
	2	12	50	SMEAR	
	3	38	417	ALPHA DPM	BETA DPM
	4	ND	200	ND	ND
	5	ND	350		
	AVERAGE	10	303	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 82	MAX LEVEL	26	517	15	
	1	12	483		
	2	26	517	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	26	383	ND	ND
	5	ND	333		
	AVERAGE	13	423	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 83	MAX LEVEL	62	1067	15	
	1	ND	550		
	2	38	533	SMEAR	
	3	12	917	ALPHA DPM	BETA DPM
	4	ND	550	ND	ND
	5	67	1067		
	AVERAGE	22	723	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 84	MAX LEVEL	50	767	15	
	1	ND	767		
	2	50	400	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	ND	750	ND	44
	5	12	567		
	AVERAGE	15	587	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 85	MAX LEVEL	12	617	14	
	1	12	600		
	2	ND	317	SMEAR	
	3	12	617	ALPHA DPM	BETA DPM
	4	12	467	ND	11
	5	ND	567		
	AVERAGE	7	514	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 86	MAX LEVEL	26	850	14	
	1	ND	450		
	2	ND	767	SMEAR	
	3	ND	483	ALPHA DPM	BETA DPM
	4	26	850	ND	44
	5	ND	567		
	AVERAGE	5	623	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 87	MAX LEVEL	38	867	14	
	1	ND	767		
	2	38	867	SMEAR	
	3	12	317	ALPHA DPM	BETA DPM
	4	ND	617	ND	28
	5	12	467		
	AVERAGE	12	603	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 88	MAX LEVEL	26	550	13	
	1	12	533		
	2	26	350	SMEAR	
	3	12	417	ALPHA DPM	BETA DPM
	4	ND	483	3	ND
	5	ND	550		
	AVERAGE	10	467	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 89	MAX LEVEL	26	550	14	
	1	12	550		
	2	ND	400	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	26	433	ND	11
	5	ND	500		
	AVERAGE	8	467	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 90	MAX LEVEL	12	667	13	
	1	ND	350		
	2	12	567	SMEAR	
	3	12	433	ALPHA DPM	BETA DPM
	4	ND	667	ND	44
	5	ND	600		
	AVERAGE	5	523	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 91	MAX LEVEL	50	1100	13	
	1	ND	933		
	2	12	900	SMEAR	
	3	ND	1000	ALPHA DPM	BETA DPM
	4	50	1100	ND	ND
	5	26	750		
	AVERAGE	18	937	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 92	MAX LEVEL	12	533	13	
	1	12	233		
	2	12	483	SMEAR	
	3	ND	300	ALPHA DPM	BETA DPM
	4	ND	533	ND	ND
	5	ND	367		
	AVERAGE	5	383	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 93	MAX LEVEL	24	767	13	
	1	12	600		
	2	12	517	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	26	650	ND	ND
	5	12	400		
	AVERAGE	15	587	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 94	MAX LEVEL	12	617	12	
	1	ND	600		
	2	12	617	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	ND	517	ND	28
	5	ND	417		
	AVERAGE	2	497	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 95	MAX LEVEL	26	633	13	
	1	ND	550		
	2	26	433	SMEAR	
	3	ND	500	ALPHA DPM	BETA DPM
	4	ND	400	ND	ND
	5	12	633		
	AVERAGE	8	503	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 96	MAX LEVEL	26	350	14	
	1	ND	267		
	2	ND	116	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	26	183	ND	ND
	5	ND	233		
	AVERAGE	5	230	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 97	MAX LEVEL	26	550	13	
	1	ND	550		
	2	26	233	SMEAR	
	3	ND	300	ALPHA DPM	BETA DPM
	4	12	233	ND	ND
	5	ND	350		
	AVERAGE	8	333	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 98	MAX LEVEL	38	600	13	
	1	12	350		
	2	ND	417	SMEAR	
	3	ND	500	ALPHA DPM	BETA DPM
	4	ND	600	ND	ND
	5	38	567		
	AVERAGE	10	487	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 99	MAX LEVEL	26	550	12	
	1	26	550		
	2	12	267	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	ND	433	ND	67
	5	12	400		
	AVERAGE	10	397	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 100	MAX LEVEL	12	583	13	
	1	ND	567		
	2	12	583	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	ND	300	ND	ND
	5	12	433		
	AVERAGE	5	447	DECON REQ	YES/NO

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 101	MAX LEVEL	26	650	13	
	1	ND	400		
	2	26	650	SMEAR	
	3	12	500	ALPHA DPM	BETA DPM
	4	ND	567	ND	56
	5	12	617		
	AVERAGE	10	547	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 102	MAX LEVEL	76	650	16	
	1	ND	567		
	2	76	650	SMEAR	
	3	12	217	ALPHA DPM	BETA DPM
	4	12	567	ND	ND
	5	ND	600		
	AVERAGE	20	520	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 103	MAX LEVEL	50	567	15	
	1	50	533		
	2	ND	283	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	26	567	ND	ND
	5	12	333		
	AVERAGE	18	423	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 104	MAX LEVEL	38	667	14	
	1	ND	350		
	2	38	600	SMEAR	
	3	12	367	ALPHA DPM	BETA DPM
	4	ND	617	ND	62
	5	ND	667		
	AVERAGE	10	520	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 105	MAX LEVEL	26	550	14	
	1	12	500		
	2	12	400	SMEAR	
	3	26	300	ALPHA DPM	BETA DPM
	4	ND	333	ND	ND
	5	ND	550		
	AVERAGE	10	417	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 106	MAX LEVEL	12	317	14	
	1	12	250		
	2	ND	117	SMEAR	
	3	ND	216	ALPHA DPM	BETA DPM
	4	12	317	ND	ND
	5	ND	300		
	AVERAGE	5	240	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 107	MAX LEVEL	26	433	13	
	1	12	183		
	2	12	400	SMEAR	
	3	ND	433	ALPHA DPM	BETA DPM
	4	ND	300	3	ND
	5	26	233		
	AVERAGE	10	310	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 108	MAX LEVEL	12	400	13	
	1	12	333		
	2	ND	150	SMEAR	
	3	12	233	ALPHA DPM	BETA DPM
	4	12	400	ND	ND
	5	ND	183		
	AVERAGE	7	260	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 109	MAX LEVEL	26	533	13	
	1	26	533		
	2	12	250	SMEAR	
	3	12	467	ALPHA DPM	BETA DPM
	4	ND	350	ND	ND
	5	ND	317		
	AVERAGE	10	383	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 110	MAX LEVEL	38	1000	14	
	1	12	533		
	2	26	1000	SMEAR	
	3	ND	633	ALPHA DPM	BETA DPM
	4	38	550	ND	ND
	5	ND	683		
	AVERAGE	15	760	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 111	MAX LEVEL	12	600	14	
	1	ND	283		
	2	12	567	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	ND	517	7	22
	5	12	333		
	AVERAGE	7	460	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 112	MAX LEVEL	26	917	14	
	1	12	767		
	2	12	450	SMEAR	
	3	26	917	ALPHA DPM	BETA DPM
	4	ND	567	3	61
	5	ND	500		
	AVERAGE	10	640	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 113	MAX LEVEL	12	467	12	
	1	ND	467		
	2	12	350	SMEAR	
	3	12	417	ALPHA DPM	BETA DPM
	4	ND	283	ND	ND
	5	ND	400		
	AVERAGE	5	383	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 114	MAX LEVEL	26	617	12	
	1	12	300		
	2	ND	617	SMEAR	
	3	ND	517	ALPHA DPM	BETA DPM
	4	26	367	ND	ND
	5	ND	567		
	AVERAGE	8	474	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 115	MAX LEVEL	12	700	12	
	1	ND	700		
	2	12	517	SMEAR	
	3	12	383	ALPHA DPM	BETA DPM
	4	ND	550	3	6
	5	12	617		
	AVERAGE	7	553	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 116	MAX LEVEL	26	683	12	
	1	12	600		
	2	12	367	SMEAR	
	3	ND	517	ALPHA DPM	BETA DPM
	4	26	683	ND	ND
	5	ND	433		
	AVERAGE	10	520	DECON REQ	YES/NO

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 117	MAX LEVEL	12	633	12	
	1	ND	333		
	2	12	283	SMEAR	
	3	ND	583	ALPHA DPM	BETA DPM
	4	ND	517	ND	ND
	5	12	633		
	AVERAGE	5	470	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 118	MAX LEVEL	26	617	12	
	1	ND	300		
	2	26	600	SMEAR	
	3	ND	617	ALPHA DPM	BETA DPM
	4	ND	450	ND	39
	5	ND	350		
	AVERAGE	5	463	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 119	MAX LEVEL	12	400	13	
	1	12	367		
	2	ND	17	SMEAR	
	3	ND	67	ALPHA DPM	BETA DPM
	4	ND	400	ND	ND
	5	12	367		
	AVERAGE	5	244	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 120	MAX LEVEL	26	567	14	
	1	12	533		
	2	ND	317	SMEAR	
	3	26	567	ALPHA DPM	BETA DPM
	4	12	400	ND	6
	5	ND	333		
	AVERAGE	10	430	DECON REQ	YES (NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 121	MAX LEVEL	38	717	14	
	1	26	717		
	2	12	600	SMEAR	
	3	12	416	ALPHA DPM	BETA DPM
	4	ND	400	ND	ND
	5	38	700		
	AVERAGE	18	567	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 122	MAX LEVEL	26	683	13	
	1	26	683		
	2	12	600	SMEAR	
	3	12	383	ALPHA DPM	BETA DPM
	4	ND	400	3	ND
	5	ND	500		
	AVERAGE	10	513	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 123	MAX LEVEL	26	467	13	
	1	ND	67		
	2	ND	50	SMEAR	
	3	12	333	ALPHA DPM	BETA DPM
	4	26	467	ND	33
	5	ND	417		
	AVERAGE	8	267	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 124	MAX LEVEL	26	900	14	
	1	ND	433		
	2	12	833	SMEAR	
	3	ND	550	ALPHA DPM	BETA DPM
	4	26	900	7	ND
	5	12	533		
	AVERAGE	10	650	DECON REQ	YES/NO

DATE: 11 03 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 125	MAX LEVEL	12	783	14	
	1	12	783		
	2	12	617	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	ND	617	ND	ND
	5	12	417		
	AVERAGE	7	567	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 126	MAX LEVEL	38	917	14	
	1	26	900		
	2	ND	350	SMEAR	
	3	ND	383	ALPHA DPM	BETA DPM
	4	38	517	3	17
	5	ND	917		
	AVERAGE	13	613	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 127	MAX LEVEL	50	1150	14	
	1	ND	533		
	2	26	550	SMEAR	
	3	12	933	ALPHA DPM	BETA DPM
	4	50	1150	ND	22
	5	ND	883		
	AVERAGE	18	810	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 128	MAX LEVEL	26	583	15	
	1	26	583		
	2	12	533	SMEAR	
	3	ND	217	ALPHA DPM	BETA DPM
	4	12	350	7	ND
	5	ND	267		
	AVERAGE	10	390	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 129	MAX LEVEL	26	933	13	
	1	ND	933		
	2	26	383	SMEAR	
	3	26	450	ALPHA DPM	BETA DPM
	4	ND	400	ND	ND
	5	ND	767		
	AVERAGE	10	587	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 130	MAX LEVEL	12	667	13	
	1	ND	233		
	2	ND	216	SMEAR	
	3	12	667	ALPHA DPM	BETA DPM
	4	ND	500	3	ND
	5	ND	583		
	AVERAGE	2	440	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 131	MAX LEVEL	ND	1083	13	
	1	ND	1083		
	2	ND	1050	SMEAR	
	3	ND	933	ALPHA DPM	BETA DPM
	4	ND	550	ND	ND
	5	ND	767		
	AVERAGE	ND	877	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
OR 132	MAX LEVEL	12	617	13	
	1	12	350		
	2	ND	617	SMEAR	
	3	12	433	ALPHA DPM	BETA DPM
	4	ND	400	ND	67
	5	12	567		
	AVERAGE	5	473	DECON REQ	YES/NO

DATE: 11-03-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: FLOOR SURROUNDING REACTOR (2m)

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/5/92

METERS: #97276 EFF=0.12 BKG=65cpm / EFF=0.16, BKG=14cpm
Ludlum 2221 w/43-65-1 MDA=670 DPM/100cm² / 43-65 MDA=92 DPM/100cm²
#95511
Ludlum 19 BKG = 12 uR/hr
#74076 BETA EFF=0.18, BKG=58CPM, MDA=211 DPM/100cm²
Ludlum 2929 w/43-10-1 ALPHA EFF=0.3, BKG=0cpm, MDA 17.22DPM/100cm²

ADDITIONAL INFORMATION: Concrete Surface

F = FLOOR, ND = NOT DETECTABLE, SURVEY # 110592-1R

NOTES:

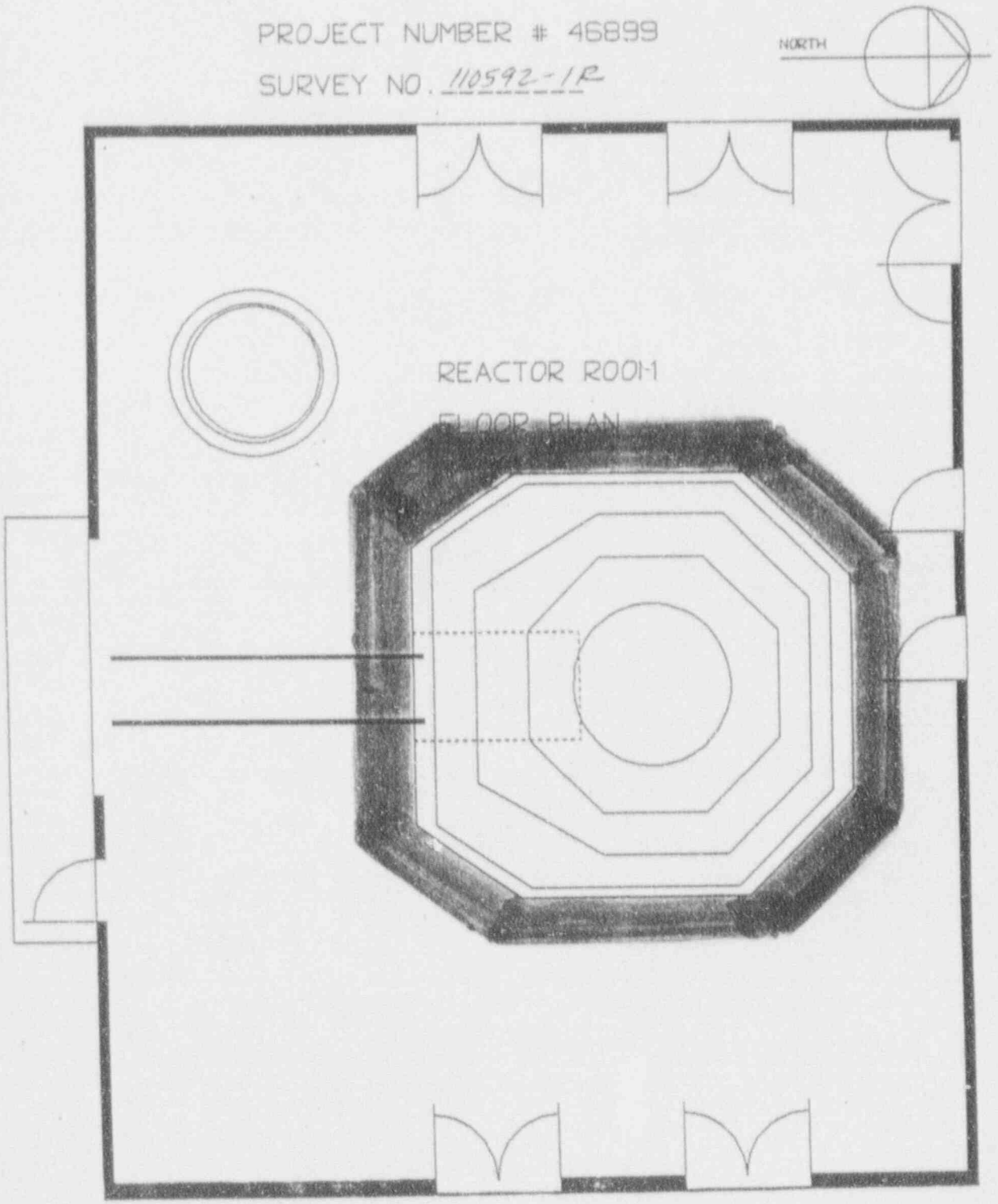
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: Dal Higgs for FE Robinson DATE: 11/9/92

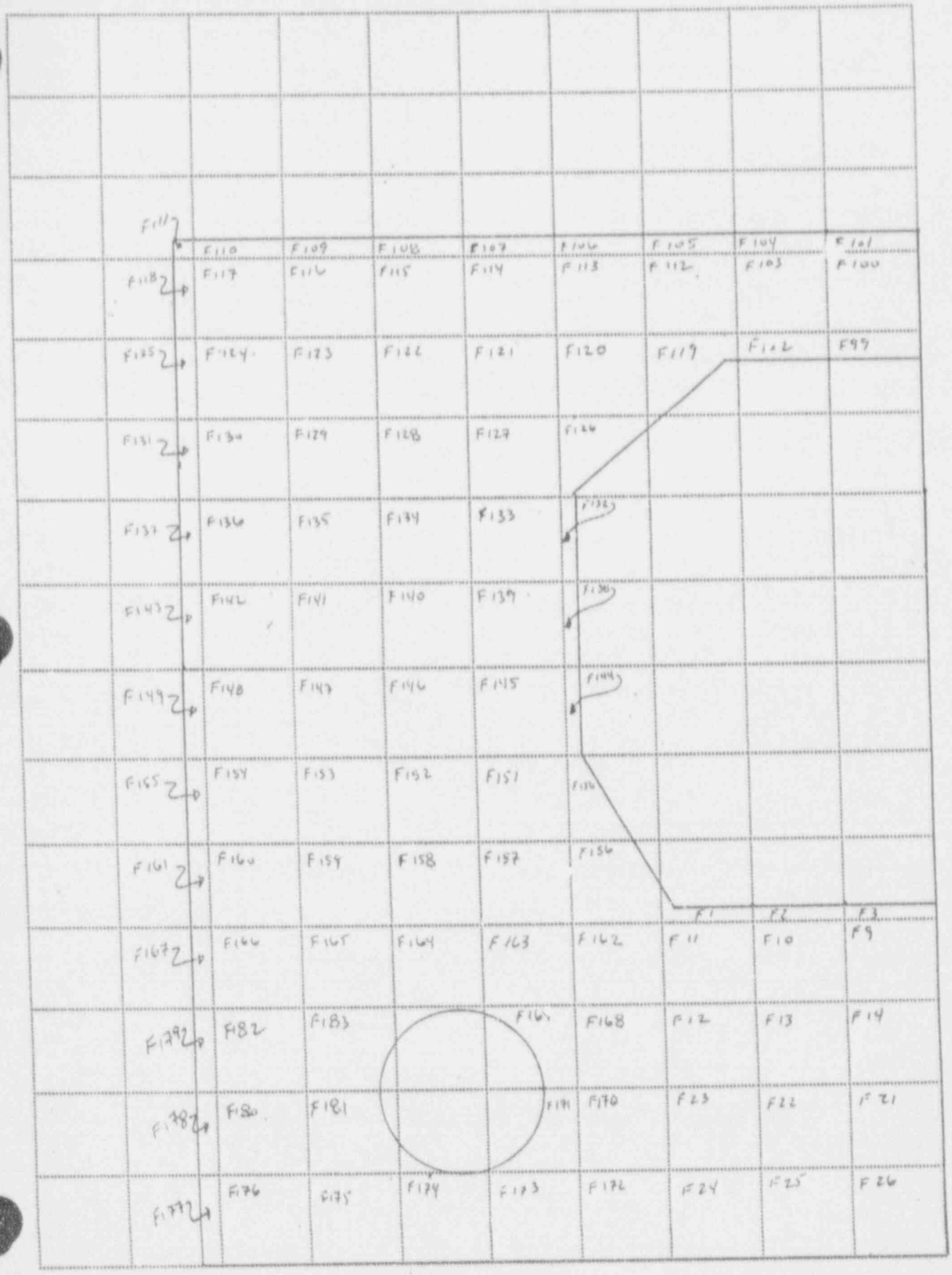
UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

PROJECT NUMBER # 46899

SURVEY NO. 110592-1R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11.05.92

FLOOR/CEILING

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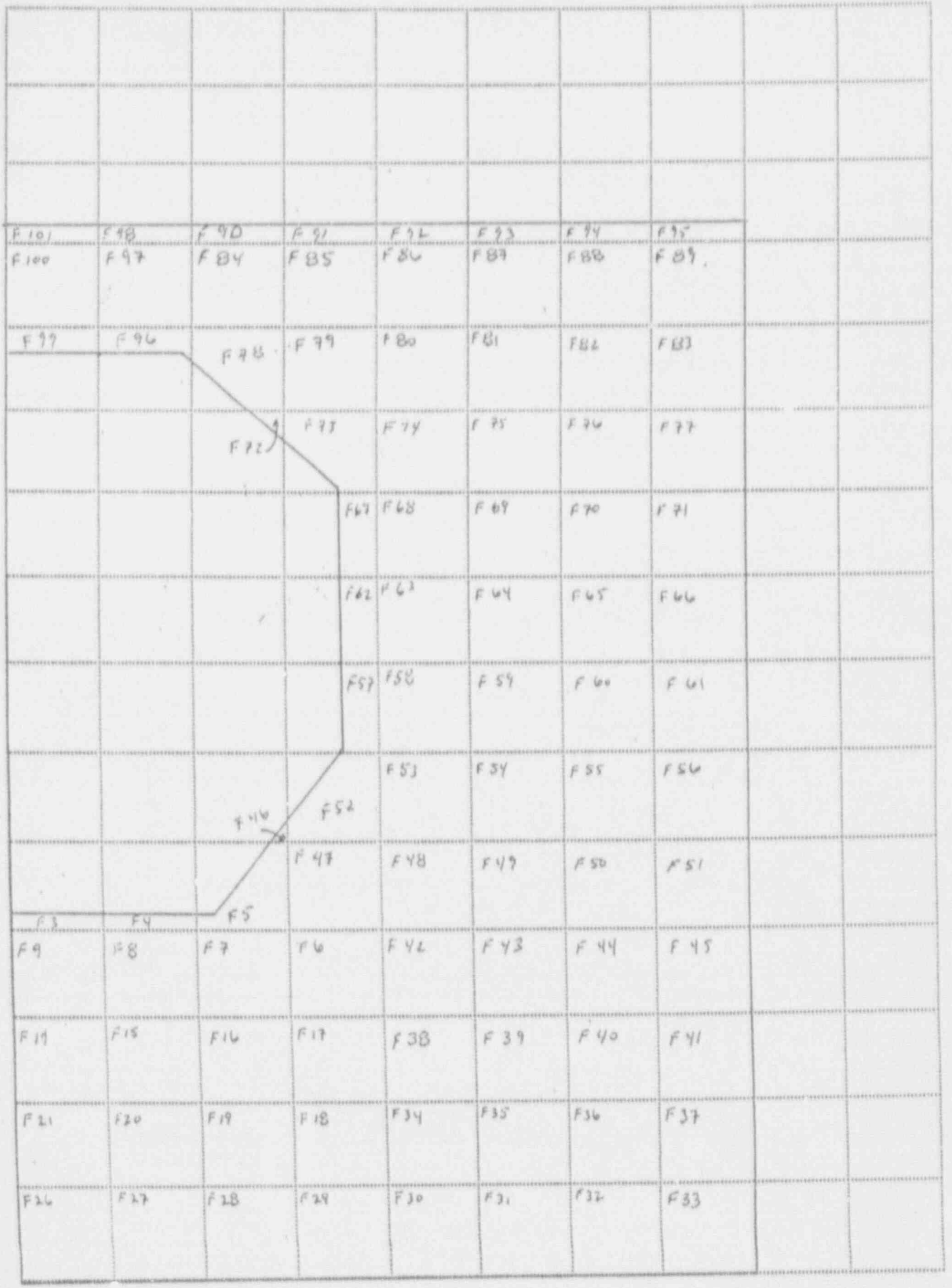
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11·05·92

FLOOR/CEILING

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 1	MAX LEVEL	26	617	9	
	1	ND	583		
	2	26	617	SMEAR	
	3	ND	467	ALPHA DPM	BETA DPM
	4	ND	333	ND	6
	5	12	567		
	AVERAGE	8	513	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 2	MAX LEVEL	12	483	10	
	1	ND	483		
	2	12	300	SMEAR	
	3	12	200	ALPHA DPM	BETA DPM
	4	ND	367	ND	28
	5	12	433		
	AVERAGE	7	357	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 3	MAX LEVEL	26	400	10	
	1	12	333		
	2	ND	400	SMEAR	
	3	ND	233	ALPHA DPM	BETA DPM
	4	ND	183	3	ND
	5	26	317		
	AVERAGE	8	293	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 4	MAX LEVEL	26	1017	9	
	1	ND	767		
	2	26	550	SMEAR	
	3	ND	683	ALPHA DPM	BETA DPM
	4	12	1017	ND	ND
	5	12	883		
	AVERAGE	10	780	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 5	MAX LEVEL	38	783	11	
	1	ND	700		
	2	38	783	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	ND	683	ND	ND
	5	12	550		
	AVERAGE	10	157	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA		RAD LEVEL	
100% F 6	MAX LEVEL	38	833	13	
	1	ND	667		
	2	38	783	SMEAR	
	3	12	550	ALPHA DPM	BETA DPM
	4	ND	750	ND	ND
	5	26	583		
	AVERAGE	15	667	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 7	MAX LEVEL	26	1083	12	
	1	ND	1083		
	2	26	667	SMEAR	
	3	ND	800	ALPHA DPM	BETA DPM
	4	12	1150	3	72
	5	12	983		
	AVERAGE	10	937	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 8	MAX LEVEL	12	1017	11	
	1	12	833		
	2	12	900	SMEAR	
	3	ND	1017	ALPHA DPM	BETA DPM
	4	12	867	ND	ND
	5	ND	950		
	AVERAGE	7	913	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 9	MAX LEVEL	12	1133	12	
	1	ND	617		
	2	12	817	SMEAR	
	3	ND	1000	ALPHA DPM	BETA DPM
	4	ND	1133	3	ND
	5	ND	1083		
	AVERAGE	2	930	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 10	MAX LEVEL	ND	1017	11	
	1	ND	917		
	2	ND	700	SMEAR	
	3	ND	800	ALPHA DPM	BETA DPM
	4	ND	1017	ND	22
	5	ND	750		
	AVERAGE	ND	837	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 11	MAX LEVEL	ND	1217	12	
	1	ND	1217		
	2	ND	650	SMEAR	
	3	ND	733	ALPHA DPM	BETA DPM
	4	ND	1083	ND	ND
	5	ND	983		
	AVERAGE	ND	933	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 46	MAX LEVEL	26	1067	11	
	1	12	983		
	2	26	633	SMEAR	
	3	ND	1067	ALPHA DPM	BETA DPM
	4	12	900	3	ND
	5	12	867		
	AVERAGE	12	890	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 47	MAX LEVEL	26	983	13	
	1	12	983		
	2	26	633	SMEAR	
	3	ND	600	ALPHA DPM	BETA DPM
	4	12	550	3	28
	5	ND	817		
	AVERAGE	10	717	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 52	MAX LEVEL	12	1217	13	
	1	12	1083		
	2	12	1217	SMEAR	
	3	ND	1000	ALPHA DPM	BETA DPM
	4	12	833	ND	ND
	5	ND	917		
	AVERAGE	7	1010	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 53	MAX LEVEL	26	967	14	
	1	ND	967		
	2	26	617	SMEAR	
	3	ND	667	ALPHA DPM	BETA DPM
	4	ND	900	3	ND
	5	ND	767		
	AVERAGE	5	784	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 57	MAX LEVEL	38	1167	14	
	1	ND	1033		
	2	38	1167	SMEAR	
	3	ND	1100	ALPHA DPM	BETA DPM
	4	ND	900	ND	14
	5	12	867		
	AVERAGE	10	1013	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 58	MAX LEVEL	26	1100	14	
	1	ND	983		
	2	ND	650	SMEAR	
	3	26	817	ALPHA DPM	BETA DPM
	4	ND	1100	ND	ND
	5	12	733		
	AVERAGE	8	857	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 62	MAX LEVEL	26	533	13	
	1	26	383		
	2	12	400	SMEAR	
	3	12	483	ALPHA DPM	BETA DPM
	4	ND	533	ND	50
	5	ND	433		
	AVERAGE	10	446	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 63	MAX LEVEL	12	833	13	
	1	ND	750		
	2	12	433	SMEAR	
	3	ND	667	ALPHA DPM	BETA DPM
	4	ND	853	3	ND
	5	12	517		
	AVERAGE	5	640	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 67	MAX LEVEL	38	850	13	
	1	ND	750		
	2	38	483	SMEAR	
	3	ND	850	ALPHA DPM	BETA DPM
	4	26	550	ND	ND
	5	ND	633		
	AVERAGE	13	517	DECON REQ	YES/NO

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 68	MAX LEVEL	26	683	13	
	1	ND	600		
	2	26	333	SMEAR	
	3	ND	433	ALPHA DPM	BETA DPM
	4	12	683	ND	ND
	5	ND	533		
	AVERAGE	8	516	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 72	MAX LEVEL	12	1067	13	
	1	ND	867		
	2	12	800	SMEAR	
	3	ND	933	ALPHA DPM	BETA DPM
	4	ND	1067	ND	ND
	5	12	833		
	AVERAGE	5	900	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 73	MAX LEVEL	38	1017	14	
	1	ND	650		
	2	26	550	SMEAR	
	3	ND	900	ALPHA DPM	BETA DPM
	4	38	1017	3	ND
	5	ND	933		
	AVERAGE	13	810	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 78	MAX LEVEL	12	917	14	
	1	ND	733		
	2	ND	450	SMEAR	
	3	12	533	ALPHA DPM	BETA DPM
	4	ND	917	ND	ND
	5	ND	650		
	AVERAGE	2	657	DECON REQ	YES (NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 79	MAX LEVEL	26	1000	14	
	1	ND	917		
	2	26	1000	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	ND	700	ND	28
	5	12	833		
	AVERAGE	10	780	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 84	MAX LEVEL	12	733	13	
	1	ND	517		
	2	12	617	SMEAR	
	3	12	733	ALPHA DPM	BETA DPM
	4	ND	550	ND	39
	5	12	583		
	AVERAGE	7	600	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 96	MAX LEVEL	26	400	13	
	1	ND	350		
	2	26	117	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	ND	183	3	ND
	5	26	233		
	AVERAGE	10	257	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 97	MAX LEVEL	26	667	13	
	1	ND	600		
	2	26	383	SMEAR	
	3	ND	283	ALPHA DPM	BETA DPM
	4	ND	667	ND	ND
	5	ND	367		
	AVERAGE	5	460	DECON REQ	YES/NO

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 99	MAX LEVEL	38	550	14	
	1	ND	450		
	2	38	300	SMEAR	
	3	ND	500	ALPHA DPM	BETA DPM
	4	12	550	ND	ND
	5	12	367		
	AVERAGE	12	433	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 100	MAX LEVEL	12	767	14	
	1	ND	717		
	2	12	467	SMEAR	
	3	ND	517	ALPHA DPM	BETA DPM
	4	12	767	3	ND
	5	12	650		
	AVERAGE	7	624	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 102	MAX LEVEL	26	833	15	
	1	ND	767		
	2	ND	567	SMEAR	
	3	26	700	ALPHA DPM	BETA DPM
	4	ND	833	ND	ND
	5	ND	650		
	AVERAGE	5	703	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 103	MAX LEVEL	ND	683	14	
	1	ND	483		
	2	ND	400	SMEAR	
	3	ND	600	ALPHA DPM	BETA DPM
	4	ND	683	3	ND
	5	ND	533		
	AVERAGE	ND	540	DECON REQ	YES (NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 112	MAX LEVEL	26	883	13	
	1	ND	750		
	2	26	633	SMEAR	
	3	12	550	ALPHA DPM	BETA DPM
	4	12	683	ND	39
	5	ND	883		
	AVERAGE	10	700	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 119	MAX LEVEL	26	350	14	
	1	ND	317		
	2	ND	167	SMEAR	
	3	26	233	ALPHA DPM	BETA DPM
	4	ND	350	3	ND
	5	12	317		
	AVERAGE	8	277	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 120	MAX LEVEL	12	767	15	
	1	ND	733		
	2	12	283	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	767	3	ND
	5	ND	450		
	AVERAGE	5	517	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 126	MAX LEVEL	26	383	14	
	1	26	183		
	2	ND	117	SMEAR	
	3	26	333	ALPHA DPM	BETA DPM
	4	ND	383	ND	ND
	5	ND	267		
	AVERAGE	10	257	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 127	MAX LEVEL	38	733	14	
	1	12	733		
	2	38	667	SMEAR	
	3	12	417	ALPHA DPM	BETA DPM
	4	12	600	ND	ND
	5	ND	533		
	AVERAGE	14	590	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 132	MAX LEVEL	26	767	13	
	1	12	633		
	2	26	467	SMEAR	
	3	ND	533	ALPHA DPM	BETA DPM
	4	12	767	ND	100
	5	ND	483		
	AVERAGE	10	577	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 133	MAX LEVEL	12	717	14	
	1	ND	583		
	2	12	433	SMEAR	
	3	ND	717	ALPHA DPM	BETA DPM
	4	12	667	ND	ND
	5	ND	483		
	AVERAGE	5	577	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 138	MAX LEVEL	12	683	13	
	1	12	567		
	2	ND	683	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	ND	500	ND	ND
	5	ND	650		
	AVERAGE	2	570	DECON REQ	YES / NO

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 139	MAX LEVEL	26	700	13	
	1	ND	650		
	2	26	400	SMEAR	
	3	12	483	ALPHA DPM	BETA DPM
	4	ND	700	ND	33
	5	ND	550		
	AVERAGE	8	557	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 144	MAX LEVEL	ND	617	13	
	1	ND	583		
	2	ND	400	SMEAR	
	3	ND	617	ALPHA DPM	BETA DPM
	4	ND	467	ND	ND
	5	ND	517		
	AVERAGE	ND	517	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 145	MAX LEVEL	26	550	13	
	1	ND	483		
	2	26	333	SMEAR	
	3	12	550	ALPHA DPM	BETA DPM
	4	26	367	ND	11
	5	ND	400		
	AVERAGE	13	427	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 150	MAX LEVEL	12	1033	12	
	1	ND	1000		
	2	12	583	SMEAR	
	3	12	833	ALPHA DPM	BETA DPM
	4	ND	733	ND	ND
	5	12	1033		
	AVERAGE	7	836	DECON REQ	YES (NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 151	MAX LEVEL	88	1100	13	
	1	ND	700		
	2	26	817	SMEAR	
	3	ND	1100	ALPHA DPM	BETA DPM
	4	12	900	ND	ND
	5	ND	1000		
	AVERAGE	8	903	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 156	MAX LEVEL	12	867	13	
	1	12	817		
	2	ND	550	SMEAR	
	3	ND	867	ALPHA DPM	BETA DPM
	4	12	683	3	ND
	5	ND	783		
	AVERAGE	5	740	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
100% F 157	MAX LEVEL	26	667	12	
	1	ND	667		
	2	26	450	SMEAR	
	3	12	517	ALPHA DPM	BETA DPM
	4	ND	600	ND	11
	5	12	467		
	AVERAGE	10	540	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2	N/A		SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11-04-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: REACTOR BUILDING WALLS (3 METERS HIGH)

SURVEYOR: E CHRETIEN, R CHRETIEN, D HIGGINS

DATE: 11/06/92

METERS: #97276 EFF=0.12 BKG=65cpm / EFF=0.16, BKG=14cpm
Ludlum 2221 w/43-65-1 MDA=670 DPM/100cm² / 43-65 MDA=92 DPM/100cm²
#95511
Ludlum 19 BKG = 14 uR/hr
#7406 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm²
Ludlum 2929 w/43-10-1 ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: Concrete Block walls, Wood Doors, B 11-4-92 Glass windows, Roll-up Metal Door, E=East N=North W=West S=South

RBW = Reactor Building Wall, SURVEY # 110692-1R

NOTES: # HIGHER RADIATION LEVEL (μR/hr) DUE TO RADIOACTIVE MATERIAL STORED IN KU LABS

1. All measurements recorded in DPM are equivalent to DPM/100cm².

2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.

3. All smears are taken at the location indicating the maximum level of contamination.

4. Map orientation arrows point North.

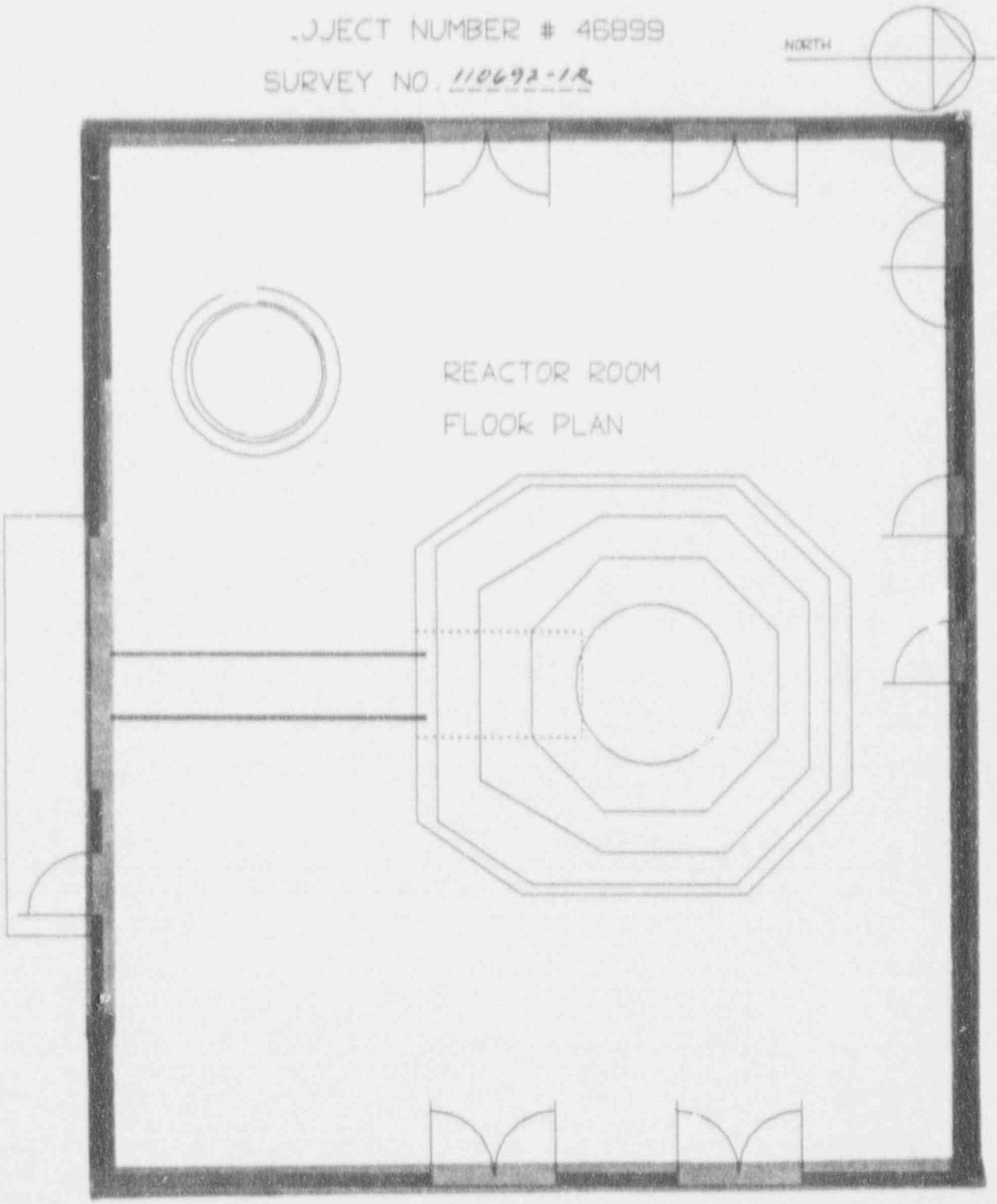
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: [signature] DATE: 11/9/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

.JJECT NUMBER # 46899

SURVEY NO. 110692-1R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD

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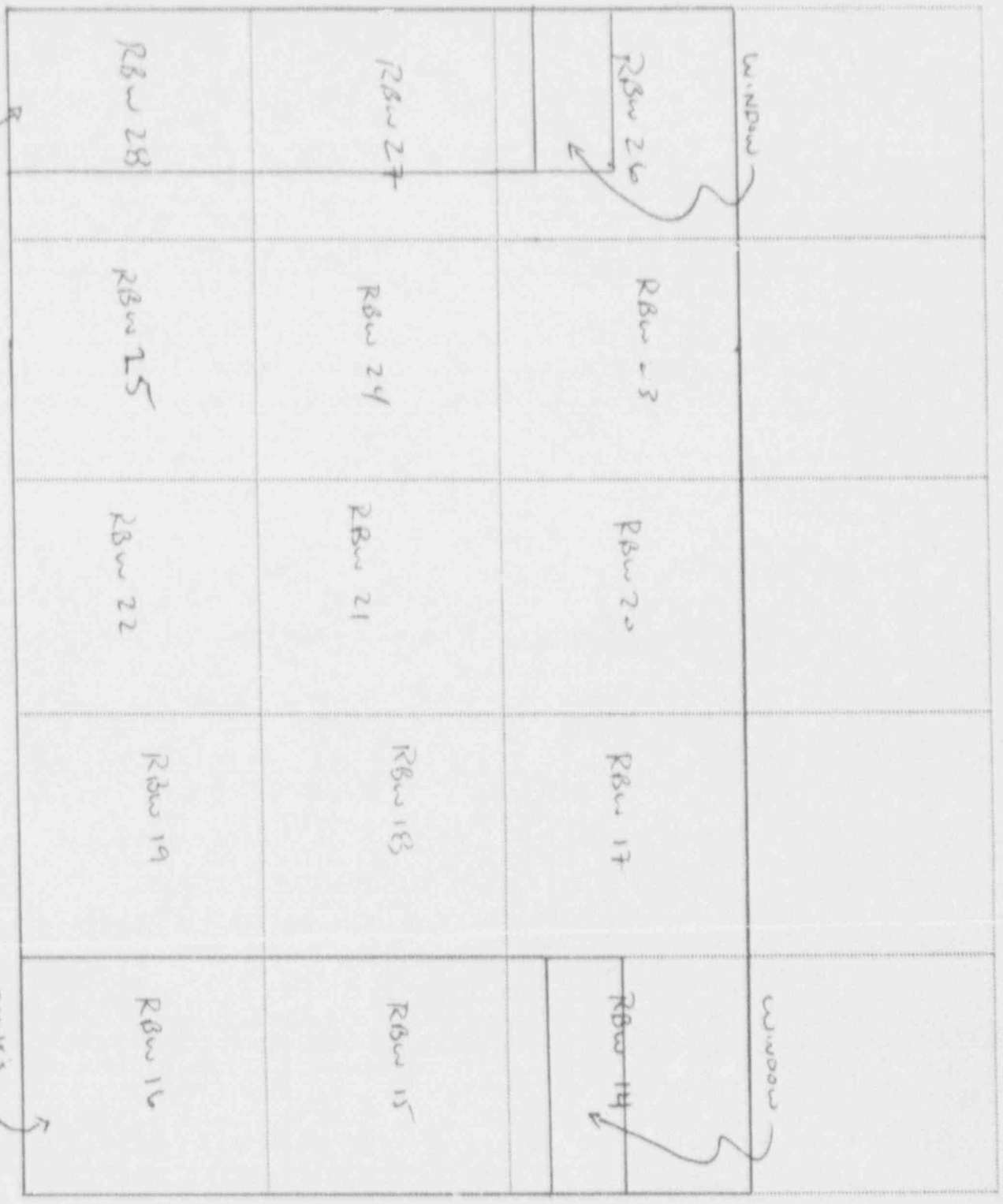
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



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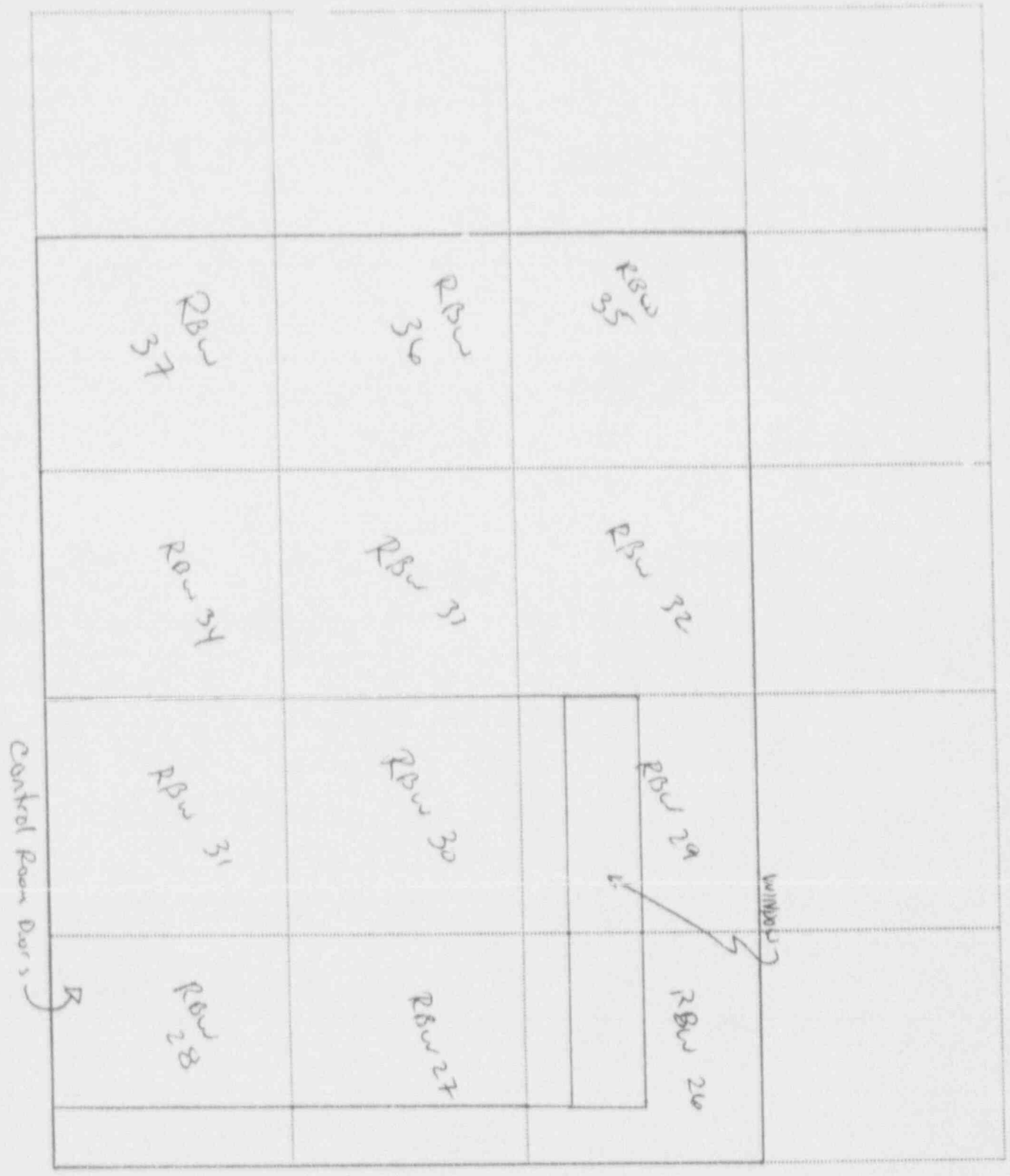

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

RBW 50	RBW 51	RBW 52	
RBW 47	RBW 48	RBW 49	
RBW 44	RBW 45	RBW 46	
RBW 41	RBW 42	RBW 43	
RBW 38	RBW 39	RBW 40	

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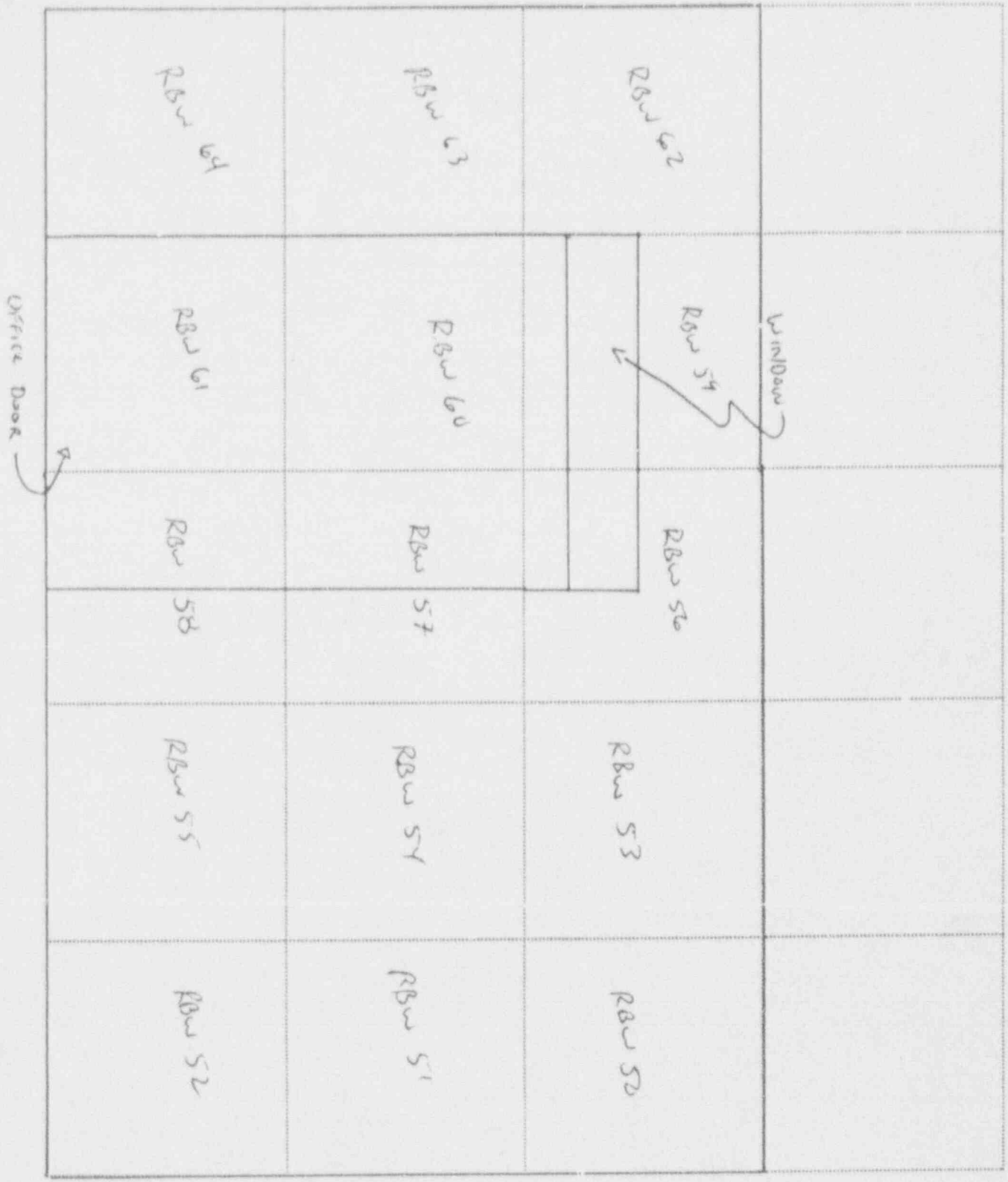
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



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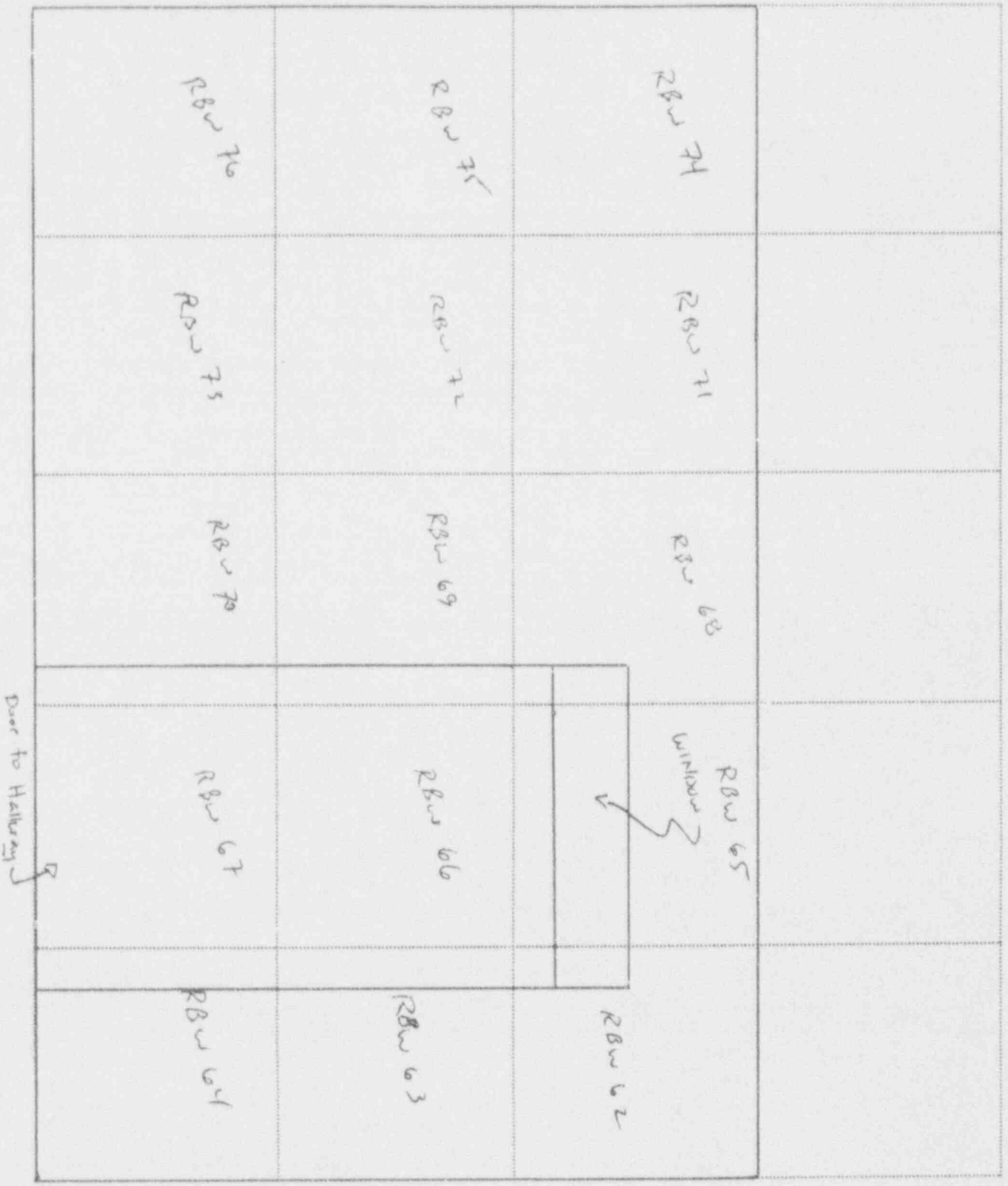
RBW 74
RBW 75
RBW 76
RBW 71
RBW 72
RBW 73
RBW 68
RBW 69
RBW 70
RBW 65
Window
RBW 66
RBW 67
Door to Hallway
RBW 62
RBW 63
RBW 64

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

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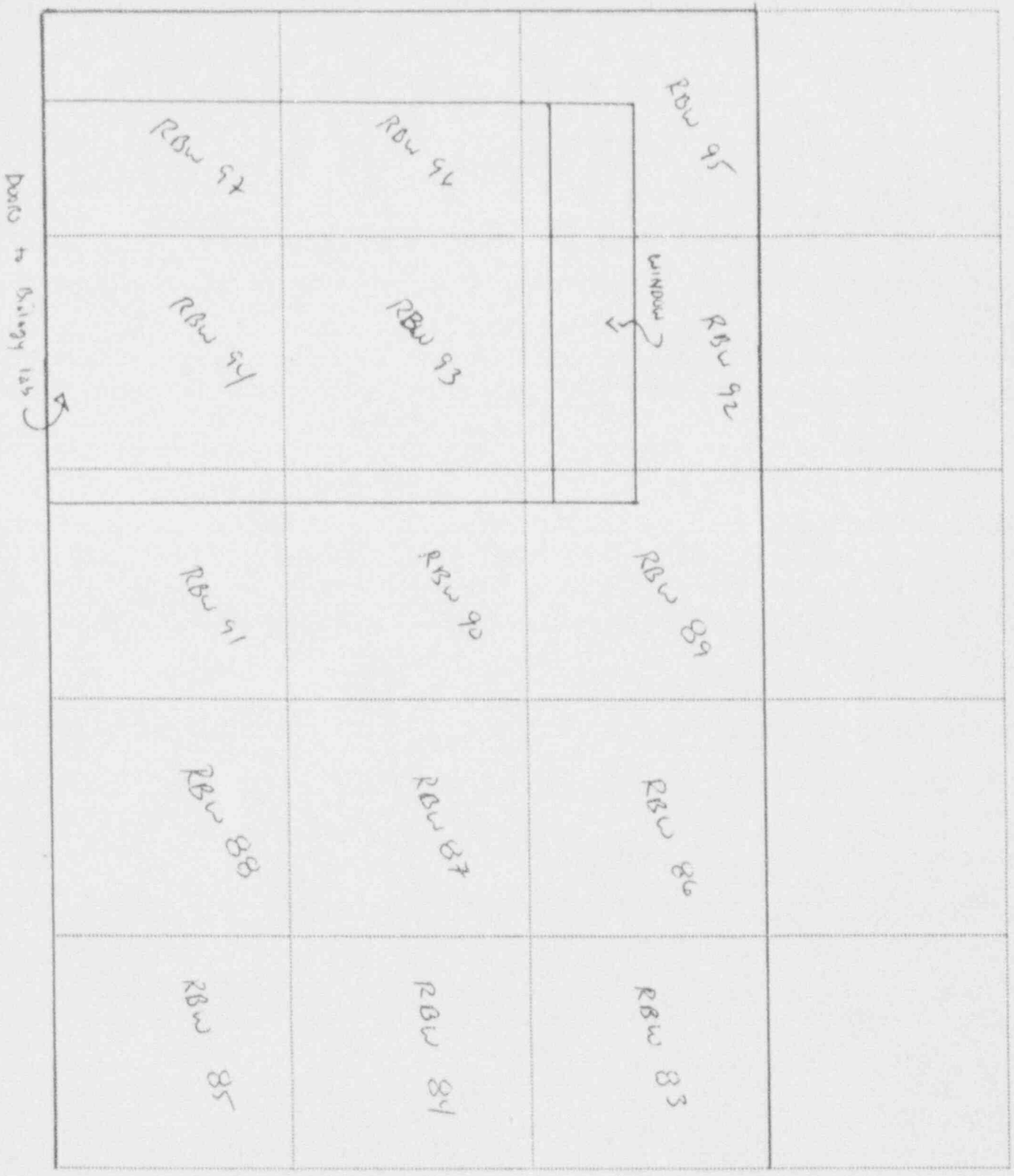
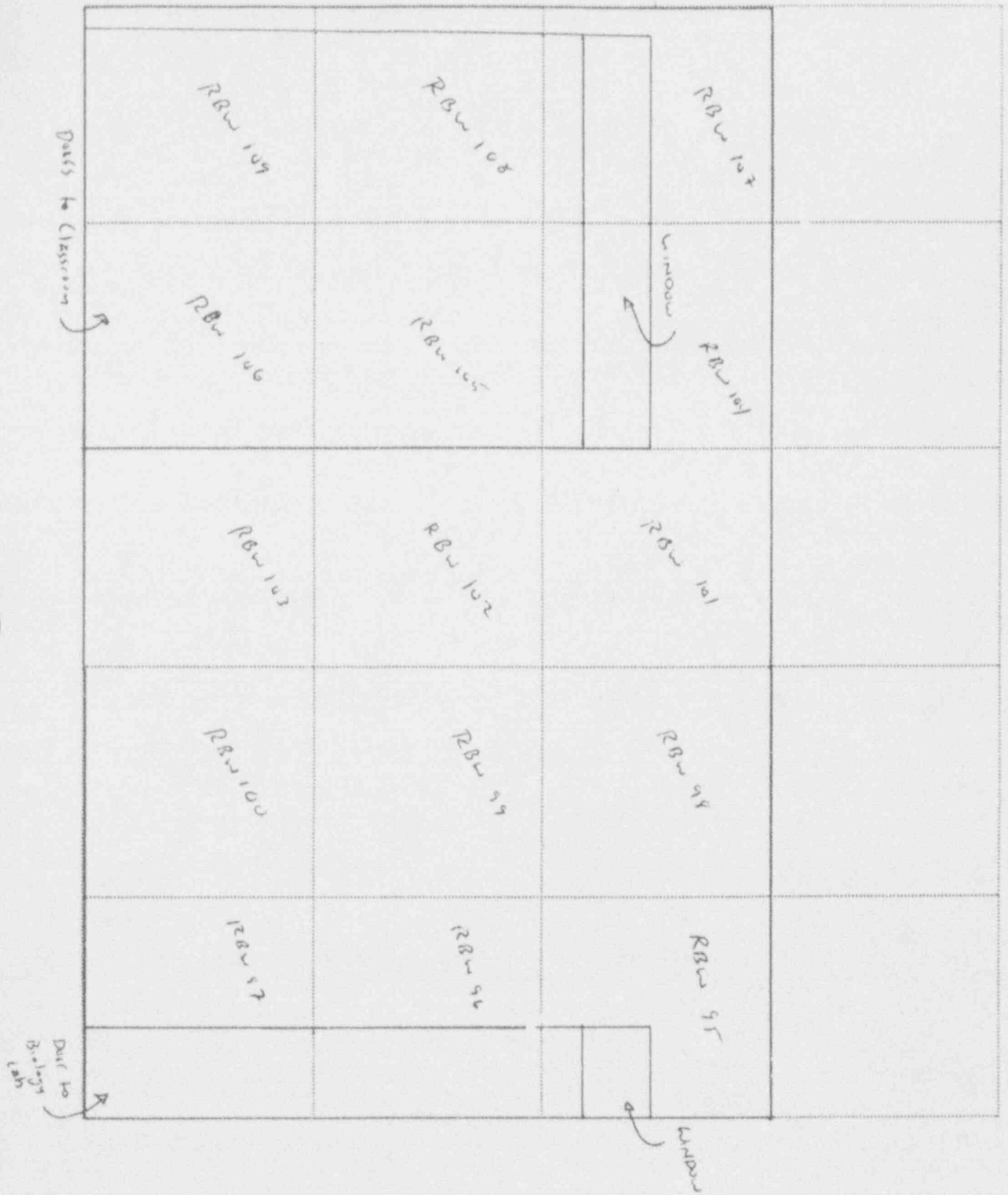

RBW 95
RBW 96
RBW 97
RBW 92
RBW 93
RBW 94
WINDOW
Door to Bridge 125
RBW 89
RBW 90
RBW 91
RBW 86
RBW 87
RBW 88
RBW 83
RBW 84
RBW 85



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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

	RBW 134	RBW 135	RBW 136	
	RBW 131	RBW 132	RBW 133	
	RBW 128	RBW 129	RBW 130	
	RBW 125	RBW 126	RBW 127	
	RBW 122	RBW 123	RBW 124	

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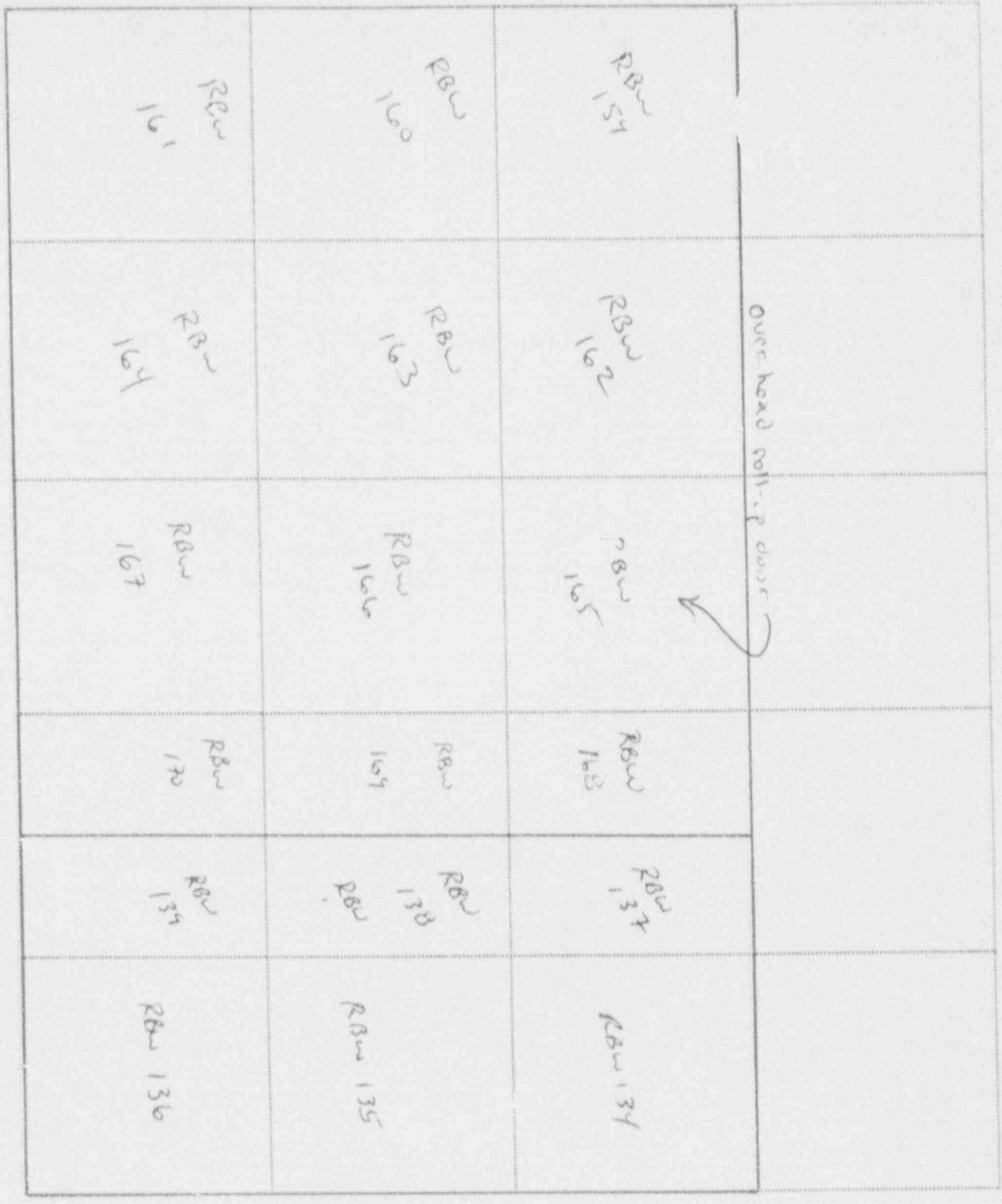
KUTR DECOMMISSIONING PROJECT SURVEY RECORD



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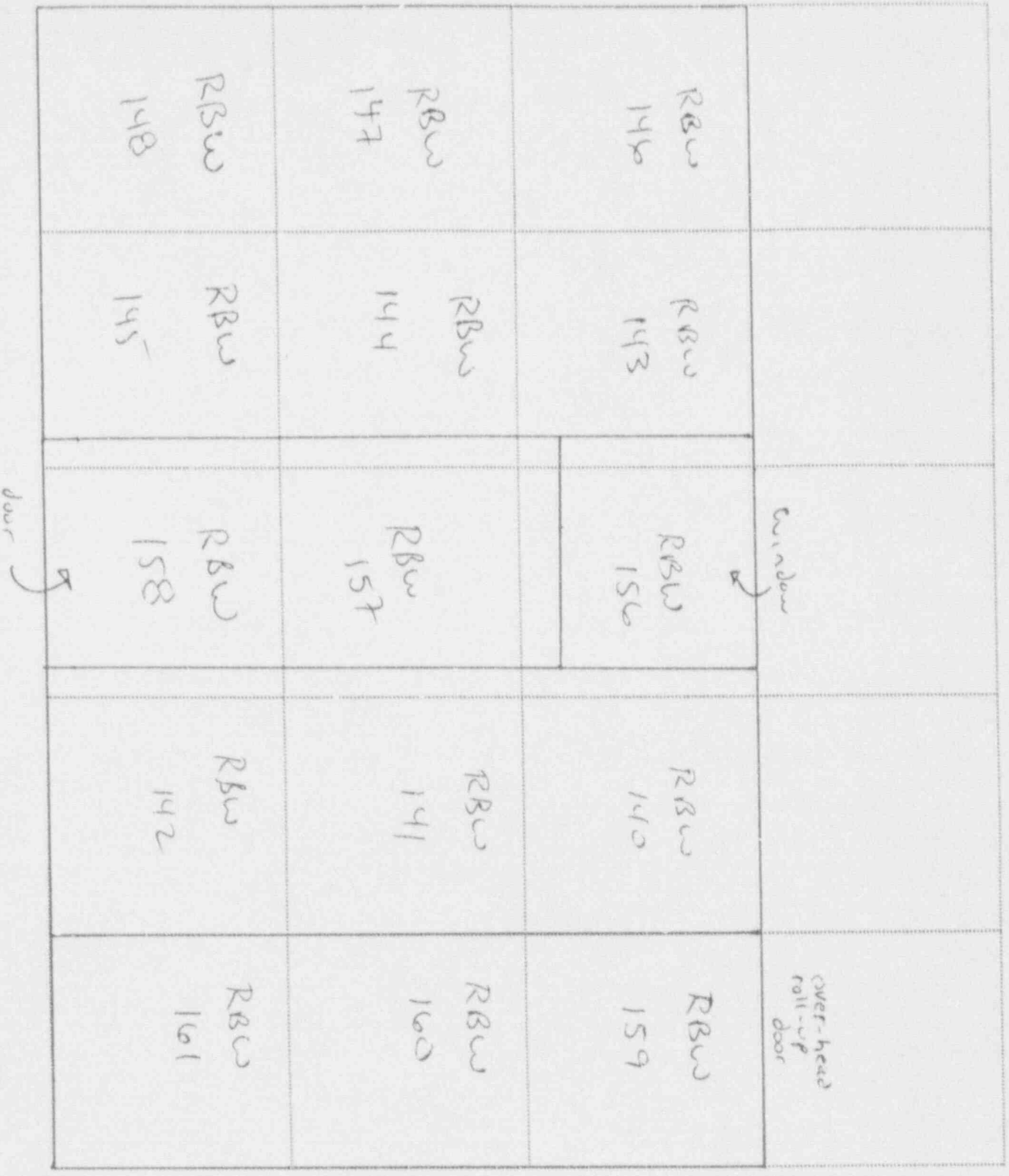
RBW 146
RBW 143
RBW 147
RBW 144
RBW 148
RBW 145
window
RBW 156
door
RBW 158
RBW 157
RBW 140
RBW 141
RBW 142
RBW 159
RBW 160
RBW 161
over-head roll-up door

RBW 154	RBW 153	RBW 152	
RBW 151	RBW 150	RBW 149	
RBW 148	RBW 147	RBW 146	

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 2	MAX LEVEL	26	1200	15	
	1	12	1200		
	2	12	633	SMEAR	
	3	ND	967	ALPHA DPM	BETA DPM
	4	26	667	7	6
	5	ND	767		
	AVERAGE	10	847	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 4	MAX LEVEL	38	1450	16	
	1	ND	1450		
	2	38	1783	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	1117	3	ND
	5	12	950		
	AVERAGE	10	913	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 6	MAX LEVEL	38	1300	17	
	1	ND	1300		
	2	ND	800	SMEAR	
	3	ND	700	ALPHA DPM	BETA DPM
	4	38	1167	ND	17
	5	ND	1017		
	AVERAGE	8	997	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 8	MAX LEVEL	26	600	16	
	1	ND	283		
	2	12	600	SMEAR	
	3	26	517	ALPHA DPM	BETA DPM
	4	ND	450	3	6
	5	12	350		
	AVERAGE	10	440	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW10	MAX LEVEL	26	1300	15	
	1	ND	683		
	2	26	1300	SMEAR	
	3	ND	1083	ALPHA DPM	BETA DPM
	4	12	767	ND	ND
	5	ND	900		
	AVERAGE	8	947	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW12	MAX LEVEL	12	1233	16	
	1	ND	550		
	2	12	1233	SMEAR	
	3	ND	967	ALPHA DPM	BETA DPM
	4	12	817	3	11
	5	12	600		
	AVERAGE	7	833	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW14	MAX LEVEL	26	450	14	
	1	ND	400		
	2	12	450	SMEAR	
	3	26	100	ALPHA DPM	BETA DPM
	4	12	167	ND	ND
	5	ND	300		
	AVERAGE	10	283	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 16	MAX LEVEL	12	350	15	
	1	12	350		
	2	12	ND	SMEAR	
	3	ND	250	ALPHA DPM	BETA DPM
	4	12	ND	6	28
	5	12	100		
	AVERAGE	10	140	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 18	MAX LEVEL	38	433	15	
	1	ND	433		
	2	38	350	SMEAR	
	3	ND	50	ALPHA DPM	BETA DPM
	4	12	150	ND	67
	5	ND	217		
	AVERAGE	10	240	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 20	MAX LEVEL	12	717	14	
	1	ND	633		
	2	12	233	SMEAR	
	3	12	567	ALPHA DPM	BETA DPM
	4	ND	717	ND	ND
	5	ND	283		
	AVERAGE	5	487	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 22	MAX LEVEL	26	900	15	
	1	ND	900		
	2	26	350	SMEAR	
	3	ND	733	ALPHA DPM	BETA DPM
	4	12	767	ND	ND
	5	ND	450		
	AVERAGE	8	640	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 24	MAX LEVEL	38	1283	15	
	1	ND	1283		
	2	ND	600	SMEAR	
	3	38	1083	ALPHA DPM	BETA DPM
	4	ND	767	ND	61
	5	12	1000		
	AVERAGE	10	767	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 26	MAX LEVEL	38	600	14	
	1	ND	600		
	2	12	567	SMEAR	
	3	38	33	ALPHA DPM	BETA DPM
	4	ND	283	ND	25
	5	ND	133		
	AVERAGE	10	323	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 28	MAX LEVEL	26	983	15	
	1	ND	517		
	2	12	767	SMEAR	
	3	ND	983	ALPHA DPM	BETA DPM
	4	26	933	ND	11
	5	ND	600		
	AVERAGE	8	760	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 30	MAX LEVEL	12	33	13	
	1	NO	33		
	2	12	ND	SMEAR	
	3	ND	NP	ALPHA DPM	BETA DPM
	4	ND	ND	3	ND
	5	ND	ND		
	AVERAGE	2	7	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 32	MAX LEVEL	26	650	13	
	1	12	650		
	2	ND	583	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	26	400	ND	ND
	5	12	467		
	AVERAGE	10	490	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 34	MAX LEVEL	12	1267	14	
	1	12	1267		
	2	ND	667	SMEAR	
	3	12	617	ALPHA DPM	BETA DPM
	4	ND	1167	ND	ND
	5	ND	767		
	AVERAGE	5	897	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 36	MAX LEVEL	12	983	14	
	1	12	983		
	2	12	467	SMEAR	
	3	ND	933	ALPHA DPM	BETA DPM
	4	12	767	3	11
	5	12	567		
	AVERAGE	10	743	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 38	MAX LEVEL	26	1283	14	
	1	12	1217		
	2	ND	767	SMEAR	
	3	26	1083	ALPHA DPM	BETA DPM
	4	ND	933	ND	ND
	5	12	1283		
	AVERAGE	10	1057	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 40	MAX LEVEL	26	1950	14	
	1	ND	1950		
	2	26	1817	SMEAR	
	3	ND	1483	ALPHA DPM	BETA DPM
	4	26	867	ND	ND
	5	ND	1117		
	AVERAGE	10	1447	DECON REQ	YES / NO

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 42	MAX LEVEL	26	1617	14	
	1	ND	683		
	2	26	1400	SMEAR	
	3	ND	933	ALPHA DPM	BETA DPM
	4	ND	1617	3	ND
	5	ND	1200		
	AVERAGE	5	1167	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 44	MAX LEVEL	12	1183	14	
	1	ND	1050		
	2	12	1100	SMEAR	
	3	ND	650	ALPHA DPM	BETA DPM
	4	12	767	ND	50
	5	ND	1183		
	AVERAGE	5	950	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 46	MAX LEVEL	12	1150	13	
	1	ND	617		
	2	12	850	SMEAR	
	3	12	1100	ALPHA DPM	BETA DPM
	4	ND	1150	ND	ND
	5	12	950		
	AVERAGE	7	933	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 48	MAX LEVEL	26	1333	13	
	1	ND	1333		
	2	12	750	SMEAR	
	3	ND	983	ALPHA DPM	BETA DPM
	4	26	1250	ND	6
	5	12	1033		
	AVERAGE	10	1030	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 50	MAX LEVEL	26	733	13	
	1	12	567		
	2	ND	383	SMEAR	
	3	26	650	ALPHA DPM	BETA DPM
	4	ND	617	ND	6
	5	ND	733		
	AVERAGE	8	590	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 52	MAX LEVEL	12	2033	12	
	1	12	2033		
	2	12	450	SMEAR	
	3	ND	433	ALPHA DPM	BETA DPM
	4	ND	1517	ND	ND
	5	ND	1217		
	AVERAGE	5	1130	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 54	MAX LEVEL	38	1100	13	
	1	ND	1100		
	2	38	750	SMEAR	
	3	ND	983	ALPHA DPM	BETA DPM
	4	12	633	ND	6
	5	ND	783		
	AVERAGE	10	850	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 56	MAX LEVEL	26	417	14	
	1	ND	417		
	2	12	383	SMEAR	
	3	26	167	ALPHA DPM	BETA DPM
	4	ND	283	ND	ND
	5	12	367		
	AVERAGE	10	323	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 58	MAX LEVEL	26	967	14	
	1	ND	967		
	2	ND	767	SMEAR	
	3	ND	550	ALPHA DPM	BETA DPM
	4	26	667	ND	22
	5	ND	867		
	AVERAGE	5	764	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 60	MAX LEVEL	12	250	14	
	1	ND	133		
	2	12	ND	SMEAR	
	3	12	217	ALPHA DPM	BETA DPM
	4	ND	67	ND	ND
	5	12	250		
	AVERAGE	7	133	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 62	MAX LEVEL	12	550	15	
	1	ND	183		
	2	12	283	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	ND	550	7	11
	5	12	483		
	AVERAGE	5	380	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 64	MAX LEVEL	26	1133	15	
	1	ND	1133		
	2	12	617	SMEAR	
	3	26	733	ALPHA DPM	BETA DPM
	4	ND	1017	ND	ND
	5	12	817		
	AVERAGE	10	863	DECON REQ	YES/NO

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 66	MAX LEVEL	12	383	15	
	1	ND	267		
	2	12	ND	SMEAR	
	3	ND	150	ALPHA DPM	BETA DPM
	4	ND	383	3	39
	5	12	ND		
	AVERAGE	5	160	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 68	MAX LEVEL	24	267	17	
	1	ND	250		
	2	24	183	SMEAR	
	3	12	50	ALPHA DPM	BETA DPM
	4	ND	183	ND	ND
	5	ND	267		
	AVERAGE	7	187	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 70	MAX LEVEL	12	633	18	
	1	ND	283		
	2	12	633	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	12	433	ND	ND
	5	12	567		
	AVERAGE	7	497	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 72	MAX LEVEL	24	867	21	
	1	12	450		
	2	12	867	SMEAR	
	3	24	583	ALPHA DPM	BETA DPM
	4	ND	733	ND	ND
	5	ND	867		
	AVERAGE	10	700	DECON REQ	YES / NO

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 74	MAX LEVEL	26	1350	20	
	1	ND	867		
	2	26	1183	SMEAR	
	3	ND	900	ALPHA DPM	BETA DPM
	4	12	1033	3	11
	5	12	1350		
	AVERAGE	10	1067	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 76	MAX LEVEL	38	2150	20	
	1	26	1583		
	2	ND	1883	SMEAR	
	3	ND	2083	ALPHA DPM	BETA DPM
	4	38	2150	ND	ND
	5	12	1733		
	AVERAGE	15	1886	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 78	MAX LEVEL	26	1517	20	
	1	ND	933		
	2	26	1517	SMEAR	
	3	26	1283	ALPHA DPM	BETA DPM
	4	ND	1417	7	ND
	5	12	833		
	AVERAGE	13	1197	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 80	MAX LEVEL	26	583	22	
	1	ND	300		
	2	26	200	SMEAR	
	3	12	450	ALPHA DPM	BETA DPM
	4	ND	583	ND	22
	5	12	567		
	AVERAGE	10	420	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 82	MAX LEVEL	26	417	24	
	1	ND	417		
	2	ND	350	SMEAR	
	3	26	400	ALPHA DPM	BETA DPM
	4	ND	183	ND	ND
	5	12	50		
	AVERAGE	8	280	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 84	MAX LEVEL	26	767	23	
	1	ND	600		
	2	12	417	SMEAR	
	3	12	733	ALPHA DPM	BETA DPM
	4	ND	767	ND	ND
	5	26	550		
	AVERAGE	10	613	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 86	MAX LEVEL	12	933	20	
	1	ND	833		
	2	12	517	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	ND	933	7	ND
	5	12	767		
	AVERAGE	5	723	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* RBW 88	MAX LEVEL	12	600	19	
	1	12	300		
	2	ND	533	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	ND	417	3	28
	5	ND	333		
	AVERAGE	5	437	DECON REQ	YES (NO)

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KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 90	MAX LEVEL	26	1150	14	
	1	ND	1083		
	2	26	1150	SMEAR	
	3	12	983	ALPHA DPM	BETA DPM
	4	26	617	ND	ND
	5	ND	750		
	AVERAGE	13	917	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 92	MAX LEVEL	12	300	14	
	1	12	233		
	2	ND	ND	SMEAR	
	3	ND	300	ALPHA DPM	BETA DPM
	4	12	67	ND	ND
	5	ND	183		
	AVERAGE	5	157	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 94	MAX LEVEL	38	333	13	
	1	12	333		
	2	ND	67	SMEAR	
	3	ND	167	ALPHA DPM	BETA DPM
	4	38	267	3	56
	5	ND	50		
	AVERAGE	10	177	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 96	MAX LEVEL	38	1200	14	
	1	ND	617		
	2	38	1050	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	26	933	ND	61
	5	ND	1200		
	AVERAGE	13	904	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 98	MAX LEVEL	26	1217	14	
	1	ND	750		
	2	26	983	SMEAR	
	3	26	1217	ALPHA DPM	BETA DPM
	4	ND	1167	ND	28
	5	12	750		
	AVERAGE	13	973	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 100	MAX LEVEL	12	1200	12	
	1	ND	1017		
	2	12	633	SMEAR	
	3	ND	717	ALPHA DPM	BETA DPM
	4	12	1200	ND	17
	5	12	850		
	AVERAGE	7	883	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 102	MAX LEVEL	26	1067	16	
	1	12	1067		
	2	26	600	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	1000	ND	ND
	5	12	633		
	AVERAGE	10	813	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 104	MAX LEVEL	12	667	14	
	1	12	600		
	2	ND	383	SMEAR	
	3	12	400	ALPHA DPM	BETA DPM
	4	ND	667	3	ND
	5	ND	567		
	AVERAGE	5	523	DECON REQ	YES (NO)

DATE: 11·03·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBw 106	MAX LEVEL	12	267	12	
	1	ND	167		
	2	ND	ND	SMEAR	
	3	ND	133	ALPHA DPM	BETA DPM
	4	12	267	ND	ND
	5	ND	ND		
	AVERAGE	2	113	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBw 108	MAX LEVEL	26	650	15	
	1	12	600		
	2	26	33	SMEAR	
	3	ND	350	ALPHA DPM	BETA DPM
	4	12	450	ND	ND
	5	ND	650		
	AVERAGE	10	417	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBw 110	MAX LEVEL	12	1333	16	
	1	ND	1083		
	2	12	950	SMEAR	
	3	12	1167	ALPHA DPM	BETA DPM
	4	ND	1250	ND	ND
	5	12	1333		
	AVERAGE	7	1157	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBw 112	MAX LEVEL	26	1217	14	
	1	12	850		
	2	26	917	SMEAR	
	3	12	1017	ALPHA DPM	BETA DPM
	4	ND	1217	ND	ND
	5	12	1150		
	AVERAGE	12	1030	DECON REQ	YES (NO)

DATE: 11-03-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 114	MAX LEVEL	12	1100	14	
	1	12	683		
	2	12	1100	SMEAR	
	3	12	767	ALPHA DPM	BETA DPM
	4	ND	1017	ND	ND
	5	12	750		
	AVERAGE	10	863	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 116	MAX LEVEL	26	1500	14	
	1	26	1500		
	2	ND	1033	SMEAR	
	3	12	1333	ALPHA DPM	BETA DPM
	4	12	1033	3	ND
	5	26	1417		
	AVERAGE	15	1263	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 118	MAX LEVEL	12	1000	15	
	1	12	933		
	2	12	900	SMEAR	
	3	12	1000	ALPHA DPM	BETA DPM
	4	ND	733	ND	11
	5	ND	600		
	AVERAGE	7	833	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 120	MAX LEVEL	26	1167	16	
	1	12	1100		
	2	26	1050	SMEAR	
	3	ND	860	ALPHA DPM	BETA DPM
	4	12	933	ND	ND
	5	ND	1167		
	AVERAGE	10	1010	DECON REQ	YES/NO

DATE: 11.03.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 122	MAX LEVEL	26	717	14	
	1	ND	533		
	2	12	717	SMEAR	
	3	ND	600	ALPHA DPM	BETA DPM
	4	26	417	ND	ND
	5	ND	667		
	AVERAGE	8	587	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 124	MAX LEVEL	12	850	15	
	1	12	850		
	2	12	650	SMEAR	
	3	ND	617	ALPHA DPM	BETA DPM
	4	ND	767	ND	ND
	5	12	550		
	AVERAGE	7	687	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 126	MAX LEVEL	26	1167	16	
	1	ND	983		
	2	ND	817	SMEAR	
	3	26	1067	ALPHA DPM	BETA DPM
	4	ND	1167	3	ND
	5	26	700		
	AVERAGE	10	947	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 128	MAX LEVEL	12	967	15	
	1	ND	833		
	2	ND	967	SMEAR	
	3	12	700	ALPHA DPM	BETA DPM
	4	ND	917	ND	ND
	5	12	617		
	AVERAGE	5	807	DECON REQ	YES/NO

DATE: 11.07.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 130	MAX LEVEL	38	1383	15	
	1	ND	1333		
	2	38	633	SMEAR	
	3	ND	1150	ALPHA DPM	BETA DPM
	4	12	1233	ND	ND
	5	12	1383		
	AVERAGE	12	1146	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 132	MAX LEVEL	12	967	14	
	1	12	733		
	2	ND	900	SMEAR	
	3	ND	667	ALPHA DPM	BETA DPM
	4	ND	967	ND	ND
	5	ND	817		
	AVERAGE	2	817	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 134	MAX LEVEL	26	750	15	
	1	12	567		
	2	24	517	SMEAR	
	3	ND	533	ALPHA DPM	BETA DPM
	4	12	650	3	ND
	5	ND	750		
	AVERAGE	10	603	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 136	MAX LEVEL	12	633	15	
	1	ND	633		
	2	12	317	SMEAR	
	3	ND	483	ALPHA DPM	BETA DPM
	4	12	400	3	ND
	5	ND	600		
	AVERAGE	5	487	DECON REQ	YES/NO

DATE 11-07-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 138	MAX LEVEL	24	1033	16	
	1	ND	717		
	2	24	617	SMEAR	
	3	24	817	ALPHA DPM	BETA DPM
	4	ND	983	ND	ND
	5	ND	1033		
	AVERAGE	10	833	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 140	MAX LEVEL	12	433	15	
	1	12	233		
	2	12	167	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	12	433	ND	6
	5	ND	400		
	AVERAGE	7	313	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 142	MAX LEVEL	24	367	14	
	1	24	167		
	2	12	117	SMEAR	
	3	ND	367	ALPHA DPM	BETA DPM
	4	12	267	ND	ND
	5	12	217		
	AVERAGE	12	227	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 144	MAX LEVEL	24	750	14	
	1	ND	517		
	2	24	650	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	12	533	ND	ND
	5	ND	566		
	AVERAGE	8	603	DECON REQ	YES/NO

DATE: 11·07·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 146	MAX LEVEL	12	867	15	
	1	ND	650		
	2	12	583	SMEAR	
	3	12	817	ALPHA DPM	BETA DPM
	4	ND	867	ND	100
	5	12	733		
	AVERAGE	7	730	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 148	MAX LEVEL	26	933	15	
	1	ND	833		
	2	26	550	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	ND	933	ND	33
	5	ND	483		
	AVERAGE	5	673	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 150	MAX LEVEL	12	933	14	
	1	ND	467		
	2	12	550	SMEAR	
	3	ND	933	ALPHA DPM	BETA DPM
	4	12	883	ND	ND
	5	ND	817		
	AVERAGE	5	730	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 152	MAX LEVEL	26	1133	15	
	1	ND	1133		
	2	12	817	SMEAR	
	3	26	733	ALPHA DPM	BETA DPM
	4	ND	1000	3	ND
	5	12	1050		
	AVERAGE	10	947	DECON REQ	YES/NO

DATE: 11.07.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 154	MAX LEVEL	26	767	13	
	1	ND	767		
	2	26	300	SMEAR	
	3	12	400	ALPHA DPM	BETA DPM
	4	26	517	ND	ND
	5	ND	650		
	AVERAGE	10	526	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 156	MAX LEVEL	12	767	15	
	1	12	767		
	2	12	667	SMEAR	
	3	12	300	ALPHA DPM	BETA DPM
	4	ND	350	ND	3
	5	12	533		
	AVERAGE	10	523	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 158	MAX LEVEL	ND	ND	14	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	3	11
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES / NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 160	MAX LEVEL	ND	ND	15	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES / NO

DATE: 11-07-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 162	MAX LEVEL	12	ND	13	
	1	ND	ND		
	2	12	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	ND		
	AVERAGE	2	ND	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 164	MAX LEVEL	ND	ND	14	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RBW 166	MAX LEVEL	ND	ND	13	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	44
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
RWB 168	MAX LEVEL	12	467	13	
	1	ND	ND		
	2	ND	467	SMEAR	
	3	12	67	ALPHA DPM	BETA DPM
	4	ND	ND	ND	ND
	5	12	317		
	AVERAGE	5	170	DECON REQ	YES/NO

DATE: 11.07.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
R6W 170	MAX LEVEL	26	683	14	
	1	ND	ND		
	2	~~2.6~~ 26	683	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	12	183	ND	ND
	5	ND	67		
	AVERAGE	8	300	DECON REQ	YES/NO (NO circled)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2	NA		SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: ____________________

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: TANK (STORAGE)

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/07/92

METERS: Ludlum 2221 #97276 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm² / 43-65 EFF=0.16, BKG=1cpm MDA=92 DPM/100cm²

Ludlum 19 #95511 BKG= 11uR/hr

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² / ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: T- TANK SURFACES SURVEY#110792-1R

Aluminum surface.

NOTES:

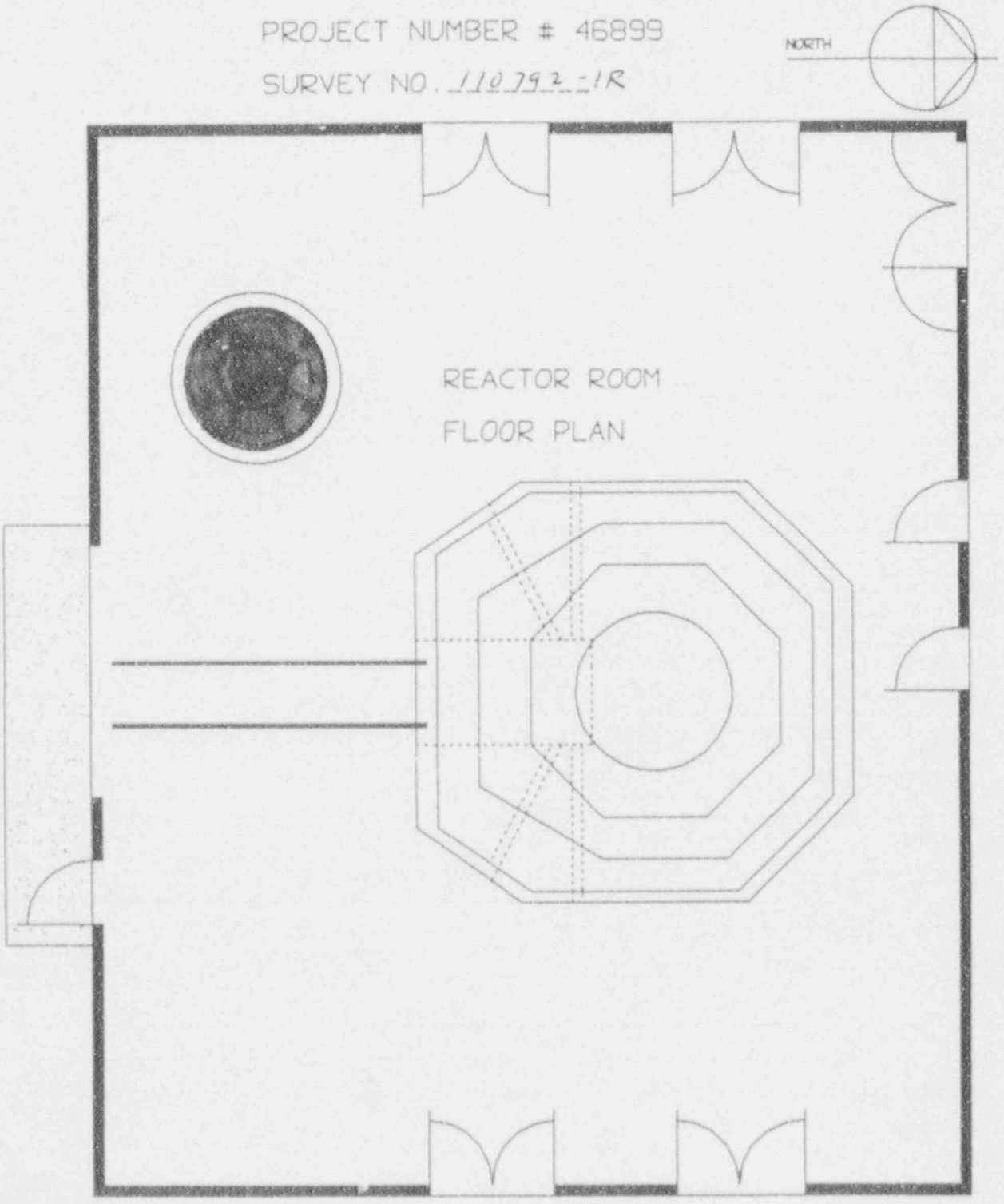
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted

RCS REVIEW: [signatures] DATE: 11/9/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

PROJECT NUMBER # 46899

SURVEY NO. 110792-1R

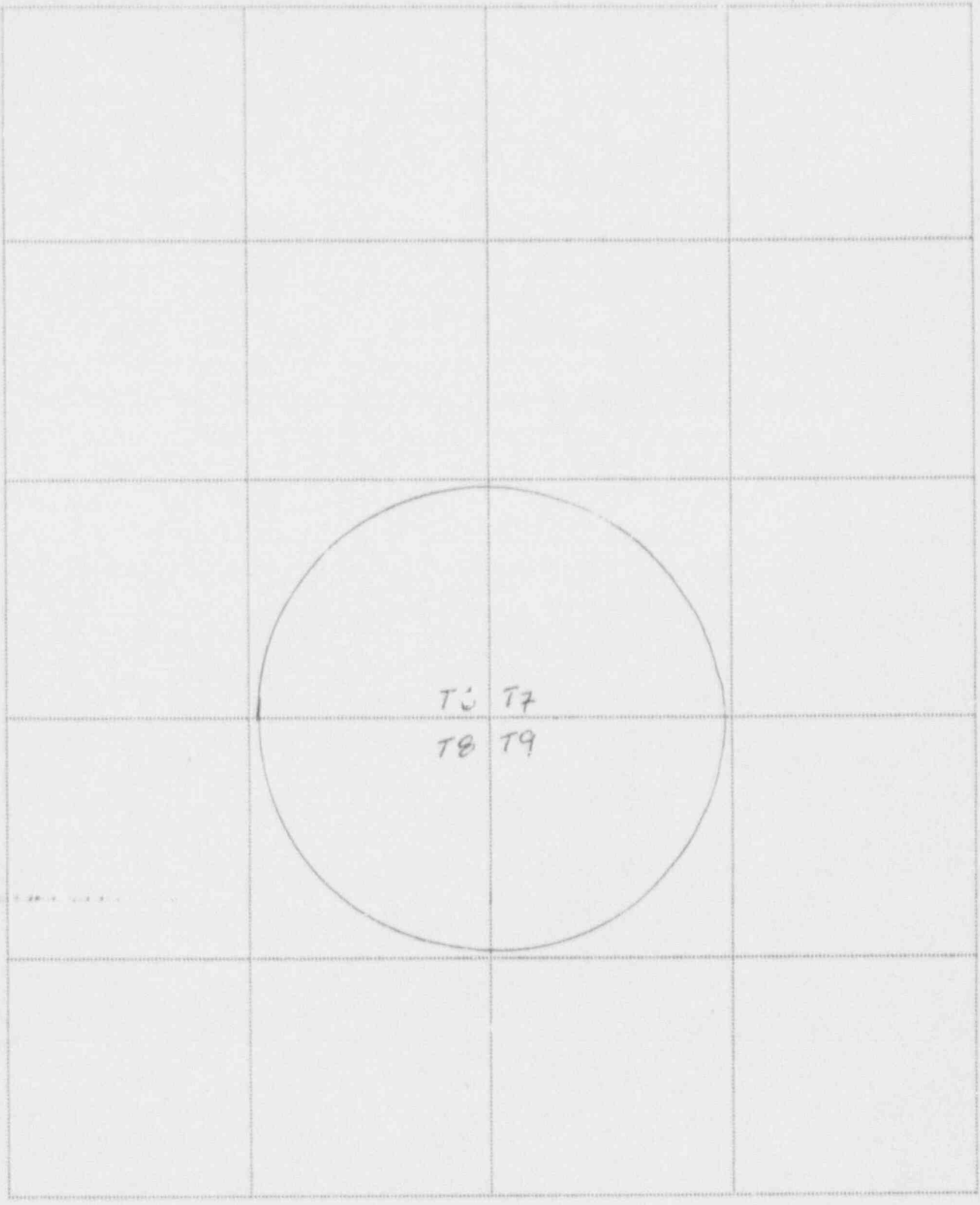


KUTR DECOMMISSIONING PROJECT SURVEY RECORD

			T2
T1			T3
T11			T4
			T5

DATE: 11/7/92 ITEM: Walls of Tank PAGE 3 OF 8

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11/7/92 ITEM: FLOOR OF TANK PAGE 4 OF 8

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-1	MAX LEVEL	12	417	12	
	1	ND	283		
	2	12	400	SMEAR	
	3	ND	417	ALPHA DPM	BETA DPM
	4	12	317	ND	83
	5	ND	117		
	AVERAGE	5	307	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-2	MAX LEVEL	12	133	12	
	1	ND	ND		
	2	12	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	133	ND	44
	5	ND	133		
	AVERAGE	2	53	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-3	MAX LEVEL	ND	267	12	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	150	3	ND
	5	ND	267		
	AVERAGE	ND	83	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-4	MAX LEVEL	12	117	12	
	1	ND	117		
	2	ND	ND	SMEAR	
	3	ND	33	ALPHA DPM	BETA DPM
	4	12	ND	3	22
	5	12	ND		
	AVERAGE	5	30	DECON REQ	YES/(NO)

DATE: 11-07-92

PAGE 5 OF 8

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-5	MAX LEVEL	12	217	12	
	1	ND	133		
	2	12	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	12	217	3	61
	5	12	ND		
	AVERAGE	7	70	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-6	MAX LEVEL	ND	83	10	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	11
	5	ND	83		
	AVERAGE	ND	17	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-7	MAX LEVEL	ND	ND	10	
	1	ND	ND		
	2	ND	ND	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	ND	ND	6
	5	ND	ND		
	AVERAGE	ND	ND	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-8	MAX LEVEL	26	650	10	
	1	12	650		
	2	ND	ND	SMEAR	
	3	26	ND	ALPHA DPM	BETA DPM
	4	ND	ND	7	28
	5	ND	ND		
	AVERAGE	8	130	DECON REQ	YES/NO

DATE: 11 07 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-9	MAX LEVEL	12	917	10	
	1	12	917		
	2	12	517	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	12	ND	ND	ND
	5	ND	650		
	AVERAGE	7	437	DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-10	MAX LEVEL	38	1533	10	
	1	ND	350		
	2	38	567	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	12	1100	ND	22
	5	ND	1533		
	AVERAGE	10	860	DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
T-11	MAX LEVEL	12	383	10	
	1	12	383		
	2	ND	ND	SMEAR	
	3	12	67	ALPHA DPM	BETA DPM
	4	12	267	3	28
	5	ND	17		
	AVERAGE	7	147	DECON REQ	YES/~~NO~~

~~GRID~~	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2		NA	SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	~~YES/NO~~

DATE: 11.07.92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: Ceiling Vents

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/02/92

METERS: #97276 Ludlum 2221 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm² / EFF=0.16, BKG=1 cpm 43-65 MDA=92 DPM/100cm²

#95511 Ludlum 19 BKG = 12μR/hr

#74076 Ludlum 2929 w/43-10-1 DELTA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: V=vents Survey # 110192-2R

NOTES:

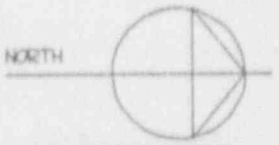
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

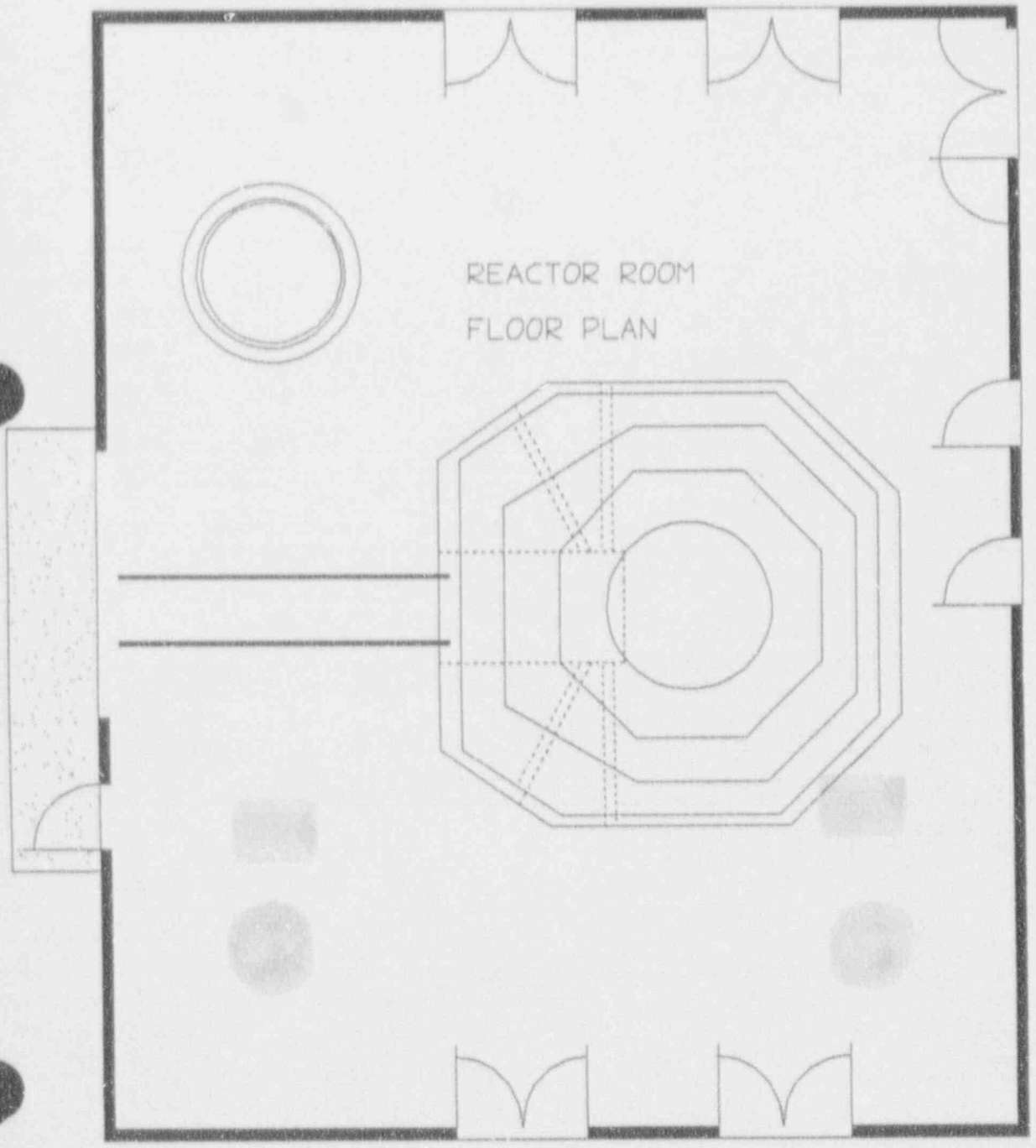
RCS REVIEW: [signature] DATE: 11/9/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

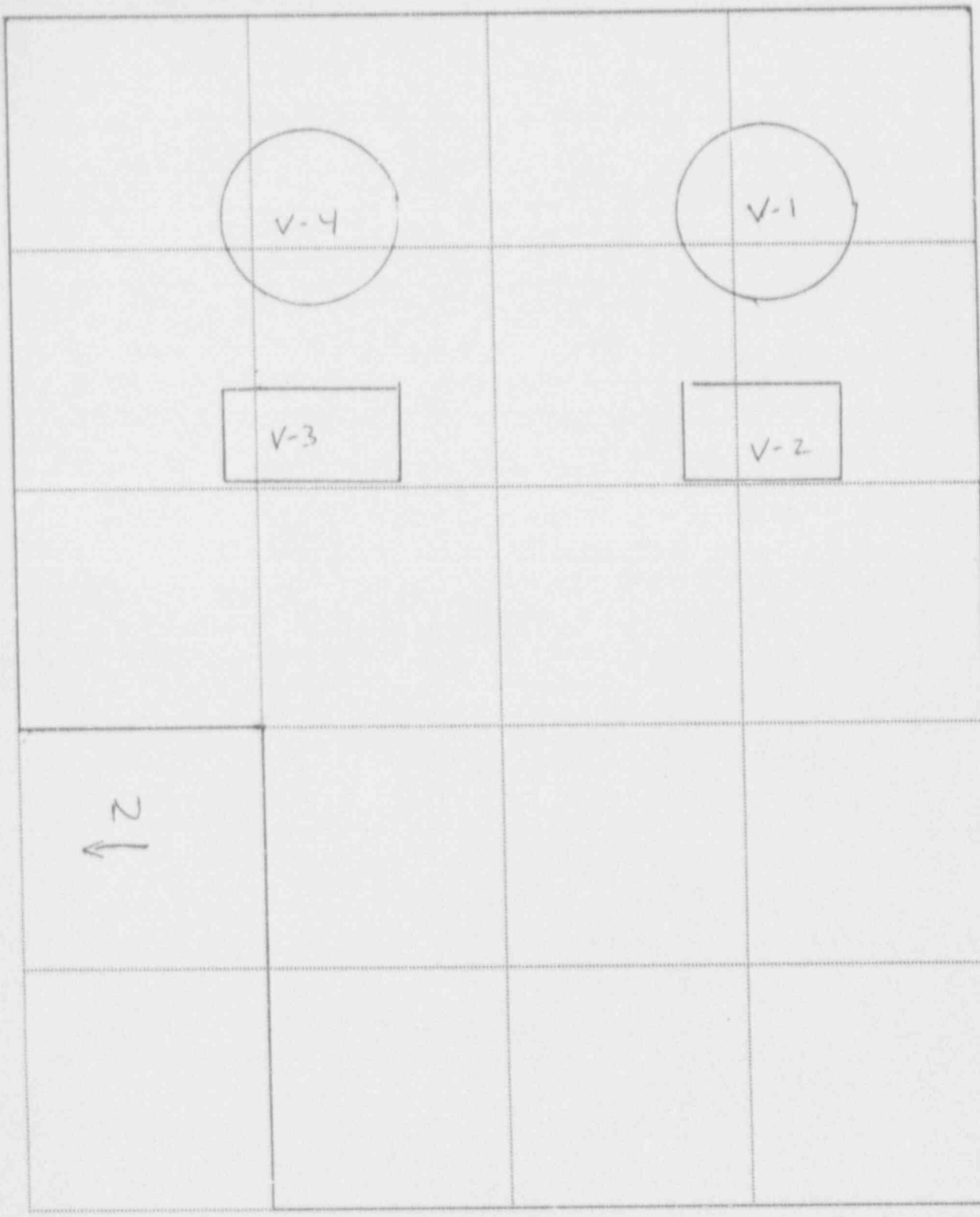
PROJECT NUMBER # 46899

SURVEY NO. 110792-2R





KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11.07.92 ITEM: Ceiling Vents PAGE 3 OF 4

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
V-1	MAX LEVEL	ND	150	12	
	1	ND	67		
	2	ND	ND	SMEAR	
	3	ND	150	ALPHA DPM	BETA DPM
	4	ND	17	ND	6
	5	ND	ND		
	AVERAGE	ND	47	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
V-2	MAX LEVEL	12	133	13	
	1	ND	133		
	2	ND	33	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	83	ND	11
	5	12	ND		
	AVERAGE	2	50	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
V-3	MAX LEVEL	12	233	12	
	1	12	ND		
	2	ND	50	SMEAR	
	3	ND	100	ALPHA DPM	BETA DPM
	4	ND	67	3	ND
	5	ND	233		
	AVERAGE	2	90	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
V-4	MAX LEVEL	ND	267	12	
	1	ND	150		
	2	ND	267	SMEAR	
	3	ND	ND	ALPHA DPM	BETA DPM
	4	ND	183	ND	28
	5	ND	17		
	AVERAGE	ND	123	DECON REQ	YES/NO

DATE: 11-07-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: UPPER REACTOR BUILDING WALLS

SURVEYOR: E CHRETIEN, R CHRETIEN, D. HIGGINS

DATE: 11/07/92

METERS: Ludlum 2221 #97276 EFF=0.12 BKG=65cpm w/43-65-1 MDA=670 DPM/100cm² / EFF=0.16, BKG=1cpm 43-65 MDA=92 DPM/100cm²

Ludlum 19 #95511 BKG = 14 μR/hr

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: E=East S=South W=West N=North URBW = Upper Reactor Building Walls Survey # 110792-3R

NOTES:

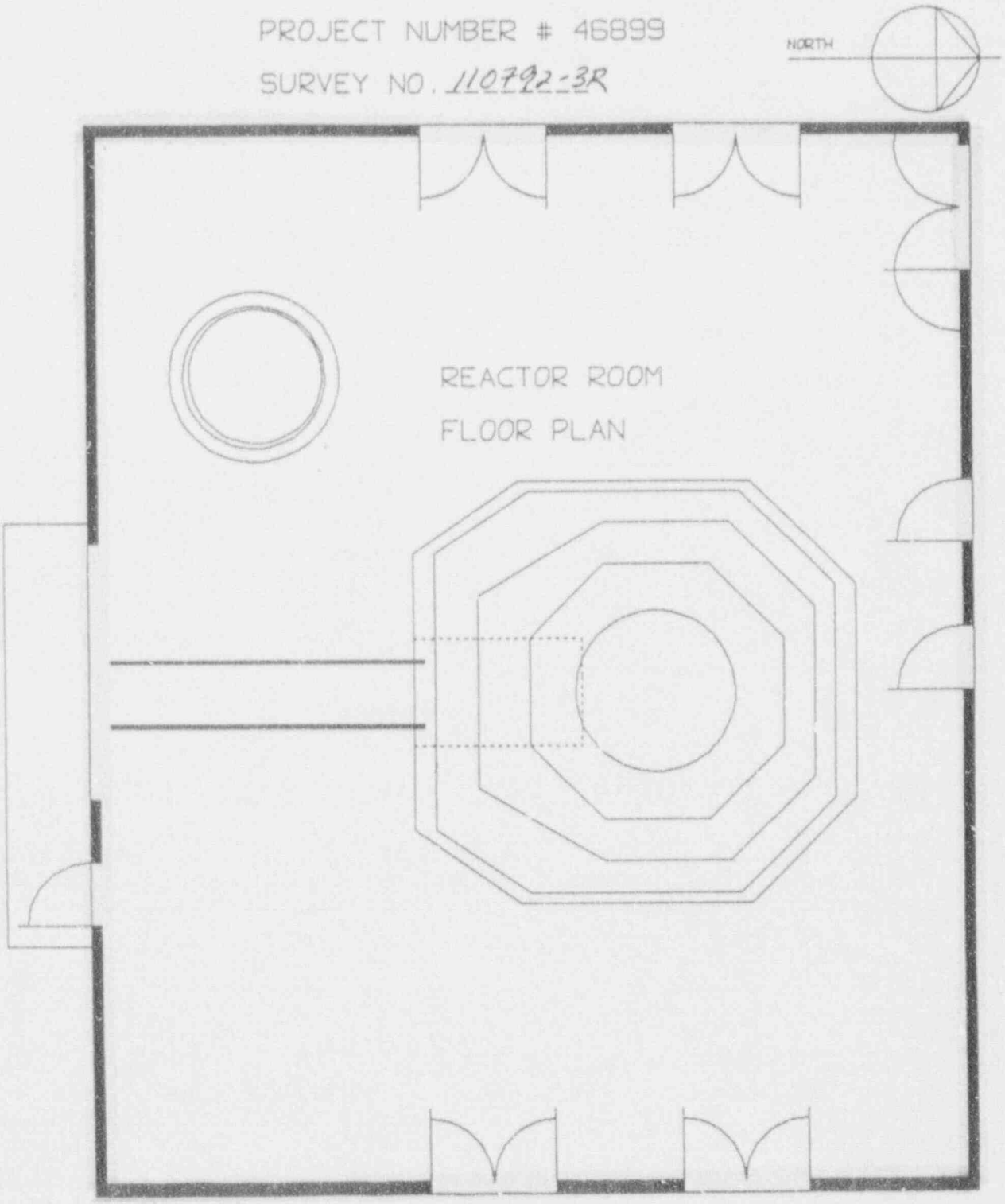
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: [signature] DATE: 11/9/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

PROJECT NUMBER # 46899

SURVEY NO. 110792-3R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11-07-92 ITEM: EURBW PAGE 3 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11.07.92 ITEM: NURBW PAGE 4 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

SURBW-3	SURBW-4			
SURBW-7	SURBW-8			

DATE: 11-07-92 ITEM: SURBW PAGE 5 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

DATE: 11·07·92 ITEM: WURBW PAGE 6 OF 10

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
EURBW-1	MAX LEVEL	12	1017	15	
	1	ND	1017		
	2	12	967	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	12	367	ND	17
	5	12	333		
	AVERAGE	7	603	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
EURBW-2	MAX LEVEL	24		14	
	1	ND	883		
	2	24	1033	SMEAR	
	3	12	483	ALPHA DPM	BETA DPM
	4	ND	567	3	11
	5	12	400		
	AVERAGE	10	673	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
SURBW-3	MAX LEVEL	12	1200	16	
	1	12	450		
	2	12	783	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	ND	1100	ND	ND
	5	12	1200		
	AVERAGE	7	857	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
SURBW-4	MAX LEVEL	12	1017	15	
	1	ND	800		
	2	12	833	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	12	1017	ND	ND
	5	ND	550		
	AVERAGE	5	793	DECON REQ	YES/NO

DATE: 11.07.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
FURBW-5	MAX LEVEL	26	1267	15	
	1	ND	633		
	2	26	750	SMEAR	
	3	ND	1267	ALPHA DPM	BETA DPM
	4	ND	767	ND	ND
	5	ND	983		
	AVERAGE	5	880	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
NURBW-6	MAX LEVEL	12	1150	15	
	1	12	783		
	2	12	933	SMEAR	
	3	ND	717	ALPHA DPM	BETA DPM
	4	ND	867	ND	28
	5	12	1150		
	AVERAGE	7	890	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
SURBW-7	MAX LEVEL	38	1483	14	
	1	ND	1483		
	2	38	1117	SMEAR	
	3	12	950	ALPHA DPM	BETA DPM
	4	ND	967	3	44
	5	ND	733		
	AVERAGE	10	1050	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
SURBW-8	MAX LEVEL	26	1183	15	
	1	ND	1183		
	2	26	1183	SMEAR	
	3	ND	900	ALPHA DPM	BETA DPM
	4	26	667	ND	ND
	5	12	883		
	AVERAGE	13	963	DECON REQ	YES/NO

DATE: 11-07-92

KUTR DECOMMISSIONING PROJECT SURV . RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
NVRBW-9	MAX LEVEL	12	700	15	
	1	12	700		
	2	ND	150	SMEAR	
	3	12	183	ALPHA DPM	BETA DPM
	4	12	133	7	50
	5	ND	700		
	AVERAGE	7	247	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
NVRBW-10	MAX LEVEL	26	1200	15	
	1	ND	967		
	2	26	1050	SMEAR	
	3	ND	533	ALPHA DPM	BETA DPM
	4	12	1200	ND	ND
	5	ND	300		
	AVERAGE	8	810	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
WVRBW-11	MAX LEVEL	ND	1167	15	
	1	ND	617		
	2	ND	633	SMEAR	
	3	ND	1167	ALPHA DPM	BETA DPM
	4	ND	633	3	ND
	5	ND	483		
	AVERAGE	ND	707	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
WVRBW-12	MAX LEVEL	24	1250	16	
	1	24	1250		
	2	24	750	SMEAR	
	3	ND	850	ALPHA DPM	BETA DPM
	4	12	833	ND	ND
	5	ND	850		
	AVERAGE	13	907	DECON REQ	YES/NO

DATE: 11.07.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
WURBW-13	MAX LEVEL	24	1150	14	
	1	24	567		
	2	ND	1150	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	12	1117	ND	ND
	5	ND	833		
	AVERAGE	10	853	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
WURBW-14	MAX LEVEL	12	983	14	
	1	ND	783		
	2	12	550	SMEAR	
	3	12	700	ALPHA DPM	BETA DPM
	4	ND	933	ND	11
	5	12	983		
	AVERAGE	7	790	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11.07.92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: FLOOR OF REACTOR BUILDING

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/7/92

METERS: Ludlum 2221 #97276 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm² / 43-65 EFF=0.16, BKG=1cpm MDA=42 DPM/100cm²

Ludlum 19 #95511 BKG=13 uR/hr

Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=56CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: F = FLOOR, ND = NOT DETECTABLE

CONCRETE SURFACE, SURVEY # 110592-2R

* HIGHER RADIATION LEVEL (uR/hr) DUE to RADIOACTIVE MATERIAL STORED IN KU LAB.

NOTES:

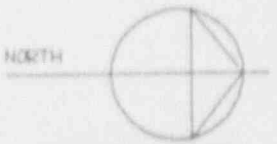
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

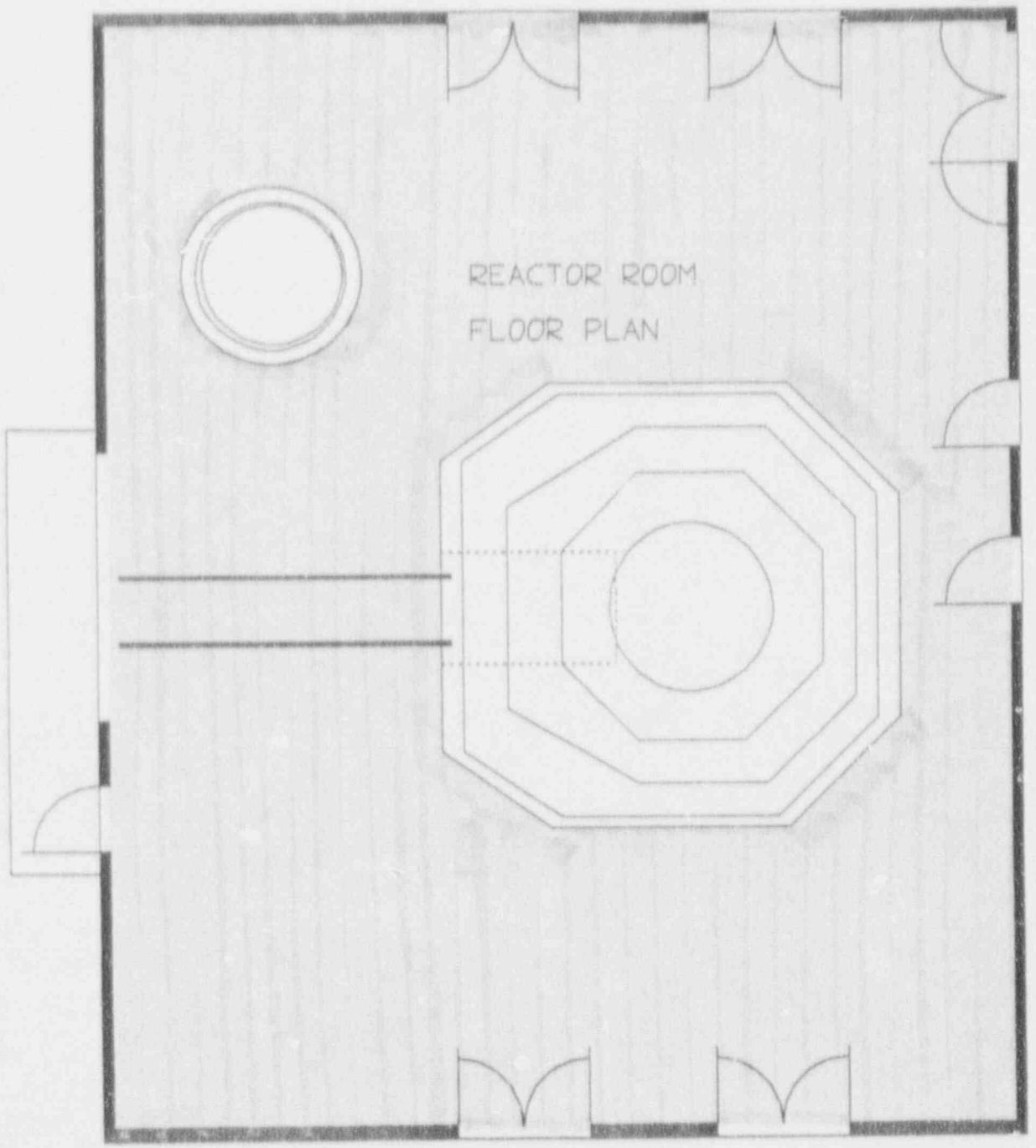
RCS REVIEW: [signature] DATE: 11/9/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

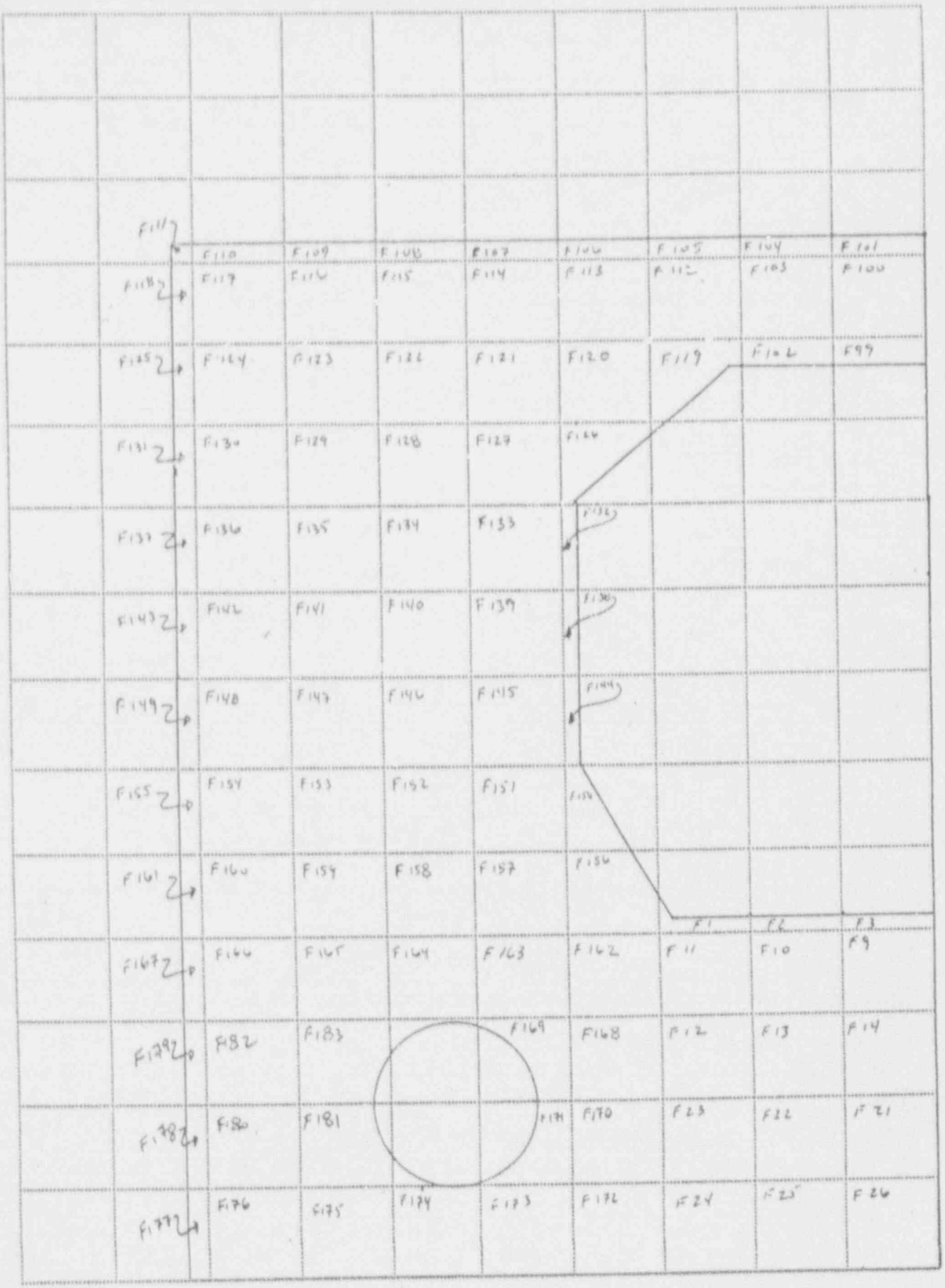
PROJECT NUMBER # 46899

SURVEY NO. LL0592-2R





KUTR DECOMMISSIONING PROJECT SURVEY RECORD

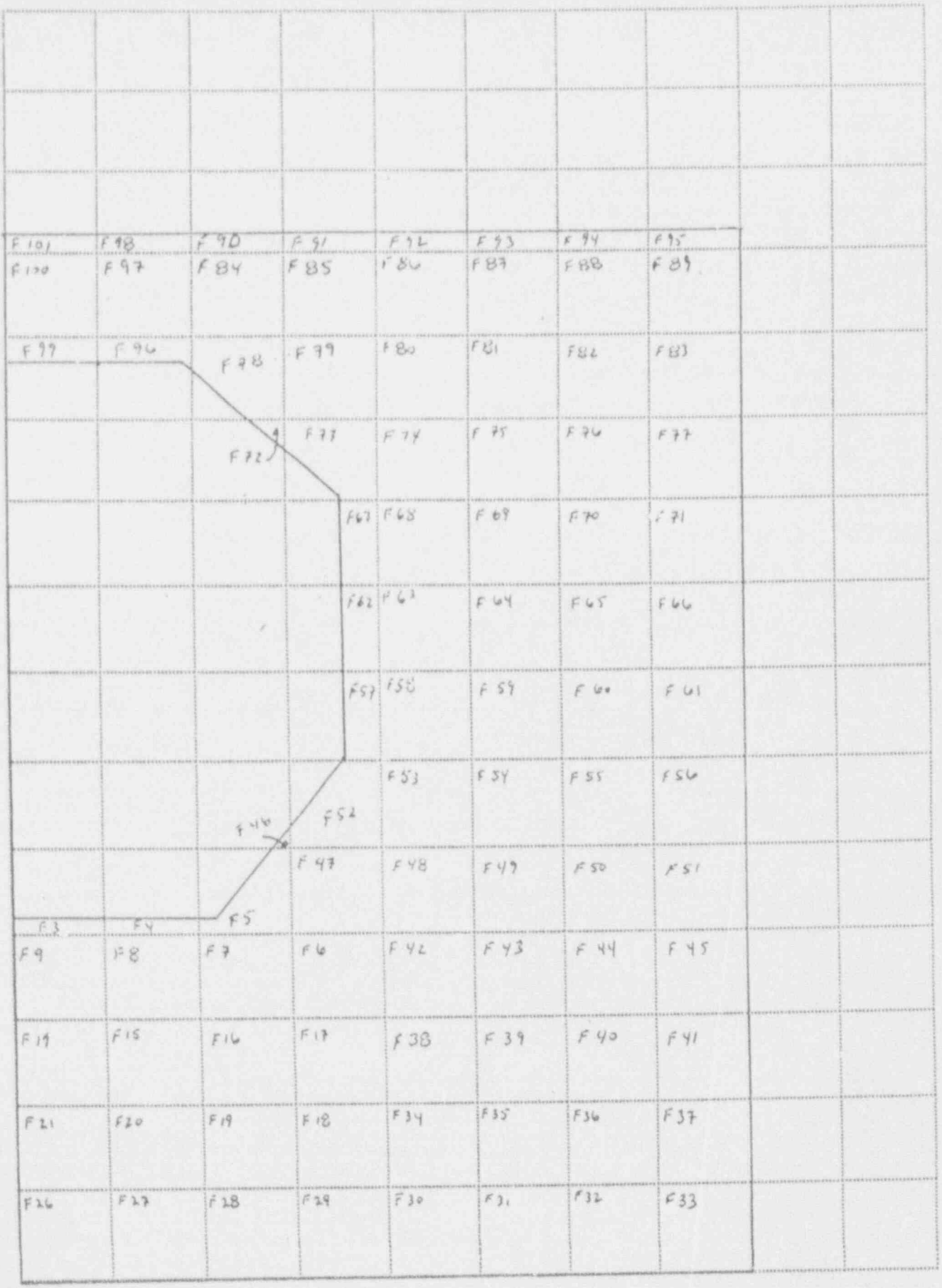


DATE: 11.05.92

FLOOR/CEILING

PAGE 3 OF 22

KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11·05·92

FLOOR/CEILING

PAGE 4 OF 22

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 13	MAX LEVEL	24	1050	11	
	1	12	933		
	2	24	633	SMEAR	
	3	12	767	ALPHA DPM	BETA DPM
	4	ND	1050	3	ND
	5	ND	700		
	AVERAGE	10	817	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 15	MAX LEVEL	12	1067	12	
	1	ND	917		
	2	12	1067	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	12	650	ND	67
	5	12	1000		
	AVERAGE	7	877	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 17	MAX LEVEL	12	600	12	
	1	ND	600		
	2	ND	433	SMEAR	
	3	12	567	ALPHA DPM	BETA DPM
	4	ND	733	ND	ND
	5	ND	467		
	AVERAGE	2	560	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 19	MAX LEVEL	24	1067	13	
	1	ND	1067		
	2	24	717	SMEAR	
	3	ND	983	ALPHA DPM	BETA DPM
	4	ND	617	ND	28
	5	12	817		
	AVERAGE	8	840	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 21	MAX LEVEL	12	917	12	
	1	12	567		
	2	12	533	SMEAR	
	3	12	767	ALPHA DPM	BETA DPM
	4	ND	667	ND	17
	5	12	917		
	AVERAGE	10	690	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 23	MAX LEVEL	26	900	12	
	1	ND	833		
	2	26	550	SMEAR	
	3	ND	617	ALPHA DPM	BETA DPM
	4	12	567	ND	22
	5	ND	900		
	AVERAGE	8	693	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 25	MAX LEVEL	38	750	12	
	1	ND	750		
	2	12	417	SMEAR	
	3	ND	483	ALPHA DPM	BETA DPM
	4	38	667	ND	ND
	5	ND	717		
	AVERAGE	10	609	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 27	MAX LEVEL	26	900	12	
	1	12	767		
	2	26	683	SMEAR	
	3	26	900	ALPHA DPM	BETA DPM
	4	ND	600	ND	78
	5	ND	867		
	AVERAGE	13	786	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVFY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 29	MAX LEVEL	12	1017	14	
	1	ND	933		
	2	12	600	SMEAR	
	3	12	433	ALPHA DPM	BETA DPM
	4	ND	733	3	ND
	5	12	1017		
	AVERAGE	7	743	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 31	MAX LEVEL	24	983	14	
	1	12	867		
	2	24	900	SMEAR	
	3	ND	983	ALPHA DPM	BETA DPM
	4	ND	933	ND	ND
	5	12	967		
	AVERAGE	10	930	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 33	MAX LEVEL	12	1267	14	
	1	12	1267		
	2	12	1067	SMEAR	
	3	ND	1217	ALPHA DPM	BETA DPM
	4	12	1167	ND	39
	5	ND	1100		
	AVERAGE	7	1164	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 35	MAX LEVEL	26	1100	14	
	1	26	1000		
	2	ND	817	SMEAR	
	3	26	900	ALPHA DPM	BETA DPM
	4	ND	933	ND	44
	5	ND	1100		
	AVERAGE	10	950	DECON REQ	YES/NO

DATE: 12 04 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 37	MAX LEVEL	12	933	16	
	1	ND	933		
	2	12	833	SMEAR	
	3	12	783	ALPHA DPM	BETA DPM
	4	12	683	ND	ND
	5	12	633		
	AVERAGE	10	773	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 39	MAX LEVEL	12	1100	15	
	1	12	1100		
	2	12	550	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	12	983	ND	ND
	5	12	783		
	AVERAGE	12	605	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 41	MAX LEVEL	26	1017	14	
	1	ND	933		
	2	26	600	SMEAR	
	3	ND	800	ALPHA DPM	BETA DPM
	4	12	650	3	ND
	5	12	1017		
	AVERAGE	10	800	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 43	MAX LEVEL	38	1083	13	
	1	ND	733		
	2	38	800	SMEAR	
	3	ND	1083	ALPHA DPM	BETA DPM
	4	ND	983	3	ND
	5	ND	933		
	AVERAGE	8	906	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 45	MAX LEVEL	26	983	15	
	1	ND	900		
	2	26	567	SMEAR	
	3	12	683	ALPHA DPM	BETA DPM
	4	26	767	ND	78
	5	ND	983		
	AVERAGE	13	780	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 49	MAX LEVEL	12	850	14	
	1	ND	767		
	2	12	583	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	ND	850	ND	ND
	5	12	650		
	AVERAGE	7	710	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 51	MAX LEVEL	26	1033	14	
	1	ND	933		
	2	26	717	SMEAR	
	3	ND	967	ALPHA DPM	BETA DPM
	4	26	850	.3	ND
	5	ND	1033		
	AVERAGE	10	900	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 55	MAX LEVEL	12	783	14	
	1	12	783		
	2	12	733	SMEAR	
	3	ND	550	ALPHA DPM	BETA DPM
	4	12	600	3	22
	5	ND	650		
	AVERAGE	7	663	DECON REQ	YES/NO

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 59	MAX LEVEL	26	1183	15	
	1	ND	1067		
	2	24	1183	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	750	ND	ND
	5	12	883		
	AVERAGE	8	930	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 61	MAX LEVEL	12	850	15	
	1	ND	767		
	2	12	650	SMEAR	
	3	12	850	ALPHA DPM	BETA DPM
	4	12	683	3	ND
	5	ND	733		
	AVERAGE	7	737	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 65	MAX LEVEL	26	833	14	
	1	ND	550		
	2	26	333	SMEAR	
	3	26	400	ALPHA DPM	BETA DPM
	4	ND	833	ND	ND
	5	12	467		
	AVERAGE	13	517	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 69	MAX LEVEL	26	1050	14	
	1	ND	933		
	2	26	767	SMEAR	
	3	12	983	ALPHA DPM	BETA DPM
	4	ND	1050	ND	ND
	5	12	850		
	AVERAGE	10	917	DECON REQ	YES (NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 71	MAX LEVEL	26	1150	14	
	1	ND	1067		
	2	26	883	SMEAR	
	3	26	1050	ALPHA DPM	BETA DPM
	4	ND	983	ND	ND
	5	26	1150		
	AVERAGE	16	1027	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 75	MAX LEVEL	12	700	14	
	1	ND	700		
	2	12	667	SMEAR	
	3	ND	517	ALPHA DPM	BETA DPM
	4	ND	450	ND	ND
	5	ND	567		
	AVERAGE	2	580	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 77	MAX LEVEL	26	983	13	
	1	ND	917		
	2	26	667	SMEAR	
	3	12	683	ALPHA DPM	BETA DPM
	4	ND	983	ND	ND
	5	12	767		
	AVERAGE	10	803	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 81	MAX LEVEL	38	967	13	
	1	ND	967		
	2	38	733	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	883	ND	6
	5	ND	867		
	AVERAGE	8	843	DECON REQ	YES/NO

DATE: 11·04·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 83	MAX LEVEL	12	1200	13	
	1	ND	1050		
	2	12	850	SMEAR	
	3	ND	1150	ALPHA DPM	BETA DPM
	4	12	750	ND	ND
	5	12	1200		
	AVERAGE	7	1000	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 85	MAX LEVEL	26	917	14	
	1	12	833		
	2	26	617	SMEAR	
	3	ND	733	ALPHA DPM	BETA DPM
	4	26	667	3	11
	5	ND	917		
	AVERAGE	13	753	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 87	MAX LEVEL	12	817	14	
	1	ND	817		
	2	12	450	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	567	ND	ND
	5	12	700		
	AVERAGE	5	660	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 89	MAX LEVEL	12	967	14	
	1	ND	717		
	2	ND	666	SMEAR	
	3	ND	583	ALPHA DPM	BETA DPM
	4	12	967	ND	ND
	5	ND	883		
	AVERAGE	2	750	DECON REQ	YES/NO

DATE: 11 04 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 91	MAX LEVEL	26	1133	15	
	1	ND	1067		
	2	24	833	SMEAR	
	3	ND	1017	ALPHA DPM	BETA DPM
	4	12	983	3	ND
	5	ND	1133		
	AVERAGE	8	1007	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 93	MAX LEVEL	12	1050	14	
	1	ND	1050		
	2	12	633	SMEAR	
	3	12	983	ALPHA DPM	BETA DPM
	4	ND	817	ND	ND
	5	12	733		
	AVERAGE	7	843	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 95	MAX LEVEL	26	667	14	
	1	24	467		
	2	ND	383	SMEAR	
	3	26	550	ALPHA DPM	BETA DPM
	4	ND	667	ND	ND
	5	ND	600		
	AVERAGE	10	533	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 101	MAX LEVEL	ND	700	14	
	1	ND	700		
	2	ND	517	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	ND	566	ND	6
	5	ND	683		
	AVERAGE	ND	583	DECON REQ	YES/NO

DATE: 11·04·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 105	MAX LEVEL	12	1000	14	
	1	ND	933		
	2	12	883	SMEAR	
	3	ND	583	ALPHA DPM	BETA DPM
	4	ND	667	ND	ND
	5	ND	1000		
	AVERAGE	2	813	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 107	MAX LEVEL	24	850	14	
	1	12	767		
	2	24	850	SMEAR	
	3	ND	530	ALPHA DPM	BETA DPM
	4	26	517	ND	11
	5	12	567		
	AVERAGE	15	640	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* F 109	MAX LEVEL	24	1200	19	
	1	ND	1200		
	2	24	867	SMEAR	
	3	12	1050	ALPHA DPM	BETA DPM
	4	ND	1117	ND	17
	5	12	983		
	AVERAGE	10	1043	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* F 111	MAX LEVEL	12	1150	19	
	1	ND	900		
	2	12	1100	SMEAR	
	3	ND	1017	ALPHA DPM	BETA DPM
	4	12	917	ND	ND
	5	ND	1150		
	AVERAGE	5	1017	DECON REQ	YES (NO)

DATE: 11·04·92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 113	MAX LEVEL	26	917	15	
	1	ND	917		
	2	26	600	SMEAR	
	3	12	567	ALPHA DPM	BETA DPM
	4	26	767	ND	6
	5	ND	717		
	AVERAGE	13	714	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* F 115	MAX LEVEL	12	733	17	
	1	ND	733		
	2	12	650	SMEAR	
	3	12	267	ALPHA DPM	BETA DPM
	4	ND	567	3	61
	5	12	400		
	AVERAGE	7	523	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
* F 117	MAX LEVEL	38	550	17	
	1	38	500		
	2	ND	333	SMEAR	
	3	12	433	ALPHA DPM	BETA DPM
	4	ND	550	3	ND
	5	ND	400		
	AVERAGE	10	443	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 121	MAX LEVEL	12	983	15	
	1	ND	667		
	2	ND	767	SMEAR	
	3	12	933	ALPHA DPM	BETA DPM
	4	ND	983	ND	ND
	5	ND	783		
	AVERAGE	2	827	DECON REQ	YES/NO

DATE: 11 04 92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 123	MAX LEVEL	11	867	15	
	1	12	833		
	2	12	450	SMEAR	
	3	ND	867	ALPHA DPM	BETA DPM
	4	12	533	ND	ND
	5	ND	700		
	AVERAGE	7	677	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 125	MAX LEVEL	24	883	16	
	1	ND	833		
	2	12	583	SMEAR	
	3	26	667	ALPHA DPM	BETA DPM
	4	ND	883	ND	ND
	5	12	733		
	AVERAGE	10	740	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 129	MAX LEVEL	12	950	15	
	1	ND	950		
	2	12	483	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	12	867	3	ND
	5	ND	800		
	AVERAGE	5	733	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 131	MAX LEVEL	38	1083	14	
	1	ND	900		
	2	38	617	SMEAR	
	3	ND	750	ALPHA DPM	BETA DPM
	4	12	1000	ND	44
	5	ND	1083		
	AVERAGE	10	870	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 135	MAX LEVEL	26	767	13	
	1	ND	667		
	2	12	450	SMEAR	
	3	26	500	ALPHA DPM	BETA DPM
	4	ND	767	3	ND
	5	12	567		
	AVERAGE	10	590	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 137	MAX LEVEL	12	567	14	
	1	ND	567		
	2	12	500	SMEAR	
	3	12	300	ALPHA DPM	BETA DPM
	4	ND	517	ND	33
	5	12	367		
	AVERAGE	7	450	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 141	MAX LEVEL	38	917	14	
	1	ND	833		
	2	ND	517	SMEAR	
	3	38	550	ALPHA DPM	BETA DPM
	4	ND	917	ND	ND
	5	ND	667		
	AVERAGE	8	697	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 143	MAX LEVEL	12	550	14	
	1	ND	500		
	2	12	250	SMEAR	
	3	12	333	ALPHA DPM	BETA DPM
	4	12	400	3	10
	5	12	550		
	AVERAGE	10	407	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 147	MAX LEVEL	12	650	12	
	1	ND	333		
	2	12	650	SMEAR	
	3	ND	450	ALPHA DPM	BETA DPM
	4	ND	533	3	67
	5	12	600		
	AVERAGE	5	513	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 149	MAX LEVEL	26	683	12	
	1	ND	683		
	2	26	400	SMEAR	
	3	ND	567	ALPHA DPM	BETA DPM
	4	ND	600	ND	ND
	5	12	500		
	AVERAGE	8	550	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 153	MAX LEVEL	12	900	13	
	1	ND	900		
	2	12	527	SMEAR	
	3	12	733	ALPHA DPM	BETA DPM
	4	ND	467	ND	22
	5	12	833		
	AVERAGE	7	700	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 155	MAX LEVEL	ND	700	12	
	1	ND	417		
	2	ND	617	SMEAR	
	3	ND	700	ALPHA DPM	BETA DPM
	4	ND	450	ND	ND
	5	ND	533		
	AVERAGE	ND	543	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 157	MAX LEVEL	26	850	13	
	1	ND	767		
	2	26	580	SMEAR	
	3	12	667	ALPHA DPM	BETA DPM
	4	ND	850	ND	22
	5	12	567		
	AVERAGE	10	660	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 159	MAX LEVEL	12	1000	12	
	1	ND	733		
	2	12	517	SMEAR	
	3	ND	833	ALPHA DPM	BETA DPM
	4	12	1000	3	17
	5	12	917		
	AVERAGE	7	800	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 161	MAX LEVEL	38	1067	13	
	1	ND	1000		
	2	38	1067	SMEAR	
	3	ND	767	ALPHA DPM	BETA DPM
	4	ND	750	ND	ND
	5	12	683		
	AVERAGE	10	853	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 163	MAX LEVEL	26	800	13	
	1	ND	667		
	2	26	450	SMEAR	
	3	26	500	ALPHA DPM	BETA DPM
	4	ND	800	7	ND
	5	ND	650		
	AVERAGE	10	613	DECON REQ	YES/(NO)

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 165	MAX LEVEL	12	850	12	
	1	12	567		
	2	12	833	SMEAR	
	3	ND	533	ALPHA DPM	BETA DPM
	4	ND	850	3	61
	5	ND	667		
	AVERAGE	5	690	DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 167	MAX LEVEL	26	817	14	
	1	ND	817		
	2	26	700	SMEAR	
	3	12	750	ALPHA DPM	BETA DPM
	4	ND	567	ND	ND
	5	12	483		
	AVERAGE	10	663	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 169	MAX LEVEL	12	500	12	
	1	ND	283		
	2	12	417	SMEAR	
	3	ND	333	ALPHA DPM	BETA DPM
	4	ND	467	ND	ND
	5	12	500		
	AVERAGE	5	400	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 171	MAX LEVEL	38	633	12	
	1	ND	633		
	2	ND	283	SMEAR	
	3	38	400	ALPHA DPM	BETA DPM
	4	ND	567	ND	ND
	5	12	500		
	AVERAGE	10	477	DECON REQ	YES/NO

DATE: 11.04.92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 173	MAX LEVEL	26	600	14	
	1	ND	600		
	2	26	500	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	12	383	ND	ND
	5	26	567		
	AVERAGE	13	490	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 175	MAX LEVEL	12	750	14	
	1	ND	750		
	2	12	550	SMEAR	
	3	12	500	ALPHA DPM	BETA DPM
	4	ND	617	ND	ND
	5	12	667		
	AVERAGE	7	617	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F177	MAX LEVEL	26	1033	14	
	1	ND	1033		
	2	26	617	SMEAR	
	3	ND	817	ALPHA DPM	BETA DPM
	4	26	917	ND	ND
	5	26	717		
	AVERAGE	16	820.	DECON REQ	YES (NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F179	MAX LEVEL	12	833	15	
	1	12	567		
	2	12	433	SMEAR	
	3	12	600	ALPHA DPM	BETA DPM
	4	ND	833	3	ND
	5	12	750		
	AVERAGE	10	637	DECON REQ	YES (NO)

DATE: 11-04-92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 181	MAX LEVEL	24	733	14	
	1	12	450		
	2	24	667	SMEAR	
	3	ND	600	ALPHA DPM	BETA DPM
	4	12	733	ND	22
	5	12	500		
	AVERAGE	12	540	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
F 183	MAX LEVEL	38	817	13	
	1	12	467		
	2	38	767	SMEAR	
	3	ND	400	ALPHA DPM	BETA DPM
	4	26	600	ND	ND
	5	ND	817		
	AVERAGE	15	610	DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
	MAX LEVEL				
	1				
	2			SMEAR	
	3			ALPHA DPM	BETA DPM
	4				
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11-04-92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: Ceiling of Reactor Building

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/7/92

METERS: #97276 EFF=0.12 BKG=65cpm / EFF=0.16, BKG=14cpm
Ludlum 2221 w/43-65-1 MDA=670 DPM/100cm² / 43-65 MDA=92 DPM/100cm²
#95511
Ludlum 19 BKG = 14μR/hr
#74076 BETA EFF=0.18, BKG=58CPM, MDA=211 DPM/100cm²
Ludlum 2929 w/43-10-1 ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: C = ceiling surfaces Survey # 110792-4R

NOTES:

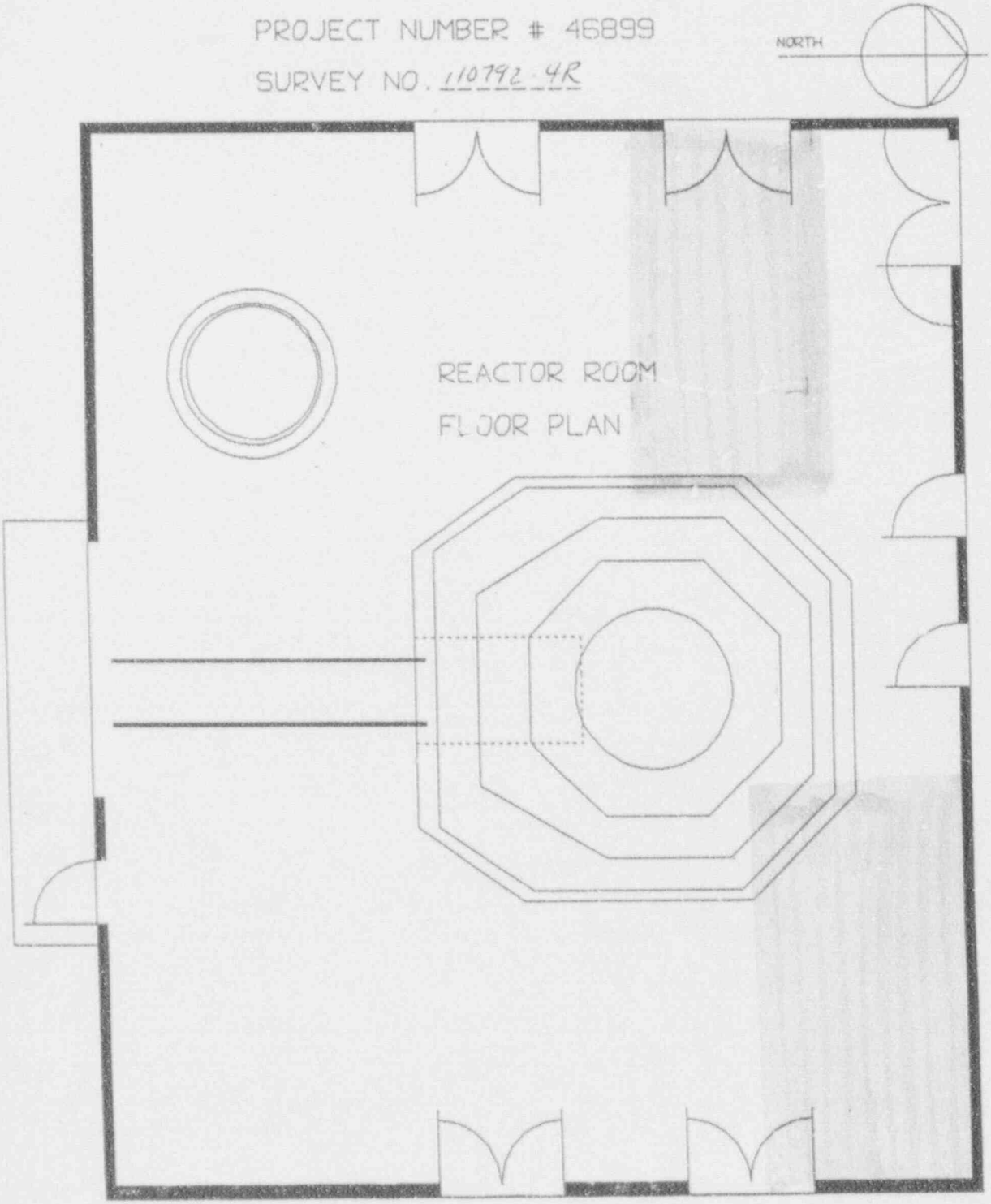
1. All measurements recorded in DPM are equivalent to DPM/100cm².
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m² unless otherwise noted.

RCS REVIEW: Del Hyde/EE Coleman DATE: 11/9/92

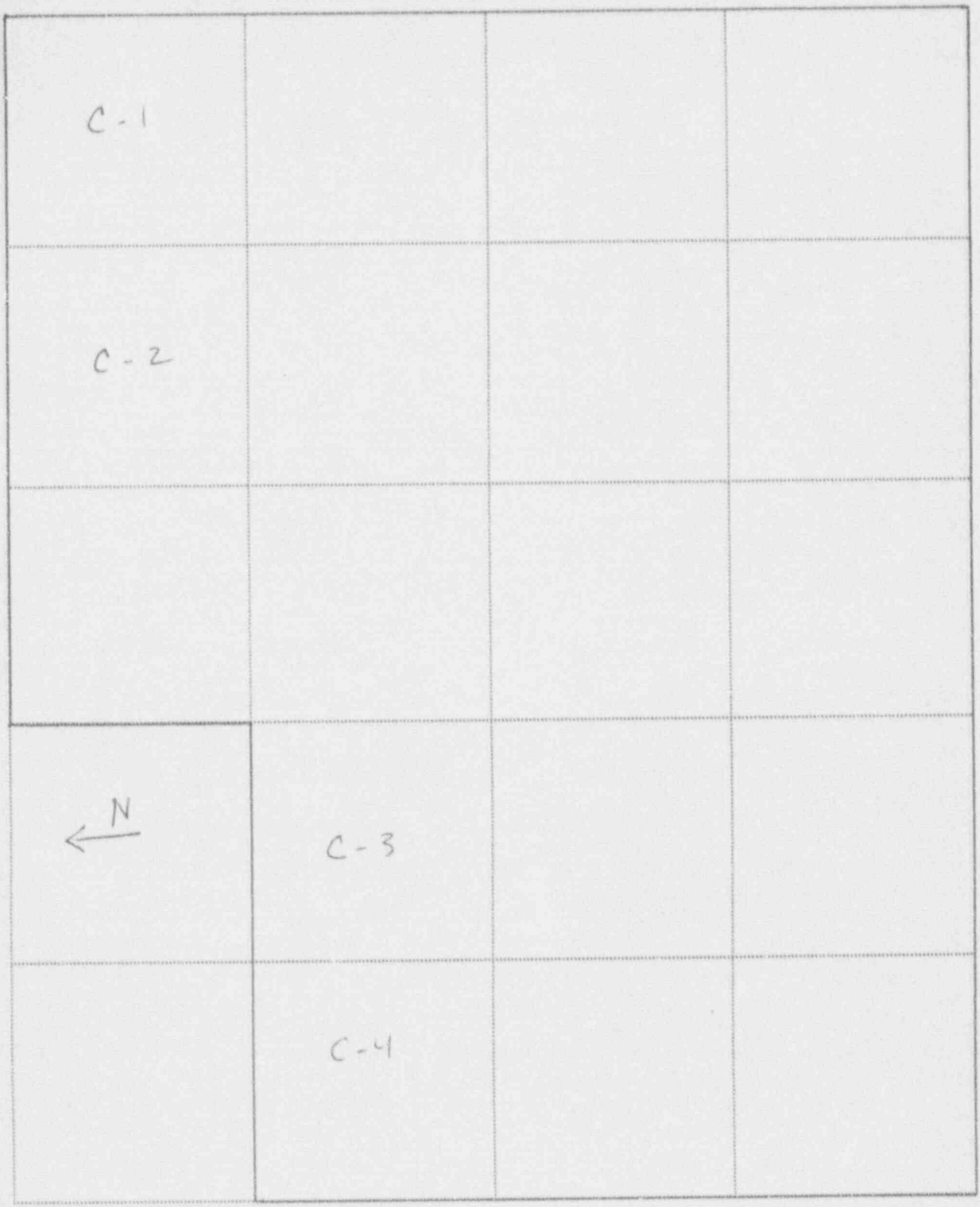
UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

PROJECT NUMBER # 46899

SURVEY NO. 110792-4R



KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11·07·92 ITEM: Ceiling PAGE 3 OF 4

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
Ceiling - 1	MAX LEVEL	12	700	13	
	1	ND	517		
	2	ND	267	SMEAR	
	3	ND	700	ALPHA DPM	BETA DPM
	4	12	450	ND	11
	5	12	767		
	AVERAGE	5	480	DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
Ceiling - 2	MAX LEVEL	26		14	
	1	24	250		
	2	12	ND	SMEAR	
	3	ND	150	ALPHA DPM	BETA DPM
	4	12	ND	ND	22
	5	ND	ND		
	AVERAGE	10	80	DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
Ceiling - 3	MAX LEVEL	12	617	14	
	1	ND	533		
	2	12	617	SMEAR	
	3	12	533	ALPHA DPM	BETA DPM
	4	ND	450	ND	6
	5	12	583		
	AVERAGE	7	543	DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
Ceiling - 4	MAX LEVEL	26	700	12	
	1	ND	283		
	2	26	417	SMEAR	
	3	12	700	ALPHA DPM	BETA DPM
	4	26	383	3	ND
	5	ND	433		
	AVERAGE	13	443	DECON REQ	YES/~~NO~~

DATE: 11·07·92

KANSAS UNIVERSITY TEST REACTOR DECOMMISSIONING PROJECT

BURT HALL

LAWRENCE, KS.

SURVEY RECORDS

AREA: SURROUNDING AREA OUTSIDE REACTOR BUILDING

SURVEYOR: E. CHRETIEN, R. CHRETIEN, D. HIGGINS

DATE: 11/7/92

METERS:
Ludlum 2221 #97276 w/43-65-1 EFF=0.12 BKG=65cpm MDA=670 DPM/100cm² / 43-65 EFF=0.16, BKG=1cpm MDA=92 DPM/100cm²
Ludlum 19 #95511 BKG=11μR/hr
Ludlum 2929 #74076 w/43-10-1 BETA EFF=0.18, BKG=58CPM, MDA=211 DPM/100cm² ALPHA EFF=0.3, BKG=0cpm, MDA 17 DPM/100cm²

ADDITIONAL INFORMATION: G=grounds Survey # 110792-5R

NOTES:

1. All measurements recorded in DPM are equivalent to DPM/100cm^2.
2. All radiation levels are taken at the center of the grid at a distance of 1 meter and are recorded in uR/hr.
3. All smears are taken at the location indicating the maximum level of contamination.
4. Map orientation arrows point North.
5. Maps are drawn to scale, all grids are 1m^2 unless otherwise noted.

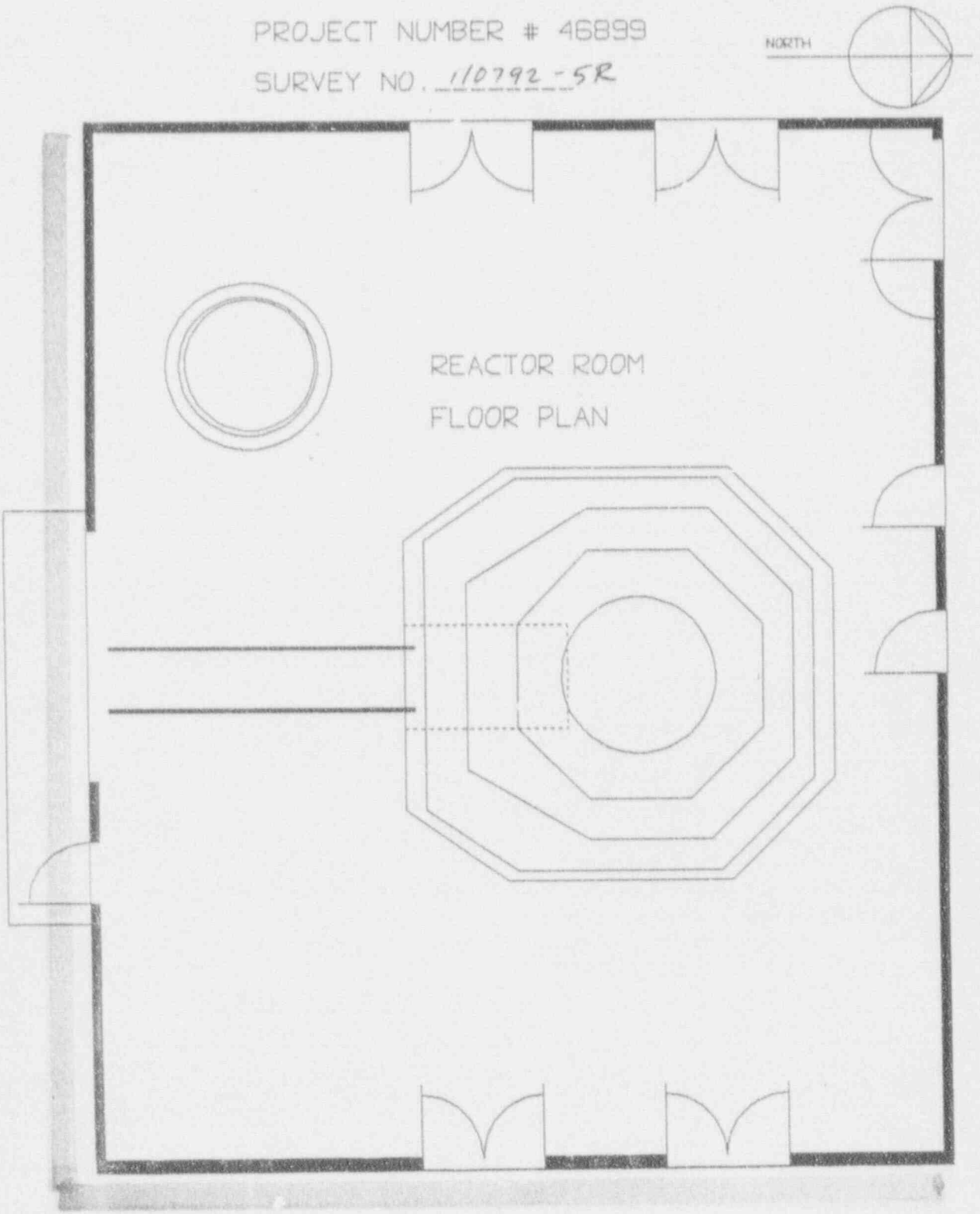
RCS REVIEW: [signatures] DATE: 11/09/92

UNIVERSITY OF KANSAS
DECOMMISSIONING PROJECT

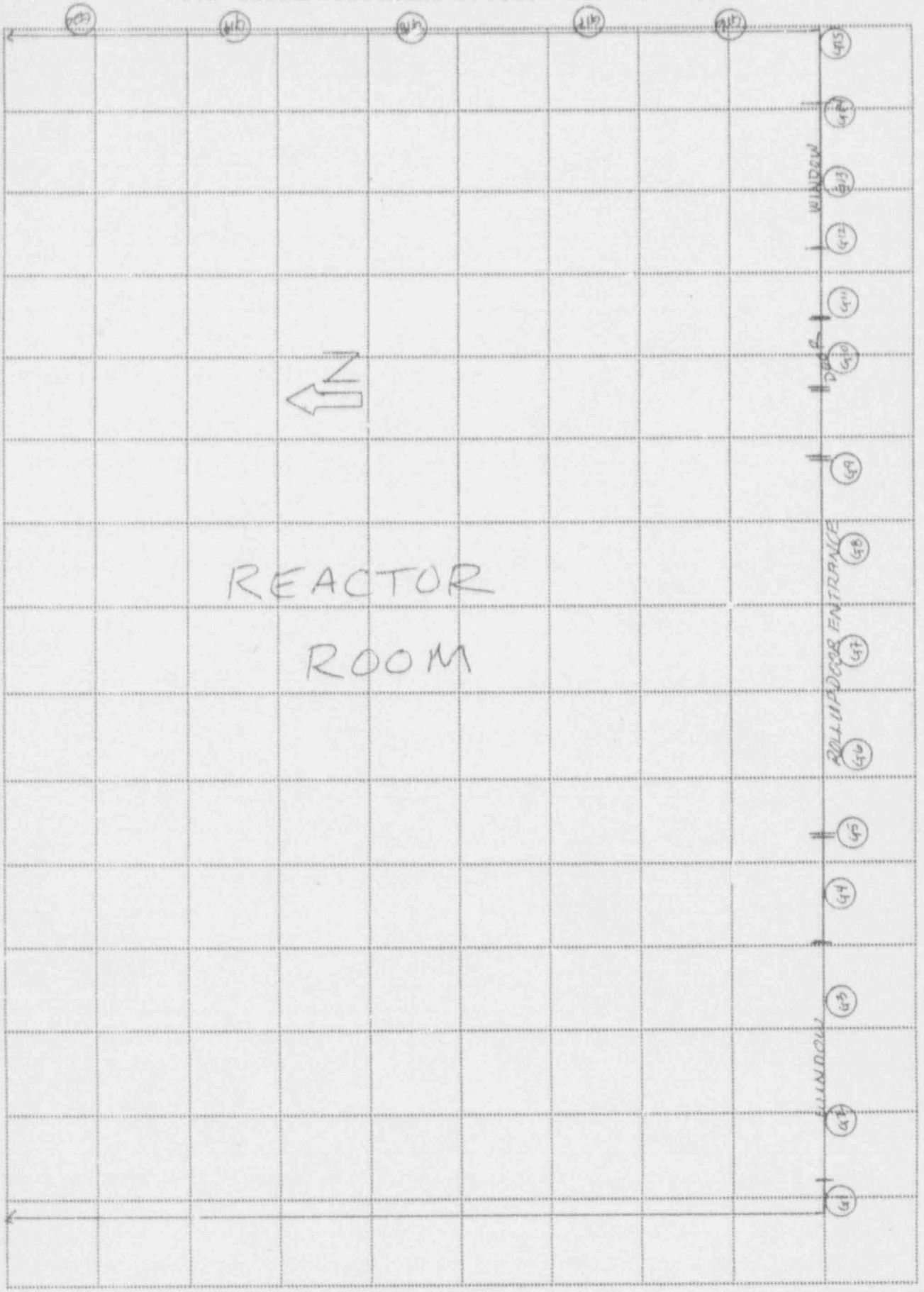
PROJECT NUMBER # 46899

SURVEY NO. 110792-5R

NORTH



KUTR DECOMMISSIONING PROJECT SURVEY RECORD



DATE: 11/7/92

OUTSIDE BUILDING
FLOOR/CEILING

PAGE 3 OF 8

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G1	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G2	MAX LEVEL			13	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G3	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/(NO)

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G4	MAX LEVEL			17	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/(NO)

DATE: 11/07/92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G5	MAX LEVEL			11	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G6	MAX LEVEL			11	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G7	MAX LEVEL			10	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/~~NO~~

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G8	MAX LEVEL			10	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/~~NO~~

DATE: 11/07/92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G9	MAX LEVEL			10	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G10	MAX LEVEL			10	
	1				
	2	NA		SMEAR	
	3			ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G11	MAX LEVEL			11	
	1				
	2	NA		SMEAR	
	3			ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G12	MAX LEVEL			11	
	1				
	2	NA		SMEAR	
	3			ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11/07/92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G13	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G14	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G15	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G16	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11/07/92

KUTR DECOMMISSIONING PROJECT SURVEY RECORD

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G17	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G18	MAX LEVEL			12	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G19	MAX LEVEL			13	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

GRID	LOCATION	ALPHA DPM	BETA DPM	RAD LEVEL	
G20	MAX LEVEL			13	
	1				
	2			SMEAR	
	3	NA		ALPHA DPM	BETA DPM
	4			NA	NA
	5				
	AVERAGE			DECON REQ	YES/NO

DATE: 11/07/92

ENWD011

CONTAMINATION/RADIATION SURVEY REPORT

TO PROJECT #46899

DATE 9/28/92 | TIME START 1400 | TIME COMPL 1800 | PAGE 1 OF 1

ACTIVITY/LOCATION KUTR
Burt Hall
Lawrence KS

SURVEYOR(S) [illegible] / [illegible]

PROBE NA

MAP I.D. NA

Survey Number 092892-06

DAILY WEEKLY MONTHLY ☒ CONTAMINATION AND DAILY WEEKLY MONTHLY ☒ RADIATION SURVEY

COMMENTS LUDLUM 2929 or BKG = 0 cpm EFF = 0.30 MDA = 17
BX BKG = 58 cpm EFF = 0.18 MDA = 211
ASP-1 w/ HP 260
100% Frisk of external surfaces

	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE CHECK DATA			
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

ALLOWABLE LEVELS ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA
CSCA AREA CONTROL LEVELS ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA
☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

SEE INSTRUCTION SHEET FOR DATA

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO: ALPHA LUDLUM 2929 #74076; BETA-GAMMA LUDLUM 2929 #74076, ASP-1 w/ HP 260 #1792
RADIATION SURVEY INSTRUMENT TYPE/TAG NO: NEUTRON NA; BETA-GAMMA LUDLUM 19 #95511

RADCON REVIEW [signature] DATE 9/28/92

REASON FOR SURVEY
☐ PROCEDURE—NO. ____
☒ SPECIAL misc. pieces of metal pipes & rods
☐ ROUTINE ____

SWIPE/PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	ND	3	ND	17	ND	misc. pieces of metal
2	ND	ND	ND	33	ND	pipes & rods
3	ND	ND	ND	ND	ND	
4	ND	ND	ND	ND	ND	
5	ND	ND	ND	ND	ND	
6	ND	ND	ND	ND	ND	
7	ND	3	ND	ND	ND	
8	ND	3	ND	ND	ND	
9	ND	3	ND	28	ND	
10	ND	ND	ND	11	ND	
11	ND	ND	ND	ND	ND	
12	ND	ND	ND	ND	ND	
13	ND	ND	ND	33	ND	
14	ND	ND	ND	39	ND	
15	ND	ND	ND	44	ND	
16	ND	ND	ND	ND	ND	
17	ND	ND	ND	ND	ND	
18	ND	ND	ND	ND	ND	misc. pieces of metal pipes & rods
19	ND	ND	ND	ND	ND	
20	ND	ND	ND	17	ND	
21	ND	3	ND	ND	ND	
22	ND	ND	ND	ND	ND	
23	ND	ND	ND	33	ND	
24	ND	3	ND	28	ND	
25	ND	ND	ND	ND	ND	wires & various pieces
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

N/A

* THE KNOWING & WILLFUL RECORDING OF FALSE, FICTICIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

ENWD011

CONTAMINATION/RADIATION SURVEY REPORT

TO PROJECT #46899

ACTIVITY/LOCATION KUTR
Burt Hall
Lawrence KS

SURVEYOR [redacted]

PHONE NA

WAFID NIA

Survey Number 100792-04

DATE 10-07-92 TIME START 0810 TIME COMPL 0900 PAGE 1 OF 1

DAILY WEEKLY MONTHLY ☒ CONTAMINATION AND NA DAILY WEEKLY MONTHLY ☒ NA RADIATION SURVEY

COMMENTS: LUDLUM 2929 # BKG = 0 cpm EFF = 0.30 MDA = 17
BX BKG = 58 cpm EFF = 0.18 MDA = 211
EBERLINE RM-15 BX BKG = 80 cpm EFF = 0.10
EBERLINE ASP-1 BX BKG = 75 cpm EFF = 0.10

	CONTAMINATION SURVEYS		RADIATION
	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

PERMISSIBLE LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

SOURCE CHECK DATA

SEE INSTRUMENT RUN SHEET FOR DATA

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO: ALPHA LUDLUM 2929 #34076; BETA-GAMMA LUDLUM 2929 #34076, EBERLINE RM-15 #11268

RADIATION SURVEY INSTRUMENT TYPE/TAG NO: NEUTRON NA; BETA-GAMMA EBERLINE ASP-1 #1992, LUDLUM 19 #95511

RADCON REVIEW D. L. Hyer DATE 10/8/92

REASON FOR SURVEY
☐ PROCEDURE—NO. ____
☒ SPECIAL Release of Poly from T.C. door
☐ ROUTINE ____

SWIPE/PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm	mrem/hr BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	ND	ND	ND	ND	17	Poly # 1
2		3		161	17	Poly # 2
3		ND		ND	16	Poly #3
4		ND		39	16	Poly #4
5		ND		17	16	Poly #5
6		ND		ND	16	Poly # 6
7		ND		ND	17	Poly #7
8		ND		ND	17	Poly #8
9		ND		ND	18	Poly #9
10		3		ND	16	Poly #10
11		ND		ND	20	Poly #11
12		ND		ND	20	Poly #12
13		ND		ND	20	Poly #13
14		ND		17	20	Poly #14
15		ND		ND	21	Poly #15
16		ND		ND	19	Poly #16
17	↓	ND	↓	ND	20	Poly #17
18	ND	ND	ND	50	17	Poly #18
19		3		ND	21	Poly #~~18~~ 19 EC 10-07-92
20		3		11	18	Poly # 20
21		ND		50	20	Poly # 21
22		3		22	19	Poly #22
23		3		ND	19	Poly #23
24		ND		ND	18	Poly #24
25		ND		ND	19	Poly #25
26		ND		ND	19	Poly #26
27		ND		ND	20	Poly #27
28		ND		ND	20	Poly #28
29		ND		ND	20	Poly #29
30		ND		ND	19	Poly #30
31		3		11	18	Poly #31
32		ND		ND	18	Poly #32
33		ND		ND	18	Poly #33
34		ND		44	19	Poly #34
35		3		ND	18	Poly #35
36	↓	ND	↓	11	18	Poly #36
37					NA	
38						
39						
40						

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CONTAMINATION/RADIATION SURVEY REPORT

TO: Project #46899 | DATE: 10-09-92 | TIME START: 1400 | TIME COMPL: 1715 | PAGE 1 OF 1

ACTIVITY/LOCATION: KUTR, BURT HALL, Lawrence, KS

SURVEYOR: [illegible], [illegible]

PHONE: NA

MAP I.D.: NA

Survey Number 100992-04

☐ DAILY ☐ WEEKLY ☐ MONTHLY CONTAMINATION AND NA ☐ DAILY ☐ WEEKLY ☐ MONTHLY NA RADIATION SURVEY

COMMENTS:
Ludlum 2929 αBKG = 0 EFF = 0.30 MDA = 17
βγBKG = 58 EFF = 0.18 MDA = 211
EBERLINE ASP1 βγBKG = 50 EFF = 0.10

PERMISSIBLE LEVELS ____ dpm/100 cm² ALPHA ____ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS ____ dpm/100 cm² ALPHA ____ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE CHECK DATA	SEE		
SOURCE I.D.	INSTRUMENT		
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	DATA cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR	SHEETS		
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO: ALPHA Ludlum 2929 # 74076; BETA-GAMMA ASP-1, EBERLINE, 1792, 260 probe 11274/Ludlum 2929 #74076

RADIATION SURVEY INSTRUMENT TYPE/TAG NO: NEUTRON NA; BETA-GAMMA Ludlum 19 #45511

RADCON REVIEW [illegible] DATE 10/12/92

REASON FOR SURVEY ☐ PROCEDURE—NO. ____ ☒ SPECIAL Release of Aluminum from TANK ☐ ROUTINE ____

SWIPE PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA dpm/100 cm²	☐ mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☒ micro R/hr	ITEM OR LOCATION
1	ND	ND	ND	ND	19	50% SURVEY
2	ND	ND	ND	72	15	DIRECT FRISK
3	ND	ND	ND	50	15	↓
4	ND	3	ND	39	16	
5	ND	ND	ND	ND	16	
6	ND	3	ND	67	16	
7	ND	ND	ND	72	16	
8	ND	ND	ND	17	15	
9	ND	ND	ND	ND	15	
10	ND	ND	ND	6	16	
11	ND	ND	ND	ND	15	
12	ND	ND	ND	39	16	
13	ND	ND	ND	ND	17	
14	ND	ND	ND	ND	15	
15	ND	ND	ND	ND	16	
16	ND	ND	ND	33	17	
17	ND	ND	ND	ND	16	↓
18	ND	ND	ND	~~16~~ ND [illegible]	16	50% SURVEY
19	ND	ND	ND	~~16~~ 39 [illegible]	16	DIRECT FRISK
20	ND	3	ND	ND	15	
21	ND	3	65K	ND	80	(placed in LSA box) (For Disposal) FROM Thermal Column Wall
22	ND	ND	ND	22	15	
23	ND	ND	ND	6	15	↓
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
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(Rows 24–40 lined through: NA)

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CONTAMINATION/RADIATION SURVEY REPORT

TO: PROJECT #41899

DATE: 10-12-92 | TIME START: 1100 | TIME COMP: 1800 | PAGE 1 OF 1

ACTIVITY/LOCATION: KUTR Burt Hall Lawrence KS

SURVEYOR: Everett J. Chester | PHONE: NA

MAP I.D.: N/A | Survey Number: 701292-06

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND NA | DAILY / WEEKLY / MONTHLY ☐ NA RADIATION SURVEY

COMMENTS: LUDLUM 2929 or BKG = 0 cpm EFF = 0.30 MDA = 17
B & BKG = 58 cpm EFF = 0.16 MDA = 211
ASP-1 #1175 BKG = 70 cpm EFF = 0.10

PERMISSIBLE LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

	CONTAMINATION SURVEYS		RADIATION
SOURCE CHECK DATA	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.	SEE INSTRUMENT SHEET FOR DATA		
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE/TAG NO: ALPHA LUDLUM 2929 #74076 | BETA-GAMMA LUDLUM 2929 #74076 ASP-1 / HP-260 #1175

RADIATION SURVEY INSTRUMENT TYPE/TAG NO: NEUTRON NA | BETA-GAMMA LUDLUM 19 #95511

RADCON REVIEW: [signature] DATE 10/12/92

REASON FOR SURVEY
☐ PROCEDURE—NO. ____
☒ SPECIAL Release of Aluminum Foam Tank
☐ ROUTINE ____

SWIPE/PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	ND	ND	ND	ND	14	Aluminum Piece #24
2	ND	ND	ND	ND	16	" " #25
3	ND	ND	ND	28	15	" " #26
4	ND	7	ND	22	17	" " #27
5	ND	ND	ND	ND	15	" " #28
6	ND	3	ND	11	15	" " #29
7	ND	ND	ND	ND	16	" " #30
8	ND	ND	ND	ND	14	" " #31
9	ND	7	ND	67	14	" " #32
10	ND	ND	ND	ND	12	" " #33
11	ND	ND	ND	ND	15	" " #34
12	ND	ND	ND	ND	14	" " #35
13	ND	ND	ND	33	16	" " #36
14	ND	ND	ND	6	16	" " #37
15	ND	7	ND	6	16	" " #38
16	ND	ND	ND	39	15	" " #39
17	NA	NA	NA	NA	NA	NA

SWIPE/PROBE NO	ALPHA EQUIV ____ dpm/PROBE	ALPHA EQUIV ____ dpm/100 cm²	BETA-GAMMA EQUIV ____ dpm/PROBE	BETA-GAMMA EQUIV ____ dpm/100 cm	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
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36						
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CONTAMINATION/RADIATION SURVEY REPORT

TO	PROJECT #46899
SURVEYOR	[signature]
PHONE	NA
ACTIVITY/LOCATION	KUTR, Burt Hall, Lawrence KS
WP I.D.	N/A
Survey Number	10/292-05
DATE	10-12-92
TIME START	10:00
TIME COMPL	1530
PAGE	1 OF 1

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND NA DAILY / WEEKLY / MONTHLY ☐ NA RADIATION SURVEY

COMMENTS:
LUDLUM 2929 α BKG = 0 cpm EFF = 0.30 MDA = 17
βγ BKG = 58 cpm EFF = 0.18 MDA = 211
LUDLUM 2223 α BKG = 0 cpm EFF = 0.24
βγ BKG = 195 cpm EFF = 0.092

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO:
ALPHA: Ludlum 2929 #74076; Ludlum 2223 #93436
BETA-GAMMA: Ludlum 2929 #74076; Ludlum 2223 #93436

RADIATION SURVEY INSTRUMENT TYPE TAG NO:
NEUTRON: NA
BETA-GAMMA: Ludlum 19 #95511

RADCON REVIEW: [signature] DATE 10/16/92

PERMISSIBLE LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA
CSCA AREA CONTROL LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA
☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

SEE INSTRUCT. SHEET DATA SHEET

	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE CHECK DATA			
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			SAT. ☐ UNSAT. ☐
MDA	dpm	dpm	
BACKGROUND	cpm	cpm	mR/hr.

REASON FOR SURVEY: ☐ PROCEDURE—NO. ____ ☒ SPECIAL Release of Boral From Thermal Column Door ☐ ROUTINE ____

SWIPE PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA dpm/100 cm²	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	13	ND	24	ND	15	Boral # 1A
2	8	ND	571	44	15	Boral # 2A
3	25	ND	1529	56	16	Boral # 3A
4	8	3	1857	56	16	Boral # 4A
5	ND	ND	1476	33	16	Boral # 5A
6	ND	ND	405	56	16	Boral # 6A
7	4	ND	952	100	16	Boral # 7A
8	50	20	667	ND	15	Boral # 8A
9	ND	ND	1023	ND	15	Boral # 9A
10	8	3	1357	28	15	Boral # 10A
11	ND	3	881	44	15	Boral # 11A
12	ND	7	1167	11	15	Boral # 12A
13						
14				NA		
15						
16						
17						

SWIPE PROBE NO	ALPHA EQUIV ___ dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV ___ dpm/PROBE	BETA-GAMMA dpm/100 cm²	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
18						
19						
20						
21						
22						
23						
24						
25					NA	
26						
27						
28						
29						
30						
31						
32						
33						
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39						
40						

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CONTAMINATION/RADIATION SURVEY REPORT

ACTIVITY/LOCATION	KUTR Burt Hall Lawrence KS
TO	PROJECT #46899
SURVEYOR	[signature] / Everett J. Christen
PHONE	NA
SUP I.D.	N/A
Survey Number	101392-5
DATE	10.13.92
TIME START	1200
TIME COMP.	1730
PAGE	1 OF 1

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND NA DAILY / WEEKLY / MONTHLY ☐ NA RADIATION SURVEY

COMMENTS:
LUDLUM 2929 α BKG = 0 cpm EFF = 0.30 MDA = 17
βγ BKG = 58 cpm EFF = 0.18 MDA = 211
LUDLUM RM-15 ~~βγ~~ βγ BKG = 70 EFF = 0.10
Ludlum 2223 βγ BKG = 195 MDA = α BKG = 0 MDA =

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO	ALPHA: LUDLUM 2929 #74071, LUDLUM 2223	BETA-GAMMA: LUDLUM 2929 #74076, LUDLUM RM-15 = 133, BETA-GAMMA Ludlum 2223 = 93436
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON	LUDLUM 19 #95511 = BKG 18 μR

RADCON REVIEW [signature] DATE 12/14/92

PERMISSIBLE LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

CSCA AREA CONTROL LEVELS: ____ dpm/100 cm² ALPHA; ____ dpm/100 cm² BETA-GAMMA

☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE CHECK DATA			
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			SAT. ☐ UNSAT. ☐
MDA -	dpm	dpm	
BACKGROUND	cpm	cpm	mR/hr.

SEE INSTRUMENT DATA SHEET

REASON FOR SURVEY ☐ PROCEDURE—NO. ____
☒ SPECIAL Release of Aluminum From TANK
☐ ROUTINE ____

SWIPE PROBE NO	ALPHA EQUIV Th230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV Tc99 dpm/PROBE	BETA-GAMMA dpm/100 cm²	☒ micro R/hr	ITEM OR LOCATION
1	ND	ND	ND	ND	16	Aluminum Piece # 40
2	ND	3	ND	44	16	" " # 41
3	ND	ND	ND	11	16	" " # 42
4	ND	7	ND	ND	14	" " # 43
5	ND	ND	ND	11	15	" " # 44
6	ND	3	ND	ND	15	" " # 45
7	ND	ND	ND	6	16	" " # 46
8	ND	3	ND	28	14	" " # 47
9	ND	7	ND	50	22	" " # 48
10	ND	ND	ND	30	19	" " # 49
11	ND	ND	ND	94	16	" " # 50
12						
13						
14						
15						
16						
17						

NA

SWIPE PROBE NO	ALPHA EQUIV dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV dpm/PROBE	BETA-GAMMA dpm/100 cm	mrem/hr / BETA-GAMMA / NEUTRON / micro R/hr	ITEM OR LOCATION
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NA

ENWD011

CONTAMINATION/RADIATION SURVEY | ID: PROJECT #46899 | DATE: 10/14/92 | START: 1509 | COMP: 1530 | PAGE 1 OF 1

ACTIVITY/LOCATION: KUTR; Burt Hall; Lawrence KS | SURVEYOR: [redacted] | AREA: NA | MAP I.D.: N/A | Survey Number: 10/14/92-05

WEEKLY / MONTHLY: CONTAMINATION AND NA | DAILY / MONTHLY: NA RADIATION SURVEY

COMMENTS: LUDLUM 2929 w/ BKG = 0 cpm EFF = 0.30 MDA = 17
B1 BKG = 58 cpm EFF = 0.18 MDA = 211

PERMISSIBLE LEVELS: _____ dpm/100 cm² ALPHA; _____ dpm/100 cm² BETA-GAMMA
CSCA AREA CONTROL LEVELS: _____ dpm/100 cm² ALPHA; _____ dpm/100 cm² BETA-GAMMA
☐ OTHER (SEE COMMENTS) ☐ NO ACTION REQ'D.

SOURCE CHECK DATA	CONTAMINATION SURVEYS: ALPHA	CONTAMINATION SURVEYS: BETA/GAMMA	RADIATION: BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA -	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE INSTRUMENT RUN SHEET FOR DATA

CONTAMINATION SURVEY INSTRUMENT TYPE-TAG NO: ALPHA LUDLUM 2929 #74076 | BETA-GAMMA LUDLUM 2929 #74076
RADIATION SURVEY INSTRUMENT TYPE-TAG NO: NEUTRON NA | BETA-GAMMA LUDLUM 19 #95511 BKG N/A

RADCON REVIEW [redacted] DATE 10/14/92

REASON FOR SURVEY
☐ PROCEDURE—NO. _____
☒ SPECIAL Release Survey of A1
☐ ROUTINE _____

SWIPE/PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm²	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	ND	3	ND	ND	14	A1 side #51
2	ND	ND	ND	ND	19	" #52
3	ND	3	ND	22	15	#53
4	ND	ND	ND	11	14	#54
5						
6						
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16						
17						

SWIPE/PROBE NO	ALPHA EQUIV ____ dpm/PROBE	ALPHA EQUIV ____ dpm/100 cm²	BETA-GAMMA EQUIV ____ dpm/PROBE	BETA-GAMMA EQUIV ____ dpm/100 cm²	mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☐	ITEM OR LOCATION
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N/A

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CONTAMINATION/RADIATION SURVEY

TO PROJECT #46899

DATE 10/19/92 TIME START 0750 TIME COMP. 0830 PAGE 1 OF 1

ACTIVITY/LOCATION: KUTR, Burt Hall, Lawrence KS

SURVEYOR: RS Charlton

ROUTE: NA

MAP I.D.: N/A

Survey Number: 101992-05

DAILY / WEEKLY / MONTHLY ☐ CONTAMINATION AND NA DAILY / WEEKLY / MONTHLY ☐ NA RADIATION SURVEY

COMMENTS: LUDLUM 2929 α BKG = 0 cpm EFF = 0.30 MDA = 17
β BKG = 58 cpm EFF = 0.18 MDA = 211
Eberline RM-15 β BKG = 60 cpm EFF = 0.10
Ludlum 19 BKG = 17 μR/hr

	CSCA AREA CONTROL LEVELS	☐ OTHER (SEE COMMENTS)
PERMISSIBLE LEVELS ____ dpm/100 cm² ALPHA ____ dpm/100 cm² BETA-GAMMA	____ dpm/100 cm² ALPHA ____ dpm/100 cm² BETA-GAMMA	☐ NO ACTION REQ'D.

	CONTAMINATION SURVEYS		RADIATION
SOURCE CHECK DATA	ALPHA	BETA/GAMMA	BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			
MDA*	dpm	dpm	SAT. ☐ UNSAT. ☐
BACKGROUND	cpm	cpm	mR/hr.

SEE INSTRUMENT CAL. SHEET FOR DATA

	INSTRUMENT	TYPE/TAG NO	ALPHA	BETA-GAMMA
CONTAMINATION SURVEY			LUDLUM 2929 # 94076	LUDLUM 2929 # 94076
RADIATION SURVEY			NEUTRON: NA	BETA-GAMMA: LUDLUM 19 #95511

REASON FOR SURVEY
☐ PROCEDURE—NO. ____
☒ SPECIAL Brief Release of pipes in SW corner
☐ ROUTINE

RADCON REVIEW Del Kay DATE 10/20/92

SWIPE PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm	dpm/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr ☒	ITEM OR LOCATION
1	ND	ND	ND	ND	17	inside big pipe
2	ND	ND	ND	ND	17	inside little pipe
3	ND	ND	ND	28	17	outside big pipe
4	ND	7	ND	78	17	outside little pipe
5	ND	ND	ND	11	17	hole surrounding pipes
6	ND	ND	ND	11	17	pipe protruding concrete
7						
8						
9						
10					N/A	
11						
12						
13						
14						
15						
16						
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26					N/A	
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ENWD011

ENWD-RP-006, Appendix A
Page 1, 1/14/92

CONTAMINATION/RADIATION SURVEY | TO: PROJECT #41899

ACTIVITY/LOCATION: KUTR
Burt Hall
Lawrence KS

SURVEYOR: [illegible] | PHONE: NA

MAP I.D.: N/A | Survey Number 101992-08

DATE: 10/19/92 | TIME START: 1545 | TIME COMP.: 1620 | NO. 1 OF 1

☐ DAILY ☐ WEEKLY ☐ MONTHLY CONTAMINATION AND NA | ☐ DAILY ☐ WEEKLY ☐ MONTHLY NA RADIATION SURVEY

COMMENTS:
LUDLUM 2929 α BKG = 0 cpm EFF = 0.30 MDA = 17
βγ BKG = 58 cpm EFF = 0.18 MDA = 211
LUDLUM 19 BKG = 14 μR/hr
Rm 15 BKG = 40 cpm EFF = 0.10

PERMISSIBLE LEVELS	CSCA AREA CONTROL LEVELS	
___ dpm/100 cm² ALPHA	___ dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
___ dpm/100 cm² BETA-GAMMA	___ dpm/100 cm² BETA-GAMMA	☐ NO ACTION REQ'D.

SEE INSTRUMENT DATA SHEET

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA-GAMMA	RADIATION BETA-GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			SAT. ☐ UNSAT. ☐
MDA -	dpm	dpm	
BACKGROUND	cpm	cpm	mR/hr.

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO	ALPHA: LUDLUM 2929 #74076	BETA-GAMMA: LUDLUM 2929 #74076
RADIATION SURVEY INSTRUMENT TYPE/TAG NO	NEUTRON: NA	BETA-GAMMA: LUDLUM 19 #95511

RADCON REVIEW: [signature] DATE: 10/20/92

REASON FOR SURVEY ☐ PROCEDURE—NO. ___
☒ SPECIAL Survey on cask type structure (Release)
☐ ROUTINE ___

SWIPE PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA EQUIV Th-230 dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA EQUIV Tc-99 dpm/100 cm²	☐ mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☒ micro R/hr	ITEM OR LOCATION
1	ND	ND	ND	ND	5	inside
2	ND	ND	ND	33	14	outside
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

NA

SWIPE PROBE NO	ALPHA EQUIV ___ dpm/PROBE	ALPHA EQUIV ___ dpm/100 cm²	BETA-GAMMA EQUIV ___ dpm/PROBE	BETA-GAMMA EQUIV ___ dpm/100 cm²	☐ mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr	ITEM OR LOCATION
18						
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NA

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CON[illegible]ON/RADIATION SUR[illegible]ORT

TO	PROJECT #46899	
ACTIVITY/LOCATION: KUTR	SURVEYOR: RJ Chuter [illegible]	ZONE: N/A
Burt Hall	MAP I.D.: N/A	Survey Number 103192-02
Lawrence KS		

PERMISSIBLE LEVELS	CSCA AREA CONTROL LEVELS	
____ dpm/100 cm² ALPHA	____ dpm/100 cm² ALPHA	☐ OTHER (SEE COMMENTS)
____ dpm/100 cm² BETA-GAMMA	____ dpm/100 cm² BETA-GAMMA	☐ NO ACTION REQ'D.

SEE INSTRUMENT DATA SHEETS

SOURCE CHECK DATA	CONTAMINATION SURVEYS ALPHA	CONTAMINATION SURVEYS BETA/GAMMA	RADIATION BETA/GAMMA
SOURCE I.D.			
SOURCE STRENGTH	dpm	dpm	mR/hr.
INSTRUMENT RESPONSE	cpm	cpm	mR/hr.
EFFICIENCY/CORRECTION FACTOR			SAT. ☐ UNSAT. ☐
MDA -	dpm	dpm	
BACKGROUND	cpm	cpm	mR/hr.

REASON FOR SURVEY ☐ PROCEDURE—NO. ____
☒ SPECIAL Survey of pneumatic tube
☐ ROUTINE ____

SWIPE PROBE NO	ALPHA EQUIV Th-230 dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV Tc-99 dpm/PROBE	BETA-GAMMA dpm/100 cm²	☐ mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☒ micro R/hr	ITEM OR LOCATION
1	ND	3	ND	ND	22	inside tube (outlet)
2	ND	3	ND	6	22	outside tube
3	ND	ND	ND	ND	22	plate
4						
5						
6						
7						
8			N/A			
9						
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12						
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15						
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17						

DATE 10/31/92	TIME START 1000	TIME COMPL. 1030	PAGE 1 OF 1			
☐ DAILY ☐ WEEKLY ☐ MONTHLY	CONTAMINATION AND	☐ DAILY ☐ WEEKLY ☐ MONTHLY	RADIATION SURVEY			

COMMENTS:
Ludlum 2929 α BKG: 0cpm EFF: 0.30 MDA: 17
βγ BKG: 58cpm EFF: 0.18 MDA: 211
2m15 BKG: 90cpm EFF: 0.10
Ludlum 19 BKG: 22 μR/hr

CONTAMINATION SURVEY INSTRUMENT TYPE TAG NO	ALPHA Ludlum 2929 #74076	BETA-GAMMA Ludlum 2929 #74076
RADIATION SURVEY INSTRUMENT TYPE-TAG NO	NEUTRON N/A	BETA-GAMMA Ludlum 19 #95511

RADCON REVIEW [signature] DATE 10/31/92

SWIPE PROBE NO	ALPHA EQUIV ___ dpm/PROBE	ALPHA dpm/100 cm²	BETA-GAMMA EQUIV ___ dpm/PROBE	BETA-GAMMA dpm/100 cm²	☐ mrem/hr ☐ BETA-GAMMA ☐ NEUTRON ☐ micro R/hr	ITEM OR LOCATION
18						
19						
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25			N/A			
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ND - Not Detectable