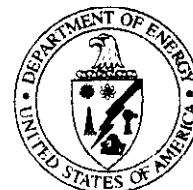


*Certification Docket for the  
Remedial Action Performed  
at the Baker and Williams  
Warehouses Site in  
New York, New York, 1991 - 1993*

*Department of Energy  
Former Sites Restoration Division  
Oak Ridge Operations Office*

*November 1995*



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CERTIFICATION DOCKET FOR THE REMEDIAL ACTION  
PERFORMED AT THE BAKER AND WILLIAMS WAREHOUSES SITE  
IN NEW YORK, NEW YORK, 1991-1993

NOVEMBER 1995

Prepared for

United States Department of Energy

Oak Ridge Operations Office

Under Contract No. DE-AC05-91OR21949

By

Bechtel National, Inc.

Oak Ridge, Tennessee

Bechtel Job No. 14501

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## ACRONYMS

AEA	Atomic Energy Act
AEC	Atomic Energy Commission
ALARA	as low as reasonably achievable
B&WW	Baker and Williams Warehouses
BNI	Bechtel National, Inc.
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CX	categorical exclusion
DAC	derived air concentration
DOE	U.S. Department of Energy
DOE-FSRD	Department of Energy Former Sites Restoration Division
DOE-ORO	Department of Energy Oak Ridge Office
DOT	Department of Transportation
EA	environmental assessment
EIS	environmental impact study
ERP	expedited remedial process
ESSAP	Environmental Survey and Site Assessment Program
FONSI	finding of no significant impact
FUSRAP	Formerly Utilized Sites Remedial Action Program
HEPA	high-efficiency particulate air
HRS	hazard ranking system

## ACRONYMS

(continued)

IVC	independent verification contractor
LLRW	low-level radioactive waste
MED	Manhattan Engineer District
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NPL	National Priority List
NRC	Nuclear Regulatory Commission
ORAU	Oak Ridge Associated Universities
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory
PA/SI	preliminary assessment/site inspection
PIC	pressurized ionization chamber
PMC	project management contractor
QA	quality assurance
SFMP	Surplus Facilities Management Program
TMA	ThermoAnalytical



## UNITS OF MEASURE

cm	centimeter
dpm	disintegrations per minute
ft	foot
gal	gallon
h	hour
in.	inch
kg	kilogram
lb	pound
m	meter
$\mu$ Ci	microcurie
$\mu$ R	microroentgen
MeV	million electron volts
ml	milliliter
mSv	millisievert

## INTRODUCTION

The Baker and Williams warehouses were used by the Manhattan Engineer District (MED), predecessor of the Atomic Energy Commission (AEC) and the Department of Energy (DOE), for short-term storage of uranium concentrates during the 1940s. This report documents radiological conditions at the warehouses (Buildings 513-535) following remedial action conducted by Bechtel National, Inc. (BNI) in 1991 and 1993. The remediation work was performed under the Formerly Utilized Sites Remedial Action Program (FUSRAP), a DOE project established to identify and decontaminate or otherwise control sites where residual radioactive contamination (exceeding current guidelines) remains from the early years of the nation's atomic energy program.

The objectives of FUSRAP are to

- identify and assess all sites that were formerly used in support of early MED/AEC nuclear work to determine whether further decontamination or control is needed;
- decontaminate or apply controls to these sites to permit compliance with current applicable guidelines;
- dispose of or stabilize all generated residues in an environmentally acceptable manner;
- accomplish all work in accordance with appropriate landowner agreements and local and state environmental and land-use requirements to the extent permitted by federal law and applicable DOE orders, regulations, standards, policies, and procedures; and
- certify, at the completion of the remedial action, that the chemical and radiological conditions of the sites comply with guidelines and that the sites may be released for appropriate future use.

FUSRAP is managed by the DOE Oak Ridge Operations Office (DOE-ORO), Former Sites Restoration Division (DOE-FSRD). As the project management contractor (PMC), BNI is responsible for planning, managing, and implementing FUSRAP.

Under standard FUSRAP protocol, an initial investigation survey of a potential site is performed by Oak Ridge Institute for Science and Education (ORISE) or Oak Ridge National Laboratory (ORNL) under contract to DOE Headquarters. If appropriate, DOE Headquarters designates the site into FUSRAP on the basis of the results provided by the initial investigation. As PMC for FUSRAP, BNI is responsible for planning and implementing FUSRAP activities and managing site characterization and remedial actions. The final phase for a FUSRAP site is independent verification, which is provided by ORISE or ORNL after remedial action is complete. This verification process provides independent (third-party) data to assist DOE in evaluating the accuracy of the post-remedial action status of the site, as presented by the PMC, and in ensuring that the documentation accurately and adequately describes the condition of the site. DOE Headquarters uses the information developed by the remediation and verification activities to certify that a site may be released for use without restrictions.

### **Environmental Regulations for FUSRAP**

To assess the environmental effects of federal actions, Executive Order 11991 empowered the Council on Environmental Quality (CEQ) to issue regulations to federal agencies for implementing the procedural provisions of the National Environmental Policy Act (NEPA) that are mandatory under the law. In June 1979, CEQ issued regulations containing guidance and specific requirements. DOE guidelines for implementing the NEPA process and satisfying the CEQ regulations were subsequently issued and became effective on March 28, 1980. In April 1992, DOE revised its NEPA guidelines to provide more specificity and detail and to enhance public review opportunities. Codified at 10 CFR Part 1021, the regulations became effective on May 26, 1992. The rule also includes a list of typical classes of actions, including categorical exclusion (CX). A CX does not require the preparation of either an environmental impact statement or an environmental assessment.

The NEPA process required FUSRAP decision-makers to identify and assess the environmental consequences of proposed actions before beginning remedial action activities, developing disposal sites, or transporting and emplacing radioactive wastes. After the enactment of the Superfund Amendments and Reauthorization Act, which amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), DOE established a policy in November 1992 to integrate the similar requirements of CERCLA and NEPA under DOE Order 5440.1E.

The Baker and Williams Warehouses site was selected for remediation under the expedited protocol delineated by DOE's office of Environmental Guidance (EH-231) in June 1990 (see Section 2.4). The expedited protocol is a streamlined approach to cleaning up sites with a relatively small amount of contamination in a cost-effective and environmentally acceptable manner that complies with NEPA and CERCLA regulations. This protocol applies only to sites with interior contamination or sites with limited external contamination for which the response will not significantly impact the environment. In contrast to the standard protocol, under the expedited protocol the designation contractor functions as the organization responsible for conducting the remedial action and post-remedial action survey.

NEPA requirements were satisfied by the issuance and approval of a CX for the remedial action. This NEPA documentation confirmed that there would be no adverse effects on the environment from the remedial activities.

Work performed under FUSRAP by the PMC or by architect-engineers, construction and service subcontractors, and other project subcontractors is governed by the quality assurance program for the project and is in compliance with DOE Order 5700.6B. The effectiveness of the quality assurance program is assessed regularly by the BNI quality assurance organization and by DOE-FSRD.

## **Docket Contents**

The purpose of this docket is to document the successful remediation at the Baker and Williams Warehouses site in 1991 and 1993. This docket includes documents supporting the

DOE certification that conditions at the subject property are in compliance with guidelines and standards determined to be applicable. Furthermore, this certification docket provides the documents certifying that the property meets all applicable guidelines for contaminants resulting from the activities of DOE or its predecessor agencies.

Exhibit I of this docket is a summary of the remedial activities conducted at the site. The exhibit provides a brief history of the origin of the contamination, the radiological characterizations conducted, the remedial action performed, and post-remedial action/verification activities. Cost data covering all remedial action conducted at the Baker and Williams Warehouses Site are also included in Exhibit I. Appendix A of Exhibit I contains DOE guidelines for residual radioactive materials at FUSRAP sites.

Exhibit II consists of the letters, memos, and reports that were produced to document the entire remedial action process from designation of the site under FUSRAP to the certification that no radiologically or chemically based restrictions limit the future use of the site. Documents that are brief are included in Exhibit II. Lengthy documents are referenced in the exhibit and provided as an attachment to the certification docket at publication.

Exhibit III provides diagrams of the site identifying the areas of contamination that were remediated during the cleanup activities.

The certification docket and associated references will be archived by DOE through the Assistant Secretary for Management and Administration. Copies will be available for public review between 9:00 a.m. and 4:00 p.m., Monday through Friday (except federal holidays), at the DOE Public Reading Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. Copies will also be available in the DOE Public Document Room at the Oak Ridge office.

**EXHIBIT I**  
**SUMMARY OF REMEDIAL ACTION ACTIVITIES AT THE**  
**BAKER AND WILLIAMS WAREHOUSES SITE**  
**IN NEW YORK, NEW YORK, 1991-1993**

## 1.0 INTRODUCTION

Exhibit I summarizes the activities culminating in the certification that conditions at the Baker and Williams Warehouses site are in compliance with applicable guidelines and that future use of the site will not result in radiological exposure above DOE criteria and/or standards established to protect members of the general public and occupants of the site. These activities were conducted under FUSRAP (Ref. 1). This summary includes a discussion of the remedial action process at the Baker and Williams Warehouses site: the characterization of the site radiological status, designation of the site as requiring remedial action, remedial action performed, and verification that the radioactive contamination has been removed. The Baker and Williams Warehouses site is located in New York, New York; Figure I-1 shows the site location. Further details of each activity beyond those included in Exhibit I can be found in the referenced documents.

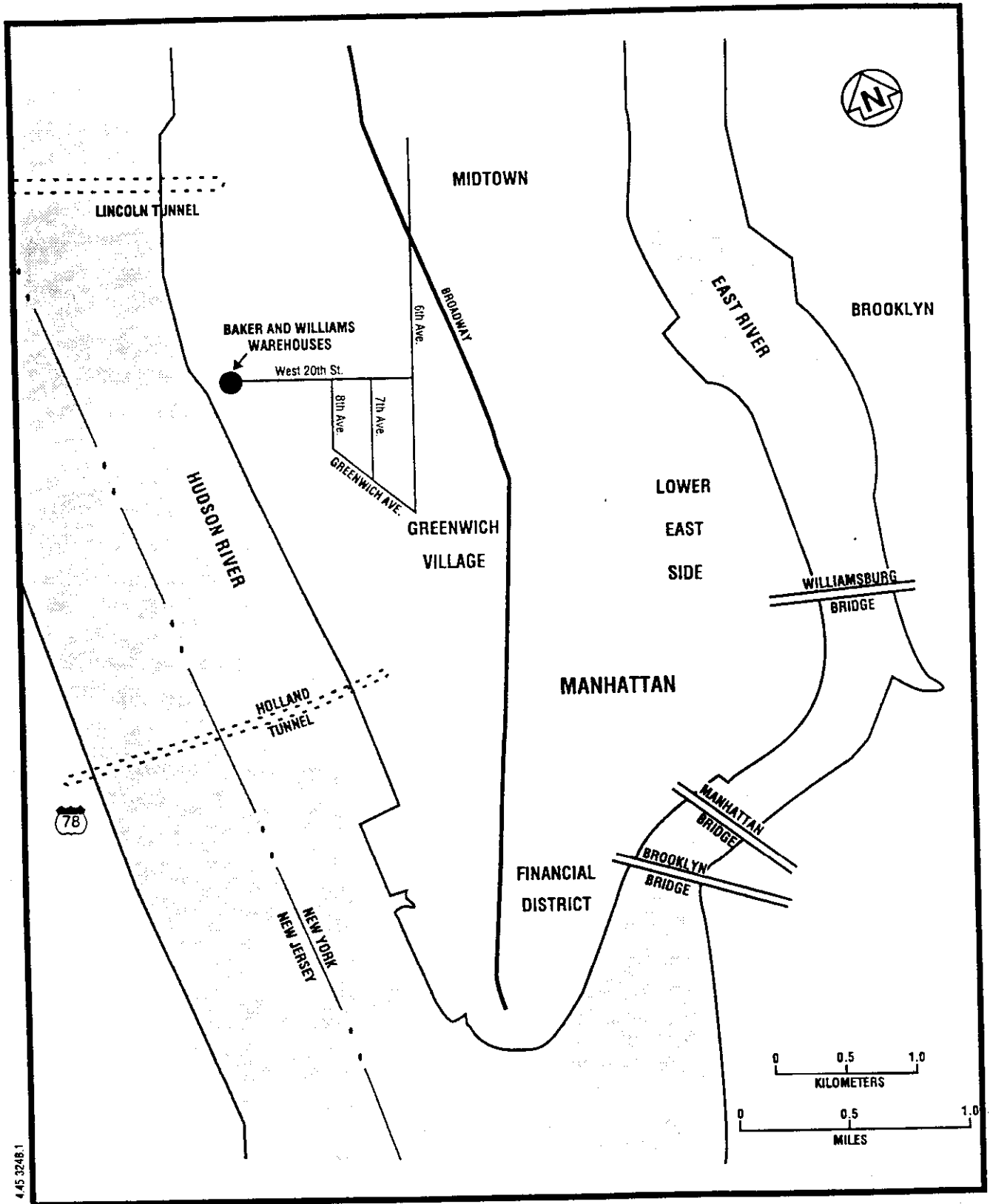


Figure I-1  
 Location of Baker and Williams Warehouses



## 2.0 SITE HISTORY

During the early 1940s, MED shipped uranium concentrates to the former Baker and Williams Warehouses in New York, New York. The warehouses were used for short-term storage of the uranium that was later distributed to U.S. government facilities. According to historical information, approximately 99,430 kg (219,000 lb) of orange and yellow sodium uranate were delivered in 1942, and approximately 39,900 kg (86,000 lb) of orange and yellow sodium uranate, 10,000 kg (22,000 lb) of sodium uranyl carbonate, and 9,080 kg (20,000 lb) of black uranium oxide were delivered in 1943. Since the 1940s, the warehouses have been leased by several businesses.

The Baker and Williams Company owned three adjacent warehouse buildings at 513-519, 521-527, and 529-535 West 20th Street during the 1940s. Historical shipping documents indicate that MED/AEC shipments of uranium concentrates were delivered to the shipping and receiving office located at Building 529-535; however, shipments may have been received, unloaded, and/or stored at either of the adjacent warehouse buildings. Adjoining doorways between building 521-527 and 529-535 allowed convenient access between the two buildings.

In 1989, DOE's Office of Environmental Restoration reviewed available historical documentation that described the previous MED/AEC activities conducted at this facility and determined that the potential for radioactive material to be present as a result of the past activities was low. However, the information was insufficient to verify the radiological condition of the site after MED activities were terminated. A designation survey was conducted to obtain sufficient radiological measurements to make a recommendation to DOE Headquarters as to whether the site should be included in FUSRAP for remedial action or eliminated from the program (Ref. 3). During a preliminary site visit by representatives of the Environment Survey and Site Assessment Program of Oak Ridge Associated Universities [now known as the Oak Ridge Institute for Science and Education (ORISE)], Building 521-527 was added to the scope of the survey, based on a visual inspection and accessibility into the adjoining Building 529-535.

In August 1989, ORISE conducted a radiological designation survey of the interior surfaces of Buildings 521-527 and 529-535 (Ref. 3). Areas of elevated direct radiation in excess of DOE guidelines for residual activity were detected in several areas in Building 521-527; however, no residual contamination was detected in Building 529-535. As a result of the findings in Building 521-527, the site was designated for inclusion in FUSRAP (Ref. 14). In March 1991, characterization of Building 521-527 was performed (Ref. 4). Characterization of the building was followed by remediation and post-remedial action surveys by BNI and independent verification by ORISE (Refs. 5 and 6).

During the 1991 operations, ORISE also conducted surveys of the accessible surfaces in Building 513-519 (Refs. 7 and 8). Based on the survey results, Building 513-519 was remediated during May through July 1993 (Ref. 9).

### 3.0 SITE DESCRIPTION

The Baker and Williams warehouses are located at 513-519, 521-527, and 529-535 West 20th Street in New York (Manhattan), New York (Figure I-1). The three adjacent buildings are currently used as warehouse facilities.

Building 513-519 has seven floors and a basement; each level has approximately 778 m<sup>2</sup> (8,375 ft<sup>2</sup>) of floor space and is divided into east and west bays. Building 521-527 has nine floors and a basement. Before remediation activities were conducted in Building 521-527, the northern and southern walls of the first floor were resurfaced with plaster and paint. In the west bay, two walls were added, and one wall has been removed since August 1989.

Each building is constructed of fireproof materials (steel, concrete, and brick). The basement floors are concrete; other floors are coated with approximately 5 cm (2 in.) of a bituminous material. Between the concrete and the bituminous material is a layer [approximately 1.3 cm (0.5 in.) thick] of material that resembles crushed stone. The main office space and loading docks of both buildings are on the first floor.

## 4.0 RADIOLOGICAL HISTORY AND STATUS

### 4.1 RADIOLOGICAL SURVEYS

#### **Building 521-527**

From March 11 through 22, 1991, ORISE performed a radiological characterization survey of the contaminated areas in Building 521-527 (particularly the east and west basement bays). Residual uranium activity exceeding DOE surface contamination guideline levels was identified in the basement east bay, basement west bay, and the first floor (Ref. 4). At locations inside the areas that exceeded guidelines, measurements ranged from  $< 5,100$  to  $46,000$  dpm/100 cm<sup>2</sup> for fixed beta-gamma activity,  $< 6$  to  $9$  dpm/100 cm<sup>2</sup> for removable alpha, and  $< 13$  dpm/100 cm<sup>2</sup> for removable beta-gamma. No removable activity exceeding guidelines was detected at any locations.

At locations outside the areas that exceeded guidelines, measurements ranged from  $< 320$  to  $13,000$  dpm/100 cm<sup>2</sup> for fixed beta-gamma activity,  $< 6$  to  $29$  dpm/100 cm<sup>2</sup> for removable alpha, and  $< 13$  to  $33$  dpm/100 cm<sup>2</sup> for removable beta-gamma.

Analyses of three dust samples from horizontal surfaces in the basement east bay indicated the presence of uranium.

#### **Building 513-519**

During the March 1991 operations, ORISE also conducted surveys of accessible surfaces in Building 513-519. Residual uranium activity exceeding DOE surface contamination guideline levels was identified at 4 locations in the basement east bay; 6 locations in the basement west bay; 21 locations on the first floor east bay; on the lower portions of the western and southern walls on the third floor east bay; 1 location on the third floor west bay; and 2 locations in the elevator pit east bay. At locations inside the areas that exceeded guidelines, measurements ranged from  $5,000$  to  $580,000$  dpm/cm<sup>2</sup> for fixed

beta-gamma activity, <12 to 340 dpm/100 cm<sup>2</sup> for removable alpha, and <20 to 320 dpm/100 cm<sup>2</sup> for removable beta-gamma (Ref. 7).

At locations outside the areas that exceeded guidelines, measurements ranged from <1,500 to 4,600 dpm/100 cm<sup>2</sup> for beta-gamma activity, <12 dpm/100 cm<sup>2</sup> for removable alpha, and <20 dpm/100 cm<sup>2</sup> for removable beta-gamma.

Two areas on the fifth floor east bay, previously identified as areas of elevated activity, were determined to be below guideline levels.

No areas of removable contamination were identified during the 1991 designation survey on the second, fourth, sixth, and seventh floors. Because materials were stored in the warehouse at the time of this survey, access to floor surfaces was limited to less than half of the floor area.

### **Building 529-535**

In August 1989, ORISE performed surface scans and direct measurements for total and removable alpha and beta-gamma activity in accessible areas of Building 529-535. Survey scans did not identify any residual contamination (Ref. 3). A total of 239 measurements for total and removable activity were made on accessible areas of the floor and lower wall surfaces, and 31 measurements were made on the center stairwell between Buildings 529-535 and 521-527. Total activity measurements for alpha ranged from <27 to 57 dpm/100 cm<sup>2</sup> and <350 to 1,400 dpm/100<sup>2</sup> for beta-gamma. Removable activity for alpha and beta-gamma ranged from <3 to 12 dpm/100 cm<sup>2</sup> and <6 to 15 dpm/100 cm<sup>2</sup>, respectively. Exposure rates measured throughout the building ranged from 7.6 μR/h to 15 μR/h. No areas in excess of DOE guidelines were identified.

## 4.2 REMEDIAL ACTION GUIDELINES

DOE residual contamination guidelines governing the release of property for future unrestricted use are listed in the DOE guidelines for residual radioactive material at FUSRAP and remote SFMP sites (Ref. 12). On surfaces where contamination exceeded the applicable guidelines, remedial action was conducted until post-remedial action measurements indicated that DOE guidelines had been met. The remedial action guidelines for uranium-contaminated surfaces at the warehouse are 5,000 dpm/100 cm<sup>2</sup> average (alpha), 15,000 dpm/100 cm<sup>2</sup> maximum (alpha), and 1,000 dpm/100 cm<sup>2</sup> removable (alpha). The external gamma exposure rate guideline is 20  $\mu$ R/h above the background level (see Table I-1). Even though the remedial action guidelines for uranium-contaminated surfaces are stated in terms of alpha activity, beta-gamma measurements were used to guide remedial activities. The contaminant of concern is processed natural uranium (i.e., uranium separated from its long-lived daughter products but in its naturally occurring isotopic abundances). Processed natural uranium emits both alpha and beta radiation in approximately equal proportions; either beta activity levels or alpha activity levels may, therefore, be measured to determine uranium surface activity levels. Measurements of beta-gamma activity levels, rather than alpha activity, provide a more accurate representation of uranium surface activity because dusty, porous, or rough building surfaces can selectively attenuate the alpha activity.

## 4.3 POST-REMEDIAL ACTION STATUS

The post-remedial action data indicate that the contaminated areas in Building 521-527 and Building 513-519 were successfully remediated during 1991 and 1993 and are now in compliance with applicable DOE guidelines for cleanup of radioactive contamination (Refs. 5 and 9).

The remedial activities discussed in this report were independently reviewed by the ORISE radiological site assessment team to verify the data supporting the adequacy of the remedial action and to confirm that the site is in compliance with applicable remedial action guidelines.

**Table I-1**  
**Summary of Residual Contamination Guidelines**

**BASIC DOSE LIMITS**

The basic limit for the annual radiation dose received by an individual member of the general public is 100 mrem/yr. In implementing this limit, DOE applies as low as reasonably achievable (ALARA) principles to set site-specific guidelines.

**STRUCTURE GUIDELINES**

**External Gamma Radiation**

The average level of gamma radiation inside a building or habitable structure on a site that has no radiological restrictions on its use shall not exceed the background level by more than 20  $\mu$ R/h and will comply with the basic dose limits when an appropriate-use scenario is considered.

**Indoor/Outdoor Structure Surface Contamination**

Radionuclide <sup>b</sup>	Allowable Surface Residual Contamination <sup>a</sup> (dpm/100 cm <sup>2</sup> )		
	Average <sup>c,d</sup>	Maximum <sup>d,e</sup>	Removable <sup>d,f</sup>
Transuranics, Ra-226, Ra-228, Th-230, Th-228 Pa-231, Ac-227, I-125, I-129	100	300	20
Th-Natural, Th-232, Sr-90, Ra-223, Ra-224 U-232, I-126, I-131, I-133	1,000	3,000	200
U-Natural, U-235, U-238, and associated decay products	5,000 $\alpha$	15,000 $\alpha$	1,000 $\alpha$
Beta-gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above	5,000 $\beta - \gamma$	15,000 $\beta - \gamma$	1,000 $\beta - \gamma$

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

<sup>b</sup>Where surface contamination by both alpha- and beta-gamma-emitting radionuclides exists, the limits established for alpha- and beta-gamma-emitting radionuclides should apply independently.

<sup>c</sup>Measurements of average contamination should not be averaged over more than 1 m<sup>2</sup>. For objects of less surface area, the average shall be derived for each such object.

<sup>d</sup>The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/h and 1.0 mrad/h, respectively, at 1 cm.

<sup>e</sup>The maximum contamination level applies to an area of not more than 100 cm<sup>2</sup>.

<sup>f</sup>The amount of removable radioactive material per 100 cm<sup>2</sup> of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 cm<sup>2</sup> is determined, the activity per unit area should be based on the actual area and the entire surface should be wiped. The numbers in this column are maximum amounts.

ORISE also provided independent radiological verification by performing separate post-remedial action confirmatory walkovers and surface surveys.



## 5.0 REMEDIAL ACTION

The following sections briefly describe the remedial action process and the measures taken to protect the public and the environment during the process.

### 5.1 PRE-REMEDIAL ACTION ACTIVITIES

#### **Building 521-527**

All materials stored in Building 521-527 were removed before remedial action began. Immediately before remedial action began, ORISE again surveyed the warehouse to more accurately define the boundaries of contamination in the east bay of the basement and the west bay of the first floor. Information obtained during this survey was used to determine the necessary remedial actions. Because ORISE had already surveyed the warehouse, BNI did not perform scans during remedial action.

The primary methods of decontamination in Building 521-527 involved using Nutech-755 (a non-hazardous, non-toxic, and biodegradable chemical decontamination agent) and a self-propelled floor scarifier.

#### **Building 513-519**

Immediately before remedial action began, ORISE characterized the warehouse, except for the third floor east bay, to more accurately define the boundaries of contamination. The characterization results indicated that radioactive contamination above guidelines was present in both basement bays, the first floor east bay, the third floor west bay, and the east bay elevator pit. Because results of a previous ORISE survey revealed radioactive contamination on the entire third floor east bay, BNI undertook remediation before characterization.

The primary method of decontamination in Building 513-519 involved using an inertial steel-shot blasting machine. The equipment used was a Blastrac™ Unit, Model 10D and a Dust Collector Model 6-54 (Blastrac™).

## 5.2 REMEDIAL ACTION ACTIVITIES

### Building 521-527

Radioactively contaminated wastes resulting from the cleanup were put into 12 drums [Department of Transportation (DOT) 17H], which were placed on pallets in the assigned storage area. The drums were banded together in groups of four, covered with a large tarp, and shipped to the Hanford, Washington, disposal facility in late October 1991.

### Basement

The area in the basement, a 14- by 26.5-m (46- by 87-ft) storage room, was vacuumed with a high-efficiency particulate air (HEPA) filtered vacuum to remove loose dirt and debris. Contaminated areas on the concrete floor, concrete platforms, and portion of the north wall were chemically decontaminated with Nutech-755. The Nutech-755, in gel form, was painted on the contaminated surfaces and left for approximately 4 hours. The gel and waste concrete were then removed with a spray and vacuum-cleaning system. Rinse water was recycled to the extent practicable, and waste water was evaporated by a 55-gal vertical drum heater. A chipping hammer was used on one of the concrete platforms to remove contamination that could not be removed chemically.

### First Floor

The remediated areas on the first floor were storage area 1 [30.1 m<sup>2</sup> (324 ft<sup>2</sup>)], storage area 2 [154.1 m<sup>2</sup> (1659 ft<sup>2</sup>)], vault area 1 [37.6 m<sup>2</sup> (405 ft<sup>2</sup>)], and vault area 2 [57 m<sup>2</sup> (614 ft<sup>2</sup>)]. Contaminated material on the floors was removed with a scarifier and chipping hammers. A chipping hammer was used to remove the bituminous material near walls [15 to 20 cm (6 to 8 in.)], in areas that could not be reached with the scarifier, and to remove small areas of contamination.

## **Building 513-519**

Contaminated materials resulting from remediation activities (e.g., bituminous material, bricks, concrete, dirt, personal protective equipment, and dust) were placed in 38 drums (DOT 17H) and stored in a secured room on the second floor west bay. The drums were shipped to a disposal facility in Clive, Utah (Envirocare of Utah, Inc.) in September 1993. Radiologically clean bituminous material was released for industrial recycling as pavement material.

### **Basement**

The contaminated areas in the basement were vacuumed with a HEPA-filtered vacuum to remove loose dirt and debris. Contaminated areas on the concrete floor were removed using the Blastrac™ and hand-held chipping hammers. Two wall-floor interfaces in each basement bay had stair-step-fashion brick ledges from the floor to the wall. The contaminated areas on the ledges (shown in the figures as contamination on the walls) were decontaminated with steel-bristled brushes and a hand-held chipping hammer. Remediated areas were then vacuumed to remove loose debris.

### **First Floor East Bay**

The contaminated areas in the first floor east bay were vacuumed with a HEPA-filtered vacuum to remove loose dirt and debris. Contaminated areas on the bituminous material floor were removed with the Blastrac™ and a hand-held chipping hammer. Remediated areas were then vacuumed to remove loose debris.

### **Third Floor West Bay**

The contaminated area in the third floor west bay was vacuumed with a HEPA-filtered vacuum to remove loose dirt and debris. Contamination on the bituminous material floor was removed with a hand-held chipping hammer. The remediated area was vacuumed to remove loose debris.

### **Third Floor East Bay**

Before characterization surveys were conducted by ORISE, the entire third floor east bay was vacuumed with a HEPA-filtered vacuum to remove loose dirt and debris; the top layer of bituminous material on the floor was removed with the Blastrac™ and hand-held chipping hammers; and various locations along the northern, eastern, and southern walls were cleaned with hand-held chipping hammers. The remedial actions were successful at removing surface contamination from most of the bituminous surface.

After the initial remediation, characterization surveys by ORISE revealed surface contamination on portions of the walls, along the western wall and floor interface, and at various locations on the floor throughout the bay.

The contaminated areas on the western wall and the western floor/wall interface were removed with steel-bristled brushes and hand-held chipping hammers. Hand-held chipping hammers were used to lift contaminated bituminous material from the underlying concrete flooring. Contamination was discovered on the underlying concrete flooring at some locations; therefore, small patches of the bituminous material were removed to expose the concrete and allow additional radiological surveying. Survey results indicated that radioactive contamination was present under the bituminous material at locations throughout the bay. To ensure identification and remediation of all contaminated areas on the concrete, the entire bituminous material floor was systematically removed with hand-held chipping hammers. Bituminous material was scanned for radioactivity as it was removed to ensure that all contaminated material was segregated from the clean material for proper handling and waste minimization. Contaminated areas on the concrete flooring were removed with hand-held chipping hammers. The bay floor and walls were vacuumed after remediation to remove loose debris.

### **East Bay Elevator Pit**

The nonradioactive trash and debris in the east bay elevator pit were removed by hand. The contaminated areas were vacuumed with a HEPA-filtered vacuum to remove additional

loose dirt and debris. Contamination on the concrete floor was sampled for chemical constituents and removed with a hand-held chipping hammer. The remediated area was then vacuumed again to remove loose debris. The remediated material was treated as radioactive-mixed waste based on sampling results. The contaminated areas on the underside of the elevator were removed with the HEPA-filtered vacuum and steel-bristled brushes.

### 5.3 POST-REMEDIAL ACTION MEASUREMENTS

After cleanup was completed, a radiological survey of the walls, floors, and ceiling was conducted to ensure that no radioactivity in excess of DOE guidelines remained. The survey involved conducting preliminary surface scans and measuring direct-contact alpha and beta-gamma activity, removable alpha activity, and gamma-ray exposure rates. Before direct measurements were made, surface scans were performed with a Geiger-Mueller counter (HP-210). Particular attention was given to cracks and joints in the floors, walls, ledges, overheads, and other surfaces where material may have accumulated. Direct-contact beta-gamma measurements were obtained with Geiger-Mueller counters (HP-210 and HP-260), and direct-contact alpha measurements were obtained with an alpha scintillation detector (AC-3-7). The number of points where readings were taken generally averaged three to five per square meter; where physical features permitted, readings were taken in the center and at the corners of a 1- by 1-m square. Exposure rates were measured 1 m (3.3 ft) above the floor surface with a pressurized ionization chamber (PIC) at various locations. Removable alpha activity was also determined at various locations by wiping a 100-cm<sup>2</sup> area with a filter and measuring alpha emissions from the filter with an alpha scintillation counter (SAC-4). Measurements of removable alpha activity were not taken at all direct-contact alpha measurement locations because no removable contamination was identified during the characterization surveys. However, measurements of removable alpha activity were taken at locations with fixed readings above and below 1,000 dpm/100 cm<sup>2</sup> to obtain a representative cross-section of the data. Approximately 20 percent of the post-remedial action measurement locations were surveyed for removable alpha activity. All instruments were calibrated in accordance with standard Thermo Analytical (TMA) procedures, and routine calibration checks were performed during the remedial activities. Detailed data from the surveys can be found in the post-remedial action reports for the site (Refs. 5 and 9).

## **Building 521-527**

Direct measurements for beta-gamma activity exceeded 5,000 dpm/100 cm<sup>2</sup> at two locations on the first floor storage area 1 (C-2 and B-3) and five locations on the first floor storage area 2 (K-21 midpoint, K-21 hot spot, and 0-22 in area B; F-6 in area E; and A-13 in areas H and I) but did not exceed the DOE guideline maximum (15,000 dpm/100 cm<sup>2</sup>) (Figure I-2). When values were averaged over a 1-m grid block, beta-gamma activity was below the DOE guideline average (5,000 dpm/100 cm<sup>2</sup>). Direct and removable alpha measurements did not exceed applicable DOE guidelines. Only three of the direct alpha measurement locations were not sampled for removable alpha activity.

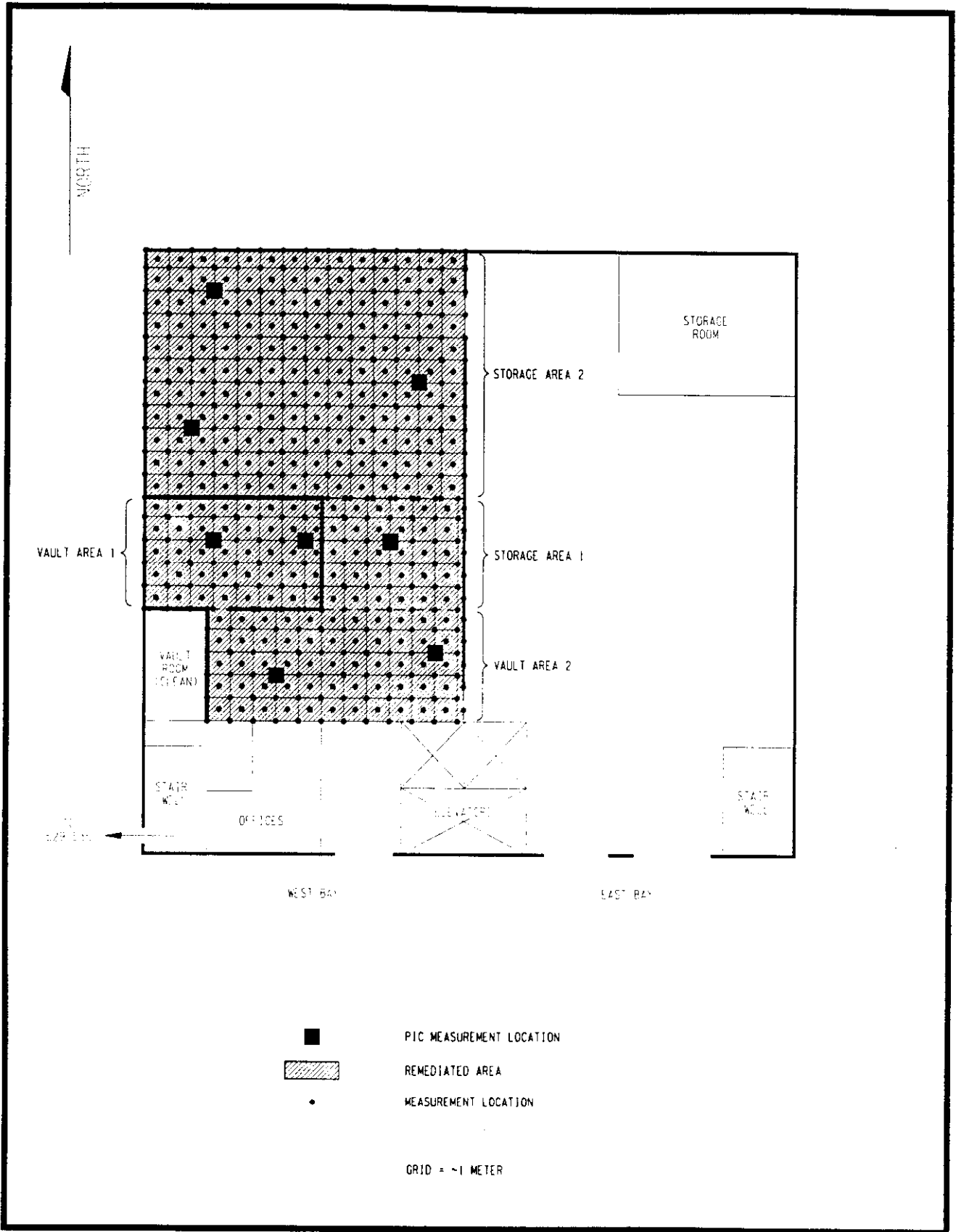
## **Building 513-519**

Measurements of fixed and removable alpha activity did not exceed applicable DOE guidelines at any of the post-remedial action measurement locations, and all exposure rate measurements were within applicable guidelines. Only two small isolated locations had fixed beta-gamma activity greater than the 5,000 dpm/100 cm<sup>2</sup> average contamination guideline (locations J-2 and M-8 on the basement west bay), but both locations were well below the maximum contamination guideline (Figure I-3). Further radiological investigations indicated that the adjacent areas had activity below the average contamination guideline; therefore, the two areas were below the average contamination guideline.

Two grids (K-13 and L-13) on the first floor east bay (Figure I-4) were not remediated because the BNI surveys did not indicate contamination above guidelines (as the earlier ORISE characterization surveys had indicated). Subsequent surveys by the independent verification contractor (IVC) found contamination levels of the grids to be below applicable guidelines.

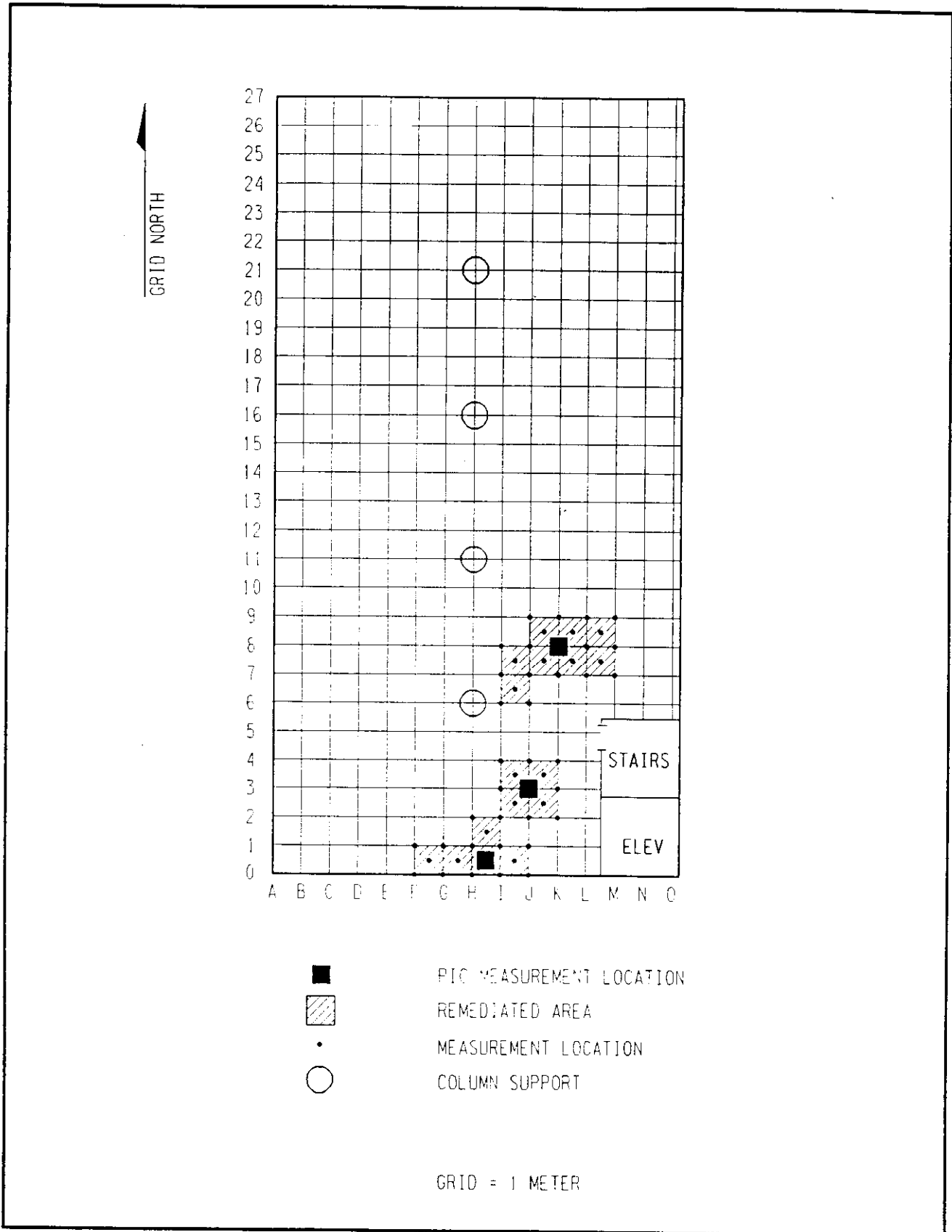
## **5.4 VERIFICATION ACTIVITIES**

After remedial activities were completed, the IVC conducted a verification survey to ensure that the site was remediated to levels below DOE guidelines and to confirm that



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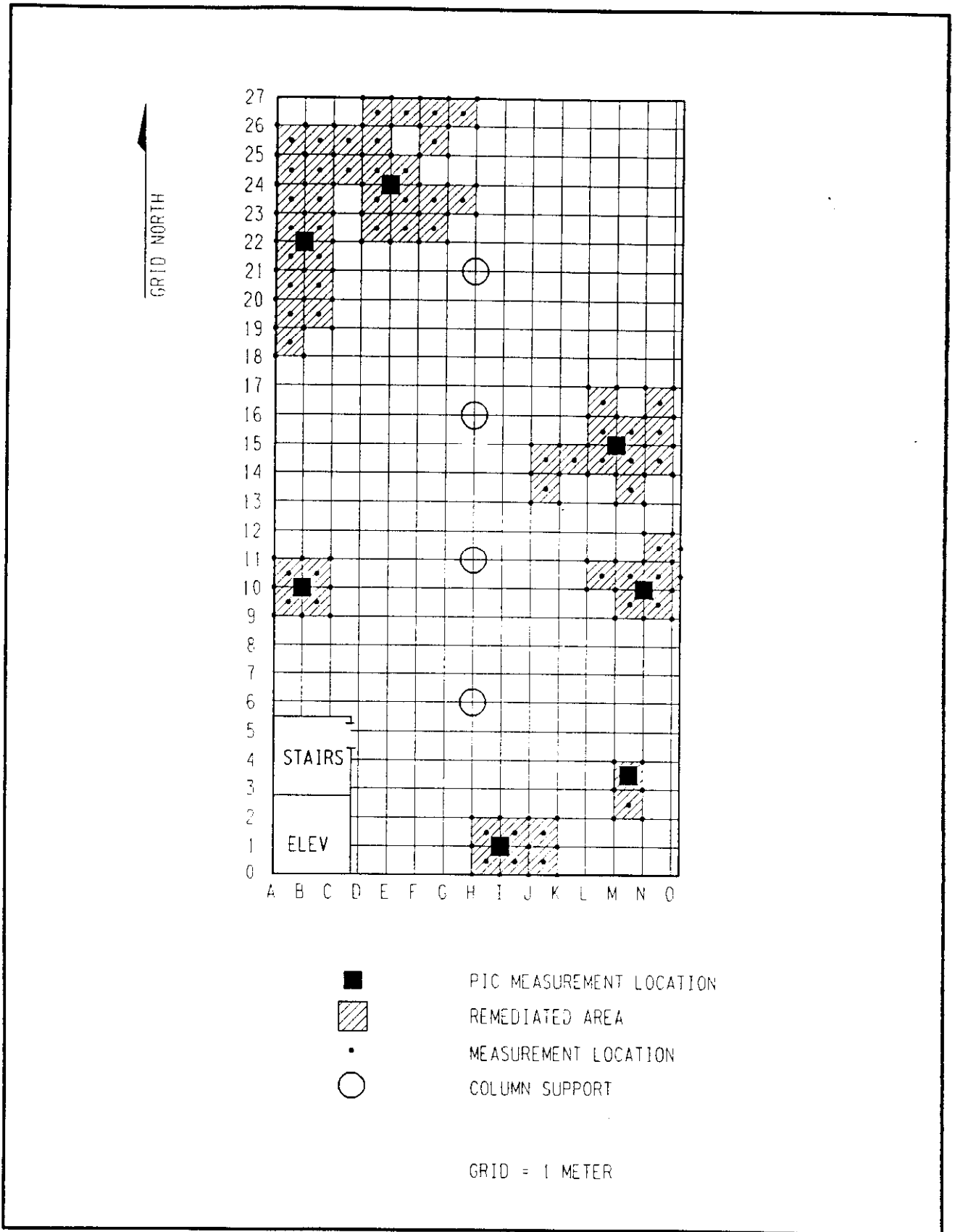
Figure I-2  
Remediated Areas and Measurement Locations  
on the First Floor of Building 521-527



R59F003.001

Figure I-3  
 Remediated Areas and Measurement Locations  
 on the Basement West Bay of Building 513-519





R59F005.DGN

**Figure I-4**  
**Remediated Areas and Measurement Locations**  
**on the First Floor East Bay of Building 513-519**

surveys, sampling, and analyses conducted during the remedial action process provided an accurate and complete description of the radiological status of the property.

The IVC's activities included reviewing the published radiological survey reports and the post-remedial action reports, visiting the site for a visual inspection, and performing radiological surveys. When the verification activities were completed, the IVC prepared verification reports and submitted them to DOE (Refs. 6 and 10).

## 5.5 OCCUPATIONAL EXPOSURE

The following measures were taken at both warehouses during remedial action to prevent the spread of contamination and to keep exposure rates as low as possible for workers and building occupants:

- doorways and entrances were blocked with plastic to prevent dust from escaping;
- a stack of three exhaust units equipped with HEPA filters was used to control dust, exhaust produced by the combustion engine of the scarifier, and organics released from the bituminous material by the Blastrac™; additionally, a flexible metal hose was used to vent the dust, exhaust, and organics away from the work area; and
- continuous air sampling was performed to ensure that contamination control measures were successful. Air particulate monitoring results are presented in the post-remedial action reports (Refs. 5 and 9). All air sampling results were well below the derived air concentration (DAC) of  $2.0 \times 10^{-11}$   $\mu\text{Ci}/\text{ml}$  (a published, calculated value that would expose a worker, over a one-year period, to his yearly limit). However, BNI requires respiratory protection during evaluation of engineering controls and when air monitoring shows that concentrations equal or exceed 10 percent of the DAC. Concentrations in most air samples were less than 10 percent of the DAC, but because of the concentration of concrete dust, industrial hygiene requirements stipulated that workers wear full-face air-purifying respirators during remedial action work.

## 5.6 COSTS

The final subcontract bid item quantities and the costs associated with the remedial action performed at the Baker and Williams Warehouses site are listed in Table I-2.

**Table I-2**  
**Cost of Remedial Action at the Baker and Williams Warehouses Site**

Description	Amount
Environmental compliance	7,038
Design engineering	189,383
Site access	453
Remedial action operations	1,318,272
Waste transport and disposal	108,564
Final engineering reports	<u>130,851</u>
<b>TOTAL</b>	<b><u>\$1,754,562</u></b>

## REFERENCES

References 1 through 11 are provided as attachments to this certification docket; all other references are presented in Exhibit II of this docket.

1. U.S. Department of Energy (DOE). Description of the Formerly Utilized Sites Remedial Action Program, ORO-777, Oak Ridge, Tenn., September 1980.
2. Bechtel National, Inc. (BNI). Formerly Utilized Sites Remedial Action Program, "Implementation Plan for Radiological Survey Protocols," July 1988.
3. Oak Ridge Associated Universities (ORAU). Radiological Survey of the Baker and Williams Warehouses, New York, New York, Final Report, June 1990.
4. ORAU. Characterization Survey of the Baker and Williams Warehouses, Building 521-527, New York, New York, Final Report, ORAU 91/L-10, November 1991.
5. BNI. Post-Remedial Action Report for Building 521-527, Baker and Williams Warehouses Site, New York, New York, DOE/OR/21949-301, Oak Ridge, Tenn., February 1992.
6. Oak Ridge Institute for Science and Education (ORISE). Verification Survey of the Baker and Williams Warehouses Building 521-527, New York, New York, Final Report, ORISE 92/E-041, May 1992.
7. ORAU. Radiological Survey of the Baker and Williams Warehouses Building 513-519, New York, New York, Final Report, ORAU 91/L-36, December 1991.

8. [ORISE. Characterization Survey of the Baker and Williams Warehouses Building 513-519, New York, New York, Final Report, ORISE 93/L-55, December 1993.](#)
9. BNI. Post-Remedial Action Report for Building 513-519, Baker and Williams Site, New York, New York, DOE/OR/21949-381, Oak Ridge, Tenn., May 1994.
10. [ORISE. Verification Survey of the Baker and Williams Warehouses, Building 513-519, New York, New York, Final Report, June 1994.](#)
11. DOE. Design Criteria for Formerly Utilized Sites Remedial Action Program (FUSRAP) and Surplus Facilities Management Program (SFMP), 14501-00-DC-01, Rev. 2, Oak Ridge, Tenn., February 1986.
12. DOE Order 5400.5, Radiation Protection of the Public and the Environment, Chapter IV, "Residual Radioactive Material," February 8, 1990.
13. [Letter from William Seay \(DOE-FSRD\) to Dr. Frank Bradley \(New York State Department of Labor\), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 27, 1990 \(BNI CCN 071634\).](#)
14. Memorandum from Leo Duffy (DOE-HQ) to Joe La Grone (DOE-ORO), "Forwarding of the Approved Memorandum-to-File Concerning Decontamination of the Former Baker and Williams Warehouse in New York, New York, as Part of the Formerly Utilized Sites Remedial Action Program," May 9, 1991 (BNI CCN 077563).
15. [Letter from R. P. Whitfield \(DOE-HQ\) to J. La Grone \(DOE-ORO\), "Authorization for Remedial Action at the Former Baker and Williams Warehouses in New York, New York," August 9, 1990 \(BNI CCN 070475\).](#)

16. Letter from William Seay (DOE-FSRD) to Robert Hargrove (U.S. EPA), "Designation of the Former Baker and Williams Warehouse into DOE's Formerly Utilized Sites Remedial Action Program," September 2, 1990 (BNI CCN 071552).
17. ["License Agreement" \(Baker and Williams Warehouses\) March 22, 1991 \(BNI CCN 076181\).](#)
18. Letter from Joe La Grone (DOE-ORO) to Carol M. Borgstrom (DOE-HQ), "Categorical Exclusion (CX) - Removal Action at the Baker and Williams Warehouses Site," September 1992 (BNI CCN 092802).
19. [Letter from Ronald Kirk \(DOE-FSRD\) to Louis Sherman, "Signed Remedial Action Agreement of Baker and Williams Building 513-519," December 9, 1992 \(BNI CCN 097909\).](#)
20. [Letter from James Fiore \(DOE-HQ\) to Lester Price \(DOE-FSRD\), "Authorization for Remedial Action at the Former Baker and Williams Warehouses on West 20th Street in New York, New York, under FUSRAP," August 1, 1990 \(BNI CCN 070264\).](#)
21. [Letter from William Say \(DOE-FSRD\) to Dr. Paul Merges \(NYSDEC\), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 24, 1990 \(BNI CCN 071551\).](#)
22. Letter from Louis Sherman to Ronald Kirk (DOE-FSRD), "Remedial Action License Agreement of Baker and Williams Building 513-519," November 25, 1992 (BNI CCN 097526).
23. [Letter from Phyllis R. Cotten \(ORISE\) to Cathy Hickey \(BNI\), "Building 521-527— Baker and Williams Warehouse," April 1, 1991 \(BNI CCN 076401\).](#)
24. [Letter from A. Wallo \(DOE-HQ\) to J. Fiore \(DOE-HQ\), "Expedited Procedures for Remedial Actions at Small Sites," June 1990 \(BNI CCN 069397\).](#)

25. Memo from Lacy Baldy (BNI) to Mark Kaye (BNI), "Review of New York Regulations for BWW," January 1991 (BNI CCN 074119).
26. Letter from William Seay (DOE-FSRD) to Dr. Leonard Solon (New York City Department of Health), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 27, 1990 (BNI CCN 071634).
27. Letter from Ronald Kirk (DOE-FSRD) to Edward T. Marshall, "Baker and Williams Warehouses - Completion of Remediation of Building 513-519," September 21, 1993 (BNI CCN 108712).
28. Letter from Ronald Kirk (DOE-FSRD) to William J. Condon (New York State Department of Health), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).
29. Letter from Ronald Kirk (DOE-FSRD) to Dr. Robert Kulikowski (New York City Department of Health), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).
30. Letter from Ronald Kirk (DOE-FSRD) to Ms. Rita Aldrich (New York State Department of Labor), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).
31. Letter from Ronald Kirk (DOE-FSRD) to Dr. Paul Merges (NYSDEC), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).
32. Letter from Phyllis R. Cotten (ORISE) to Alexander Williams (DOE-HQ), "Verification and Designation Surveys: Baker and Williams Warehouses," June 4, 1991 (BNI CCN 078360).



33. Letter from Joseph Galiber, Esq., to DOE-FSRD Division Director, Re: 513-519  
20th Street, New York, New York, April 1, 1993 (BNI CCN 102566).

APPENDIX A  
DOE ORDER 5400.5, CHAPTER IV  
RESIDUAL RADIOACTIVE MATERIAL

CHAPTER IV  
RESIDUAL RADIOACTIVE MATERIAL

1. PURPOSE. This chapter presents radiological protection requirements and guidelines for cleanup of residual radioactive material and management of the resulting wastes and residues and release of property. These requirements and guidelines are applicable at the time the property is released. Property subject to these criteria includes, but is not limited to sites identified by the Formerly Utilized Sites Remedial Action Program (FUSRAP) and the Surplus Facilities Management Program (SFMP). The topics covered are basic dose limits, guidelines and authorized limits for allowable levels of residual radioactive material, and control of the radioactive wastes and residues. This chapter does not apply to uranium mill tailings or to properties covered by mandatory legal requirements.
  
2. IMPLEMENTATION. DOE elements shall develop plans and protocols for the implementation of this guidance. FUSRAP sites shall be identified, characterized, and designated, as such, for remedial action and certified for release. Information on applications of the guidelines and requirements presented herein, including procedures for deriving specific property guidelines for allowable levels of residual radioactive material from basic dose limits, is contained in DOE/CH 8901, "A Manual for Implementing Residual Radioactive Material Guidelines, A Supplement to the U.S. Department of Energy Guidelines for Residual Radioactive Material at FUSRAP and SFMP Sites," June 1989.
  - a. Residual Radioactive Material This chapter provides guidance on radiation protection of the public and the environment from:
    - (1) Residual concentrations of radionuclides in soil (for these purposes, soil is defined as unconsolidated earth material, including rubble and debris that might be present in earth material);
    - (2) Concentrations of airborne radon decay products;
    - (3) External gamma radiation;
    - (4) Surface contamination; and
    - (5) Radionuclide concentrations in air or water resulting from or associated with any of the above.

- b. Basic Dose Limit. The basic dose limit for doses resulting from exposures to residual radioactive material is a prescribed standard from which limits for quantities that can be monitored and controlled are derived; it is specified in terms of the effective dose equivalent as defined in this Order. The basic dose limits are used for deriving guidelines for residual concentrations of radionuclides in soil. Guidelines for residual concentrations of thorium and radium in soil, concentrations of airborne radon decay products, allowable indoor external gamma radiation levels, and residual surface contamination concentrations are based on existing radiological protection standards (40 CFR Part 192; NRC Regulatory Guide 1.86 and subsequent NRC guidance on residual radioactive material). Derived guidelines or limits based on the basic dose limits for those quantities are used only when the guidelines provided in the existing standards are shown to be inappropriate.
- c. Guideline. A guideline for residual radioactive material is a level of radioactive material that is acceptable for use of property without restrictions due to residual radioactive material. Guidelines for residual radioactive material presented herein are of two kinds, generic and specific. The basis for the guidelines is generally a presumed worst-case plausible-use scenario for the property.
- (1) Generic guidelines, independent of the property, are taken from existing radiation protection standards. Generic guideline values are presented in this chapter.
  - (2) Specific property guidelines are derived from basic dose limits using specific property models and data. Procedures and data for deriving specific property guideline values are given by DOE/CH-8901.
- d. Authorized Limit. An authorized limit is a level of residual radioactive material that shall not be exceeded if the remedial action is to be considered completed and the property is to be released without restrictions on use due to residual radioactive material.
- (1) The authorized limits for a property will include:
    - (a) Limits for each radionuclide or group of radionuclides, as appropriate, associated with residual radioactive material in soil or in surface contamination of structures and equipment;
    - (b) Limits for each radionuclide or group of radionuclides, as appropriate, in air or water; and
    - (c) Where appropriate, a limit on external gamma radiation resulting from the residual material.

- (2) Under normal circumstances expected at most properties, authorized limits for residual radioactive material are set equal to, or below, guideline values. Exceptional conditions for which authorized limits might differ from guideline values are specified in paragraphs IV-5 and IV-7.
  - (3) A property may be released without restrictions if residual radioactive material does not exceed the authorized limits or approved supplemental limits, as defined in paragraph IV.7a, at the time remedial action is completed. DOE actions in regard to restrictions and controls on use of the property shall be governed by provisions in paragraph IV.7b. The applicable controls and restrictions are specified in paragraph IV.6 and IV.7.c.
- e. ALARA Applications. The monitoring, cleanup, and control of residual radioactive material are subject to the ALARA policy of this Order. Applications of ALARA policy shall be documented and filed as a permanent record.

### 3. BASIC DOSE LIMITS.

- a. Defining and Determining Dose Limits. The basic public dose limits for exposure to residual radioactive material, in addition to natural occurring "background" exposures, are 100 mrem (1 mSv) effective dose equivalent in a year, as specified in paragraph II.1a.
- b. Unusual Circumstances. If, under unusual circumstances, it is impracticable to meet the basic limit based on realistic exposure scenarios, the respective project and/or program office may, pursuant to paragraph II.1a(4), request from EH-1 for a specific authorization for a temporary dose limit higher than 100 mrem (1 mSv), but not greater than 500 mrem (5 mSv), in a year. Such unusual circumstances may include temporary conditions at a property scheduled for remedial action or following the remedial action. The ALARA process shall apply to the selection of temporary dose limits.

### 4. GUIDELINES FOR RESIDUAL RADIOACTIVE MATERIAL.

- a. Residual Radionuclides in Soil. Generic guidelines for thorium and radium are specified below. Guidelines for residual concentrations of other radionuclides shall be derived from the basic dose limits by means of an environmental pathway analysis using specific property data where available. Procedures for these derivations are given in DOE/CH-8901. Residual concentrations of radioactive material in soil are defined as those in excess of background concentrations averaged over an area of 100 m<sup>2</sup>.

- (1) Hot Spots. If the average concentration in any surface or below-surface area less than or equal to 25 m<sup>2</sup>, exceeds the limit or guideline by a factor of  $(100/A)^{0.5}$ , [where A is the area (in square meters) of the region in which concentrations are elevated], limits for "hot-spots" shall also be developed and applied. Procedures for calculating these hot-spot limits, which depend on the extent of the elevated local concentrations, are given in DOE/CH-8901. In addition, reasonable efforts shall be made to remove any source of radionuclide that exceeds 30 times the appropriate limit for soil, irrespective of the average concentration in the soil.
  - (2) Generic Guidelines. The generic guidelines for residual concentrations of Ra-226, Ra-228, Th-230, and Th-232 are:
    - (a) 5 pCi/g, averaged over the first 15 cm of soil below the surface; and
    - (b) 15 pCi/g, averaged over 15-cm-thick layers of soil more than 15 cm below the surface.
  - (3) Ingrowth and Mixtures. These guidelines take into account ingrowth of Ra-226 from Th-230 and of Ra-228 from Th-232, and assume secular equilibrium. If both Th-230 and Ra-226 or both Th-232 and Ra-228 are present and not in secular equilibrium, the appropriate guideline is applied as a limit for the radionuclide with the higher concentration. If other mixtures of radionuclides occur, the concentrations of individual radionuclides shall be reduced so that either the dose for the mixtures will not exceed the basic dose limit or the sum of the ratios of the soil concentration of each radionuclide to the allowable limit for that radionuclide will not exceed 1. Explicit formulas for calculating residual concentration guidelines for mixtures are given in DOE/CH-8901.
- b. Airborne Radon Decay Products. Generic guidelines for concentrations of airborne radon decay products shall apply to existing occupied or habitable structures on private property that are intended for release without restriction; structures that will be demolished or buried are excluded. The applicable generic guideline (40 CFR Part 192) is: In any occupied or habitable building, the objective of remedial action shall be, and a reasonable effort shall be made to achieve, an annual average (or equivalent) radon decay product concentration (including background) not to exceed 0.02 WL. [A working level (WL) is any combination of short-lived radon decay products in 1 L of air that will

result in the ultimate emission of  $1.3 \times 10^6$  MeV of potential alpha energy.] In any case, the radon decay product concentration (including background) shall not exceed 0.03 WL. Remedial actions by DOE are not required in order to comply with this guideline when there is reasonable assurance that residual radioactive material is not the source of the radon concentration.

- c. External Gamma Radiation. The average level of gamma radiation inside a building or habitable structure on a site to be released without restrictions shall not exceed the background level by more than 20  $\mu$ R/h and shall comply with the basic dose limit when an "appropriate-use" scenario is considered. This requirement shall not necessarily apply to structures scheduled for demolition or to buried foundations. External gamma radiation levels on open lands shall also comply with the basic limit and the ALARA process, considering appropriate-use scenarios for the area.
- d. Surface Contamination. The generic surface contamination guidelines provided in Figure IV-1 are applicable to existing structures and equipment. These guidelines are generally consistent with standards of the NRC (NRC 1982) and functionally equivalent to Section 4, "Decontamination for Release for Unrestricted Use," of Regulatory Guide 1.86, but apply to nonreactor facilities. These limits apply to both interior equipment and building components that are potentially salvageable or recoverable scrap. If a building is demolished, the guidelines in paragraph IV.6a are applicable to the resulting contamination in the ground.
- e. Residual Radionuclides in Air and Water. Residual concentrations of radionuclides in air and water shall be controlled to the required levels shown in paragraph II.1a and as required by other applicable Federal and/or State laws.

## 5. AUTHORIZED LIMITS FOR RESIDUAL RADIOACTIVE MATERIAL.

- a. Establishment of Authorized Limits. The authorized limits for each property shall be set equal to the generic or derived guidelines unless it can be established, on the basis of specific property data (including health, safety, practical, programmatic and socioeconomic considerations), that the guidelines are not appropriate for use at the specific property. The authorized limits shall be established to (1) provide that, at a minimum, the basic dose limits of in paragraph IV.3, will not be exceeded under the "worst-case" or "plausible-use" scenarios, consistent with the procedures and guidance provided in DOE/CH-8901, or (2) be consistent with applicable generic guidelines. The authorized limits shall be consistent with limits and guidelines established by other applicable Federal and State laws. The authorized limits are developed through the project offices in the field and are approved by the Headquarters Program Office.

Figure IV-1  
Surface Contamination Guidelines

<u>Radionuclides<sup>2/</sup></u>	<u>Allowable Total Residual Surface Contamination</u> (dpm/100 cm <sup>2</sup> ) <sup>1/</sup>		
	<u>Average<sup>2/·3/</sup></u>	<u>Maximum<sup>2/·3/</sup></u>	<u>Removable<sup>4/·5/</sup></u>
Transuranics, I-125, I-129, Ra-226, Ac-227, Ra-228, Th-228, Th-230, Pa-231.	<del>RESERVED</del> 100*	<del>RESERVED</del> 300*	<del>RESERVED</del> 20*
Th-Natural, Sr-90, I-126, I-131, I-133, Ra-223, Ra-224, U-232, Th-232.	1,000	3,000	200
U-Natural, U-235, U-238, and associated decay product, alpha emitters.	5,000	15,000	1,000
Beta-gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above. <sup>2/</sup>	5,000	15,000	1,000

- <sup>1/</sup> As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute measured by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- <sup>2/</sup> Where surface contamination by both alpha- and beta-gamma-emitting radionuclides exists, the limits established for alpha- and beta-gamma-emitting radionuclides should apply independently.
- <sup>3/</sup> Measurements of average contamination should not be averaged over an area of more than 1 m<sup>2</sup>. For objects of less surface area, the average should be derived for each such object.
- <sup>4/</sup> The average and maximum dose rates associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/h and 1.0 mrad/h, respectively, at 1 cm.
- <sup>5/</sup> The maximum contamination level applies to an area of not more than 100 cm<sup>2</sup>.

\* Because no values are presented in this order, FUSRAP uses the values shown based on "DOE Guidelines for Residual Radioactive Materials at FUSRAP and Remote SFMP Sites, Revision 2, March 1987 (CCN 046176).



- 6/ The amount of removable material per 100 cm<sup>2</sup> of surface area should be determined by wiping an area of that size with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wiping with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 cm<sup>2</sup> is determined, the activity per unit area should be based on the actual area and the entire surface should be wiped. It is not necessary to use wiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable contamination.
- 7/ This category of radionuclides includes mixed fission products, including the Sr-90 which is present in them. It does not apply to Sr-90 which has been separated from the other fission products or mixtures where the Sr-90 has been enriched.

- 
- b. Application of Authorized Limits. Remedial action shall not be considered complete until the residual radioactive material levels comply with the authorized limits, except as authorized pursuant to paragraph IV.7 for special situations where the supplemental limits and exceptions should be considered and it is demonstrated that it is not appropriate to decontaminate the area to the authorized limit or guideline value.
6. CONTROL OF RESIDUAL RADIOACTIVE MATERIAL. Residual radioactive material above the guidelines shall be managed in accordance with Chapter II and the following requirements.
- a. Operational and Control Requirements. The operational and control requirements specified in the following Orders shall apply to interim storage, interim management, and long-term management.
- (1) DOE 5000.3, Unusual Occurrence Reporting System
  - (2) DOE 5440.1C, Implementation of the National Environmental Policy Act
  - (3) DOE 5480.4, Environmental Protection, Safety, and Health Protection Standards
  - (4) DOE 5482.1B, Environmental, Safety, and Health Appraisal Program
  - (5) DOE 5483.1A, Occupational Safety and Health Program for DOE Employees at Government-Owned, Contractor-Operated Facilities
  - (6) DOE 5484.1, Environmental Protection, Safety, and Health Protection Information Reporting Requirements
  - (7) DOE 5820.2A, Radioactive Waste Management.

Vertical line denotes change.

b. Interim Storage.

- (1) Control and stabilization features shall be designed to provide, to the extent reasonably achievable, an effective life of 50 years with a minimum life of at least 25 years.
- (2) Controls shall be designed such that Rn-222 concentrations in the atmosphere above facility surfaces or openings in addition to background levels, will not exceed:
  - (a) 100 pCi/L at any given point;
  - (b) An annual average concentration of 30 pCi/L over the facility site; and
  - (c) An annual average concentration of 3 pCi/L at or above any location outside the facility site.
  - (d) Flux rates from the storage of radon producing wastes shall not exceed 20 pCi/sq.m-sec., as required by 40 CFR Part 61.
- (3) Controls shall be designed such that concentrations of radionuclides in the groundwater and quantities of residual radioactive material will not exceed applicable Federal or State standards.
- (4) Access to a property and use of onsite material contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR Part 192. These control features should be designed to provide, to the extent reasonable, an effective life of at least 25 years.

c. Interim Management.

- (1) A property may be maintained under an interim management arrangement when the residual radioactive material exceeds guideline values if the residual radioactive material is in inaccessible locations and would be unreasonably costly to remove, provided that administrative controls are established by the responsible authority (Federal, State, or local) to protect members of the public and that such controls are approved by the appropriate Program Assistant Secretary or Director.
- (2) The administrative controls include but are not limited to periodic monitoring as appropriate; appropriate shielding; physical barriers to prevent access; and appropriate radiological safety measures during maintenance, renovation, demolition, or other activities that might disturb the residual radioactive material or cause it to migrate.

- (3) The owner of the property should be responsible for implementing the administrative controls and the cognizant Federal, State, or local authorities should be responsible for enforcing them.

d. Long-Term Management.

(1) Uranium, Thorium, and Their Decay Products.

- (a) Control and stabilization features shall be designed to provide, to the extent reasonably achievable, an effective life of 1,000 years with a minimum life of at least 200 years.
- (b) Control and stabilization features shall be designed to limit Rn-222 emanation to the atmosphere from the wastes to less than an annual average release rate of 20 pCi/m<sup>2</sup>/s and prevent increases in the annual average Rn-222 concentration at or above any location outside the boundary of the contaminated area by more than 0.5 pCi/L. Field verification of emanation rates shall be in accordance with the requirements of 40 CFR Part 61.
- (c) Before any potentially biodegradable contaminated wastes are placed in a long-term management facility, such wastes shall be properly conditioned so that the generation and escape of biogenic gases will not cause the requirement in paragraph IV.6d(1)(b) to be exceeded and that biodegradation within the facility will not result in premature structural failure in violation of the requirements in paragraph IV.6d(1)(a).
- (d) Ground water shall be protected in accordance with legally applicable Federal and State standards.
- (e) Access to a property and use of onsite material contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR Part 192. These controls should be designed to be effective to the extent reasonable for at least 200 years.

- (2) Other Radionuclides. Long-term management of other radionuclides shall be in accordance with Chapters II, III, and IV of DOE 5820.2A, as applicable.

7. SUPPLEMENTAL LIMITS AND EXCEPTIONS. If special specific property circumstances indicate that the guidelines or authorized limits established for a given property are not appropriate for any portion of that property, then the Operations Office may request that supplemental limits or an exception be applied. The responsible Operations Office shall document the decision that the subject guidelines or authorized limits are not appropriate and that the alternative action selected will provide adequate protection,

giving due consideration to health and safety, the environment, costs, and public policy considerations. The Operations Office shall obtain approval for specific supplemental limits or exceptions from Headquarters as specified in paragraph IV.5, and shall provide to the Headquarters Program Element those materials required by Headquarters for the justification as specified in this paragraph and in the FUSRAP and SFMP protocols and subsequent guidance documents. The Operations Office shall also be responsible for coordination with the State and local government regarding the limits or exceptions and associated restrictions as appropriate. In the case of exceptions, the Operations Office shall be responsible for coordinating with the State and/or local governments to ensure the adequacy of restrictions or conditions of release and that mechanisms are in place for their enforcement.

- a. Supplemental Limits. Any supplemental limits shall achieve the basic dose limits set forth in Chapter II of this Order for both current and potential unrestricted uses of a property. Supplemental limits may be applied to any portion of a property if, on the basis of a specific property analysis, it is demonstrated that
  - (1) Certain aspects of the property were not considered in the development of the established authorized limits for that property; and
  - (2) As a result of these certain aspects, the established limits either do not provide adequate protection or are unnecessarily restrictive and costly.
- b. Exceptions to the authorized limits defined for a property may be applied to any portion of the property when it is established that the authorized limits cannot reasonably be achieved and that restrictions on use of the property are necessary. It shall be demonstrated that the exception is justified and that the restrictions will protect members of the public within the basic dose limits of this Order and will comply with the requirements for control of residual radioactive material as set forth in paragraph IV.6.
- c. Justification for Supplemental Limits and Exceptions. The need for supplemental limits and exceptions shall be documented by the Operations Office on a case-by-case basis using specific property data. Every reasonable effort should be made to minimize the use of supplemental limits and exceptions. Examples of specific situations that warrant DOE use of supplemental standards and exceptions are
  - (1) Where remedial action would pose a clear and present risk of injury to workers or members of the public, notwithstanding reasonable measures to avoid or reduce risk.

- (2) Where remedial action, even after all reasonable mitigative measures have been taken, would produce environmental harm that is clearly excessive compared to the health benefits to persons living on or near affected properties, now or in the future. A clear excess of environmental harm is harm that is long-term, manifest, and grossly disproportionate to health benefits that may reasonably be anticipated.
- (3) Where it is determined that the scenarios or assumptions used to establish the authorized limits do not apply to the property or portion of the property identified, or where more appropriate scenarios or assumptions indicate that other limits are applicable or appropriate for protection of the public and the environment.
- (4) Where the cost of remedial action for contaminated soil is unreasonably high relative to long-term benefits and where the residual material does not pose a clear present or future risk after taking necessary control measure. The likelihood that buildings will be erected or that people will spend long periods of time at such a property should be considered in evaluating this risk. Remedial action will generally not be necessary where only minor quantities of residual radioactive material are involved or where residual radioactive material occurs in an inaccessible location at which specific property factors limit its hazard and from which it is difficult or costly to remove. Examples include residual radioactive material under hard-surfaced public roads and sidewalks, around public sewer lines, or in fence-post foundations. A specific property analysis shall be provided to establish that the residual radioactive material would not cause an individual to receive a radiation dose in excess of the basic dose limits stated in paragraph IV.3, and a statement specifying the level of residual radioactive material shall be provided to the appropriate State and/or local agencies for appropriate action, e.g., for inclusion in local land records.
- (5) Where there is no feasible remedial action.

8. SOURCES.

- a. Basic Dose Limits. Dosimetry model and dose limits are defined in Chapter II of this Order.
- b. Generic Guidelines for Residual Radioactive Material. Residual concentrations of radium and thorium in soil are defined in 40 CFR Part 192. Airborne radon decay products are also defined in 40 CFR Part 192, as are guidelines for external gamma radiation. The surface contamination definition is adapted from NRC (1982).

- c. Control of Radioactive Wastes and Residues. Interim storage is guided by this Order and DOE 5820.2A. Long-term management is guided by this Order, 40 CFR Part 192, and DOE 5820.2A.

**EXHIBIT II**  
**DOCUMENTS SUPPORTING THE CERTIFICATION OF**  
**THE REMEDIAL ACTION PERFORMED AT THE**  
**BAKER AND WILLIAMS WAREHOUSES SITE**  
**IN NEW YORK, NEW YORK, 1991-1993**

## 1.0 CERTIFICATION PROCESS

The purpose of this certification docket is to provide a consolidated and permanent record of DOE activities at the Baker and Williams site and of the radiological conditions of this property at the time of certification. A summary of the remedial activities conducted at the site was provided in Exhibit I. Exhibit II contains the letters, memos, reports, and other documents that were produced to encompass the entire remedial action process from designation of the site under FUSRAP to certification that no radiologically based restrictions limit the future use of the site.



## **2.0 SUPPORTING DOCUMENTATION**

Each page number of Sections 2.1 through 2.11 begins with the designator "II" to denote supporting documentation that constitutes Exhibit II. These page numbers are listed in the table of contents at the beginning of this docket and in Sections 2.1 through 2.11. Lengthy documents are incorporated by reference only and are designated as such with the abbreviation "Ref."; the actual documents are provided as attachments to the certification docket.

## 2.1 DECONTAMINATION OR STABILIZATION CRITERIA

The following documents contain the guidelines that determine the need for remedial action. The subject property has been decontaminated to comply with these guidelines. The first document listed is included as Appendix A of Exhibit I; the next documents are incorporated by reference.

	<u>Page</u>
U.S. Department of Energy (DOE) Order 5400.5, <i>Radiation Protection of the Public and the Environment</i> , Chapter IV, "Residual Radioactive Material."	Exhibit I, Appendix A
DOE. <i>Description of the Formerly Utilized Sites Remedial Action Program</i> , ORO-777, Oak Ridge, Tenn., September 1980.	Ref. 1
DOE. <i>Design Criteria for Formerly Utilized Sites Remedial Action Program (FUSRAP) and Surplus Facilities Management program (SFMP)</i> , 14501-00-DC-01, Rev. 2, Oak Ridge, Tenn., February 1986.	Ref. 11

## 2.2 DESIGNATION OR AUTHORIZATION DOCUMENTATION

The following documents designated or authorized the remedial action at the Baker and Williams site.

	<u>Page</u>
Letter from James Fiore (DOE-HQ) to Lester Price (DOE-FSRD), "Authorization for Remedial Action at the Former Baker and Williams Warehouses on West 20th Street in New York, New York, under FUSRAP," August 1, 1990 (BNI CCN 070264).	II- 5
Letter from R. P. Whitfield (DOE-HQ) to J. La Grone (DOE-ORO), "Authorization for Remedial Action at the Former Baker and Williams Warehouses in New York, New York," August 9, 1990 (BNI CCN 070475).	II- 7
Letter from Phyllis R. Cotten (ORISE) to Alexander Williams (DOE-HQ), "Verification and Designation Surveys: Baker and Williams Warehouses," June 4, 1991 (BNI CCN 078360).	II- 8

United States Government

Department of Energy

# memorandum

1990 AUG -7 PM 12: 50

DATE: AUG 01 1990  
REPLY TO  
ATTN OF: EM-421

SUBJECT: Authorization for Remedial Action at the Former Baker and Williams Warehouses on West 20th Street in New York, New York, under FUSRAP

TO: L. Price, OR

The site of the former Baker and Williams Warehouses, currently owned by Ralph Ferrara, Inc., located on West 20th Street in New York City (Manhattan), is designated for inclusion in the Formerly Utilized Sites Remedial Action Project (FUSRAP). This designation is based on the results of a radiological survey and other supplemental information provided in the Designation Summary (Attachment 1). The site consists of three adjacent warehouses. Historical information indicates that the site was used during the early 1940s by the Manhattan Engineer District for short-term storage of approximately 219,000 pounds of uranium concentrates. One of the three warehouses, at 521-527 West 20th Street, was found to contain residual radioactive contamination in excess of DOE guidelines on floors and lower walls in the east bay of the basement and on the floor of the west bay of the first floor.

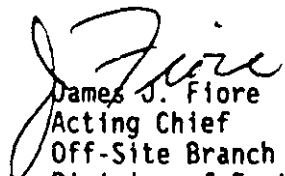
Based on our analysis of site conditions, this site would normally have a low priority. The survey study concluded that all contamination was fixed and that radiation exposure levels were within the DOE guideline values. Therefore, there is currently no significant risk to workers or members of the public from the residual radioactive contamination in the facility. However, the owner is planning extensive renovation of the buildings in the future. This will include smoothing of the floor in the areas with contamination. Such actions could result in individuals receiving doses approaching the dose limits. It could significantly spread the contamination which is presently restricted to two limited areas of this rather large warehouse building. Therefore, in consideration of the planned renovation work, the site has been assigned a medium priority under the FUSRAP protocol.

Because the limited contamination is contained entirely inside the warehouse building, we recommend that cleanup of the site follow the proposed expedited procedure for remedial action at small sites, as described in Attachment 2. Consistent with this procedure, Headquarters will take the lead on the preparation of the necessary environmental compliance documentation. We will work closely with the designation contractor (ORAU), the building owner, and you to assure that remedial action is conducted in an efficient manner. Your staff will be responsible for managing the remedial action effort.

We recommend that the cleanup be performed in FY 1991, using the expedited procedure on a trial basis. We envision two goals to this effort: (1) the cleanup of the warehouse, and (2) the demonstration of the usefulness of the expedited process.

Attachment 3 provides copies of reference information on the Baker and Williams warehouse site for your files.

It is our hope that the expedited procedure will provide timely, cost effective cleanup of smaller FUSRAP sites.

  
James J. Fiore  
Acting Chief  
Off-Site Branch  
Division of Eastern Area Programs  
Office of Environmental Restoration

3 Attachments

cc:  
J. Wagoner, EM-421  
A. Williams, EM-421  
J. Berger, ORAU

*Adams* <sup>WA</sup>

070475

United States Government

Department of Energy

# memorandum

~~ORR~~  
@LKP

Received  
Office Of The Manager  
AUG 13 1990

DATE: **AUG 09 1990**

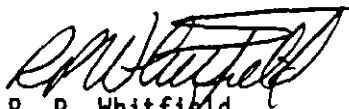
REPLY TO  
ATTN OF: EM-40 (A. Williams, 3-5439)

SUBJECT: Authorization for Remedial Action at the Former Baker and Williams  
Warehouses in New York, New York

TO: J. LaGrone  
Manager  
Oak Ridge Operations Office

The site of the former Baker and Williams Warehouses in New York City is hereby authorized for remedial action under the Formerly Utilized Sites Remedial Action Project (FUSRAP). The designation survey performed by ORAU found contamination in one of the three warehouses in excess of DOE guidelines on floors and lower walls in the east bay of the basement and on the floor of the west bay of the first floor.

Because the limited contamination is contained entirely inside the warehouse building, we recommend that cleanup of this site follow the new proposed expedited procedure for remedial action at small FUSRAP sites. This expedited procedure requires close cooperation between Headquarters, Oak Ridge Operations, and involved contractors. This project will be the first demonstration of this proposed procedure within FUSRAP and will serve to evaluate its utility in the cost effective cleanup for a qualified site.



R. P. Whitfield  
Associate Director  
Office of Environmental Restoration

CC:  
D. Fulmer, EM-42  
J. Fiore, EM-42

1990 AUG 15 PM 4:03

078360



Oak Ridge  
Associated  
Universities Post Office Box 117  
Oak Ridge, Tennessee 37831-0117

Energy  
Environment  
Systems Division

JUN 10 10 15

June 4, 1991

Dr. W. Alexander Williams  
Designation and Certification Manager  
Off-Site Branch (EM-421)  
Division of Eastern Area Programs  
Office of Environmental Restoration  
U.S. Department of Energy  
Washington, DC 20555

Subject: VERIFICATION AND DESIGNATION SURVEYS: BAKER AND WILLIAMS  
WAREHOUSES

Dear Dr. Williams:

During the period between April 20 through May 2, 1991, the Environmental Survey and Site Assessment Program of Oak Ridge Associated Universities (ORAU) performed a verification survey of Building 521-527 at the Baker and Williams Warehouses. The survey areas included the Basement, the West Bay of the first level, and the Vault. Measurements performed by ORAU identified several small locations of residual activity, in the basement, on the first level on the floor, and in the Vault area on the floor. These areas were brought to the attention of Bechtel National Inc. (BNI) and promptly remediated. ORAU resurveyed these areas and found each to be within or well below the surface guideline values.

In March of this year, during the characterization survey of Building 521-52 ORAU initiated a designation survey in Building 513-519 of the Basement and on floor levels 1 through 3. Building 513-519 is an 8 story (including the basement) operating warehouse facility, which is currently leased by Globe Moving and Storage Company. The floor and wall space is typically covered by items placed in the warehouse for storage; therefore, the survey was limited to accessible areas. The survey detected residual contamination on the floor of the Basement and on the floor on levels 1 through 3. Based on these findings, an additional survey activities were scheduled for the period in April to immediately proceed the verification survey of Building 521-527. Surface scans and direct measurements for alpha, beta, and gamma activity were performed on the floor and lower walls.

Alexander Williams

- 2 -

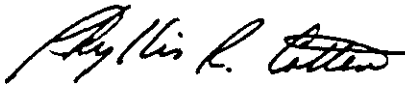
June 4, 1991

As a result of the two surveys in Building 513-519, residual activity, exceeding surface guidelines, has been identified in the basement and on levels 1 through 5. Total activity for alpha and beta-gamma ranged from <70-3900 dpm/100 cm<sup>2</sup> and <930 - 140,000 dpm/100 cm<sup>2</sup>, respectively. The highest levels of residual activity were detected on the floor of the Basement and 3rd level; alpha and beta-gamma activity ranged from <70-9100 dpm/100 cm<sup>2</sup> and <930-710,000 dpm/100 cm<sup>2</sup>, respectively.

Surface scans of the 6th and 7th levels did not detect elevated activity in accessible areas. However, based on these findings, ORAU recommends that an extensive characterization be conducted in Building 513-519 when the current occupants vacate the building.

If you have any additional questions, please contact me at FTS 626-3355 or Michele Landis at FTS 626-2908.

Sincerely,



Phyllis R. Cotton  
Staff Health Physicist  
Environmental Survey and  
Site Assessment Program

PRC:jljs

cc: J. Wagoner, DOE/HQ  
W. Seay, DOE/OR  
J. Hart, DOE/OR  
M. Landis, ORAU



## 2.3 RADIOLOGICAL CHARACTERIZATION REPORTS

The pre-remedial action status of the Baker and Williams site is documented in Exhibit I.

	<u>Page</u>
Letter from Phyllis R. Cotten (ORAU) to Cathy Hickey (BNI), "Building 521-527—Baker and Williams Warehouses," April 1, 1991 (BNI CCN 076401).	II-11
ORAU. <i>Characterization Survey of the Baker and Williams Warehouses Building 521-527, New York, New York</i> , Final Report, ORAU 91/L-10, November 1991.	Ref. 4
ORAU. <i>Radiological Survey of the Baker and Williams Warehouses Building 513-519, New York, New York</i> , Final Report, ORAU 91/L-36, December 1991.	Ref. 7
ORISE. <i>Characterization Survey of the Baker and Williams Warehouses Building 513-519, New York, New York</i> , Final Report, ORISE 93/L-55, December 1993.	Ref. 8

076401

 Oak Ridge  
Associated Universities Post Office Box 117  
Oak Ridge, Tennessee 37831-0117

April 1, 1991

Ms. Cathy Hickey  
Bechtel National Inc.  
P. O. Box 350  
Oak Ridge, Tn 37831-0350

Subject: BLDG. 521-527 - BAKER AND WILLIAMS WAREHOUSES

Dear Ms. Hickey:

Between March 11-22, 1991, the Environmental Survey and Site Assessment Program (ESSAP) of Oak Ridge Associated Universities (ORAU) conducted a radiological characterization survey of the East and West basement bays in Building 521-527 of the Baker and Williams Warehouses. A review of the survey results indicate that activity exceeding criteria is present in four (4) locations in the East bay which will require decontamination. Dust samples were collected from the floor and ledges in the East bay. Direct measurements indicate that residual activity may be present on all horizontal surfaces, overhead pipes, and on the east wall ledges in the West bay. Laboratory analysis of these samples indicate the presence of residual activity in excess of the guidelines. Based on these findings, ESSAP recommends that all horizontal surfaces (floors, ledges, and overhead pipes) in the East bay be cleaned of residual dust. It is also recommended that residual dust be cleaned from overhead pipes and east wall ledges in the West bay and that, what appears to be an unoccupied rodent nest located on an insulated overhead pipe in the southwest corner (grid block A,5,2), also be removed.

The attached figures should be of help when locating the four (4) locations which exceed criteria.

If additional information is needed, please contact me at (615) 576-3355 or James L. Payne at (615) 576-6656.

Sincerely,



Phyllis R. Cotten  
Senior Project Leader  
Environmental Survey and  
Site Assessment Program

JLP:PRC:jls

cc: A. Williams, DOE/HQ  
J. Wagoner, DOE/HQ  
M. Landis, ORAU

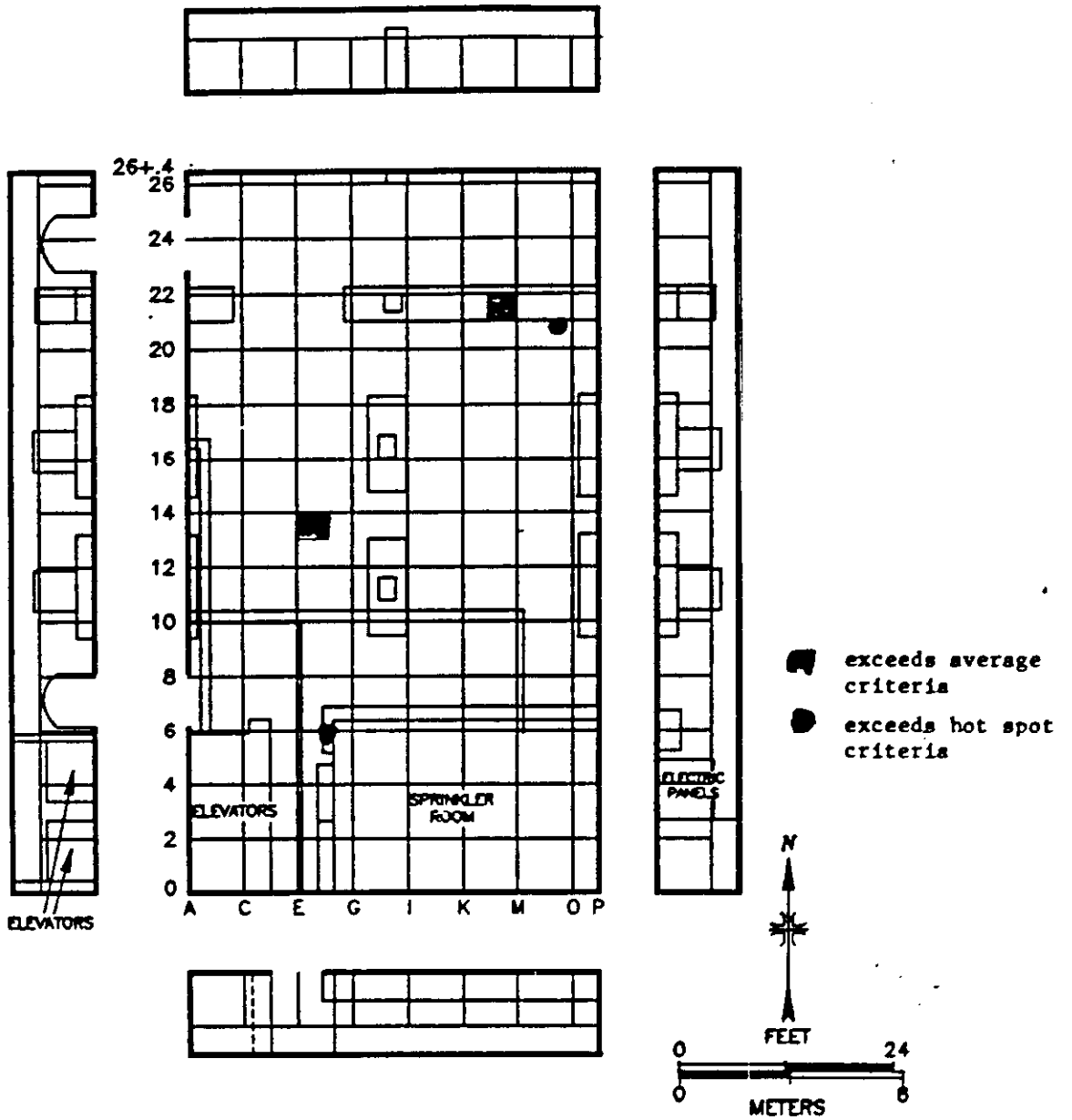


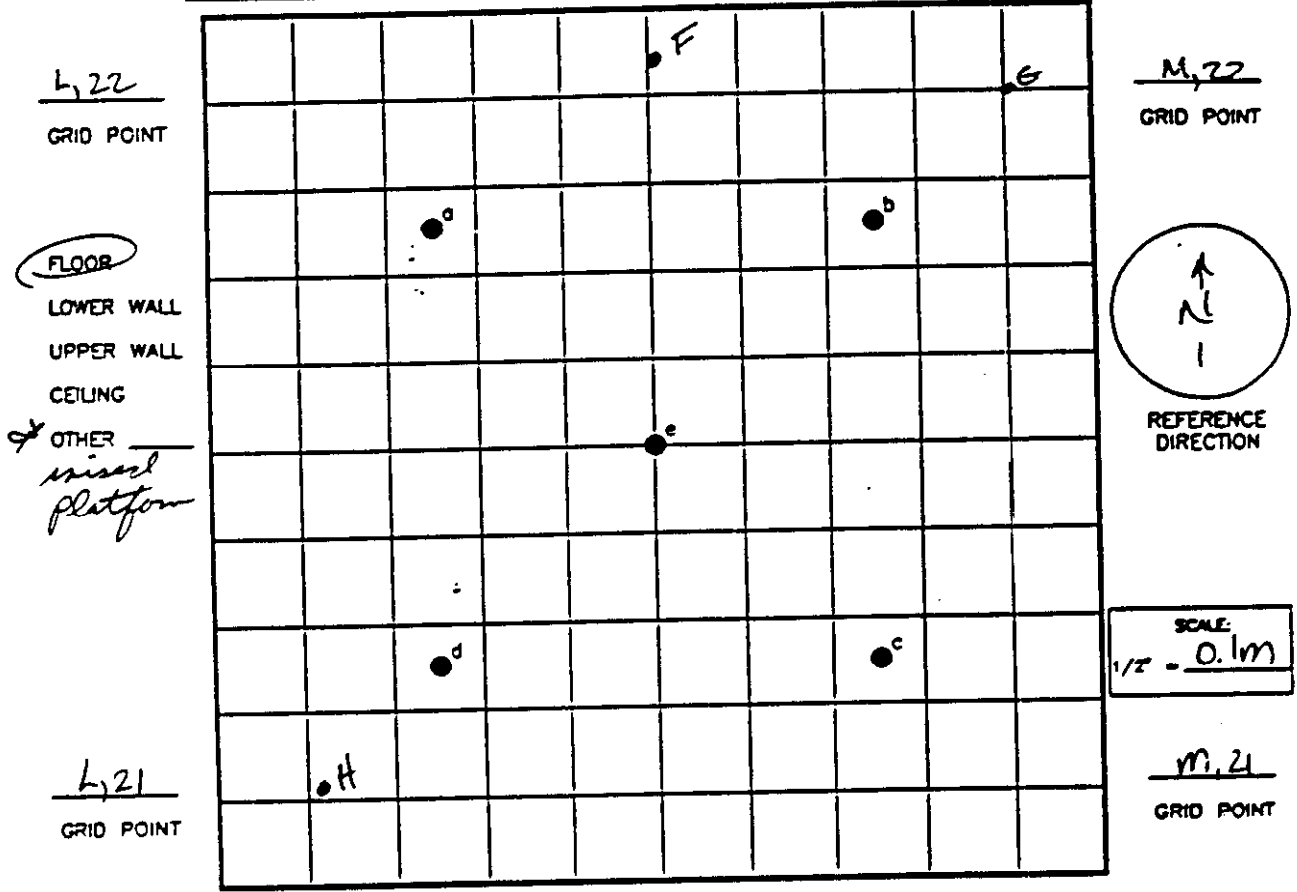
FIGURE : East Bay

SURFACE ACTIVITY SURVEY

076401

SITE: BWW  
 AREA: East Room 521-527  
 DATE: 3/18/91  
 SURVEYOR(S): Bennett

	INSTRUMENT	PROBE	BACK-GROUND	EFFICIENCY	LLD dpm/100cm <sup>2</sup>
ALPHA	2221 #10	4368 #10			
BETA	N/A	N/A	—	—	—
GAMMA			—	—	—



SCAN RANGE:  $\alpha$  \_\_\_\_\_  $\beta$  \_\_\_\_\_  $\gamma$  \_\_\_\_\_

LOCATION	DIRECT PROBE MEASUREMENTS				REMOVABLE CONTAMINATION (Smears)		
	ALPHA-BETA		BETA-GAMMA		SMEAR #	ALPHA	BETA
	c/___m	d/m/100cm <sup>2</sup>	c/___m	d/m/100cm <sup>2</sup>		dpm/100cm <sup>2</sup>	dpm/100cm <sup>2</sup>
A	2107						
B	1048						
C	906			N/A			
D	1569						
E	4449				41A		
AVERAGE	3344	10.305					
F	(7137)	24,000			41A		
G	4601	15,000					
H	(4936)	16,000					
CC:							

REMARKS: \_\_\_\_\_  
 CALCULATIONS BY: J. L. Payne REVIEWED BY: J. L. Payne  
 DATE: 3/18/91 DATE: 3/18/91 FORM 19(1-91)

SURFACE ACTIVITY SURVEY

076401

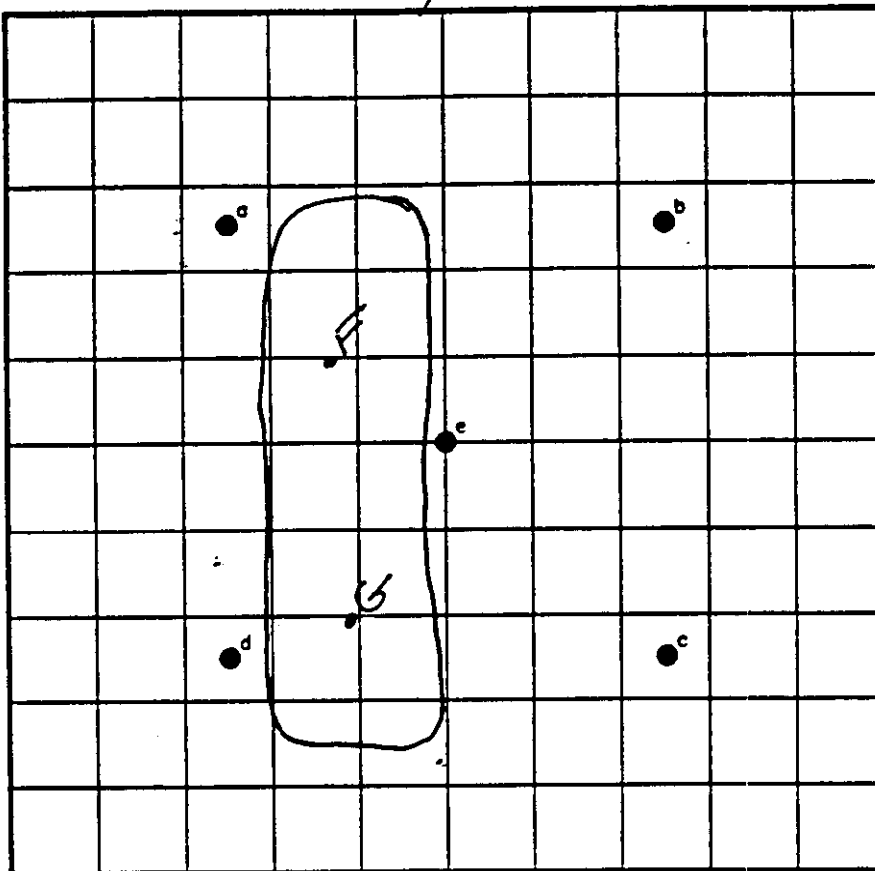
SITE BW  
 AREA East bay 521-527  
 DATE 3/18/91  
 SURVEYOR(S) Bennett

	INSTRUMENT	PROBE	BACK-GROUND	EFFI-CIENCY	LDI dpm/100cm <sup>2</sup>
ALPHA	<u>B2221 #9</u>	<u>4368 #9</u>			
BETA	<u>N/A</u>				
GAMMA	<u>N/A</u>				

E, 12  
 GRID POINT

FLOOR  
 LOWER WALL  
 UPPER WALL  
 CEILING  
 OTHER \_\_\_\_\_

E, 11  
 GRID POINT



F, 12  
 GRID POINT

REFERENCE DIRECTION

SCALE:  
 1/2 - D.M.

F, 11  
 GRID POINT

SCAN RANGE: a \_\_\_\_\_ b \_\_\_\_\_ c \_\_\_\_\_

LOCATION	DIRECT PROBE MEASUREMENTS				REMOVABLE CONTAMINATION (Smears)		
	ALPHA <u>1500</u>		BETA-GAMMA		SMEAR #	ALPHA	BETA
	c/____m	d/m/100cm <sup>2</sup>	c/____m	d/m/100cm <sup>2</sup>		dpm/100cm <sup>2</sup>	dpm/100cm <sup>2</sup>
A	<u>616</u>						
B	<u>392</u>						
C	<u>385</u>						
D	<u>446</u>						
E	<u>407</u>						
AVERAGE	<u>511.3</u>	<u>18.977</u>					
F	<u>19331</u>	<u>67,000</u>			<u>12A</u>		
G	<u>18067</u>	<u>63,000</u>					
cc: F1	<u>421</u>						

REMARKS: \_\_\_\_\_

CALCULATIONS BY: J. J. Payne      REVIEWED BY: J. J. Payne  
 DATE: 3/18/91      DATE: 3/18/91      FORM 19(1-91)

SURFACE ACTIVITY SURVEY

076401

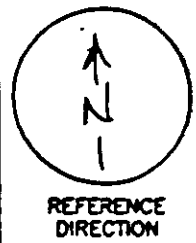
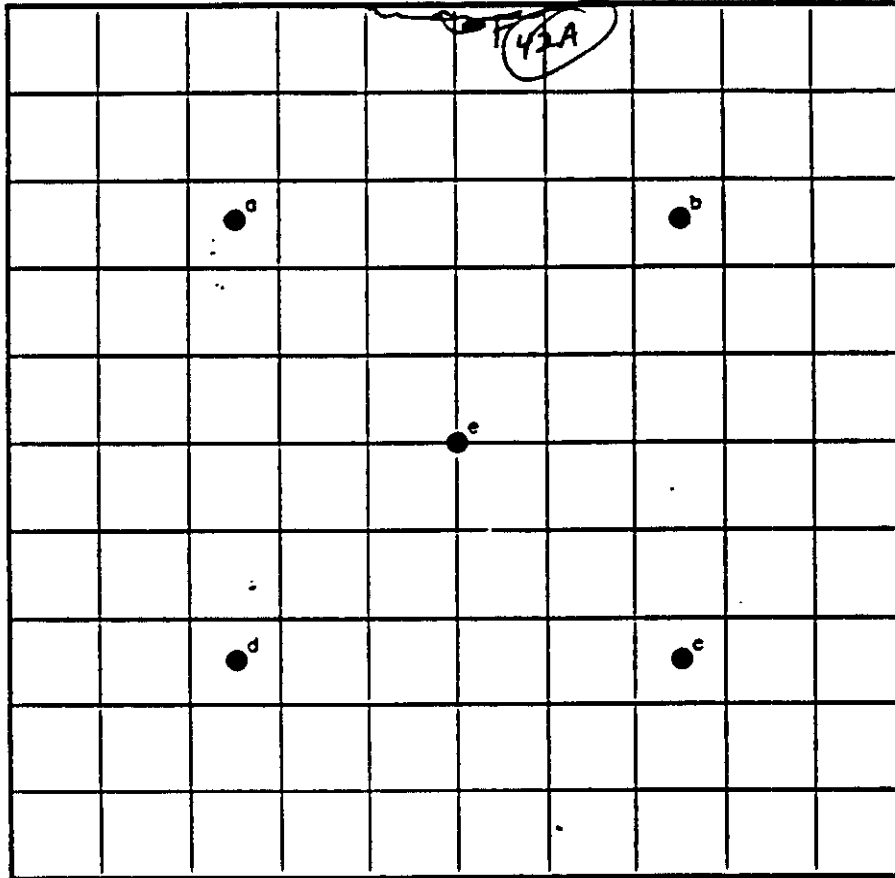
SITE BWW  
 AREA East Bay 521-527  
 DATE 3/18/90  
 SURVEYOR(S) Barnett

	INSTRUMENT	PROBE	BACK-GROUND	EFFICIENCY	LD dpm/100cm <sup>2</sup>
ALPHA	2221 #10	43-68 #10			
BETA	N/A	N/A	—	—	—
GAMMA			—	—	—

N, 21  
GRID POINT

0, 21  
GRID POINT

- FLOOR
- LOWER WALL
- UPPER WALL
- CEILING
- OTHER \_\_\_\_\_



SCALE  
1/2 = 0.1m

N, 20  
GRID POINT

0, 20  
GRID POINT

SCAN RANGE: a \_\_\_\_\_ b \_\_\_\_\_ γ \_\_\_\_\_

LOCATION	DIRECT PROBE MEASUREMENTS				REMOVABLE CONTAMINATION (Smears)		
	ALPHA + BETA		BETA-GAMMA		SMEAR #	ALPHA dpm/100cm <sup>2</sup>	BETA dpm/100cm <sup>2</sup>
	c/____m	d/m/100cm <sup>2</sup>	c/____m	d/m/100cm <sup>2</sup>			
A	429						
B	519						
C	499						
D	438						
E	499						
AVERAGE	1217	2800					
F	4919	15811			42A		
oc. E	487						

REMARKS: \_\_\_\_\_  
 CALCULATIONS BY: J. L. Payne REVIEWED BY: J. L. Payne  
 DATE: 3/18/90 DATE: 3/18/90 FORM 19(1-91)

076401

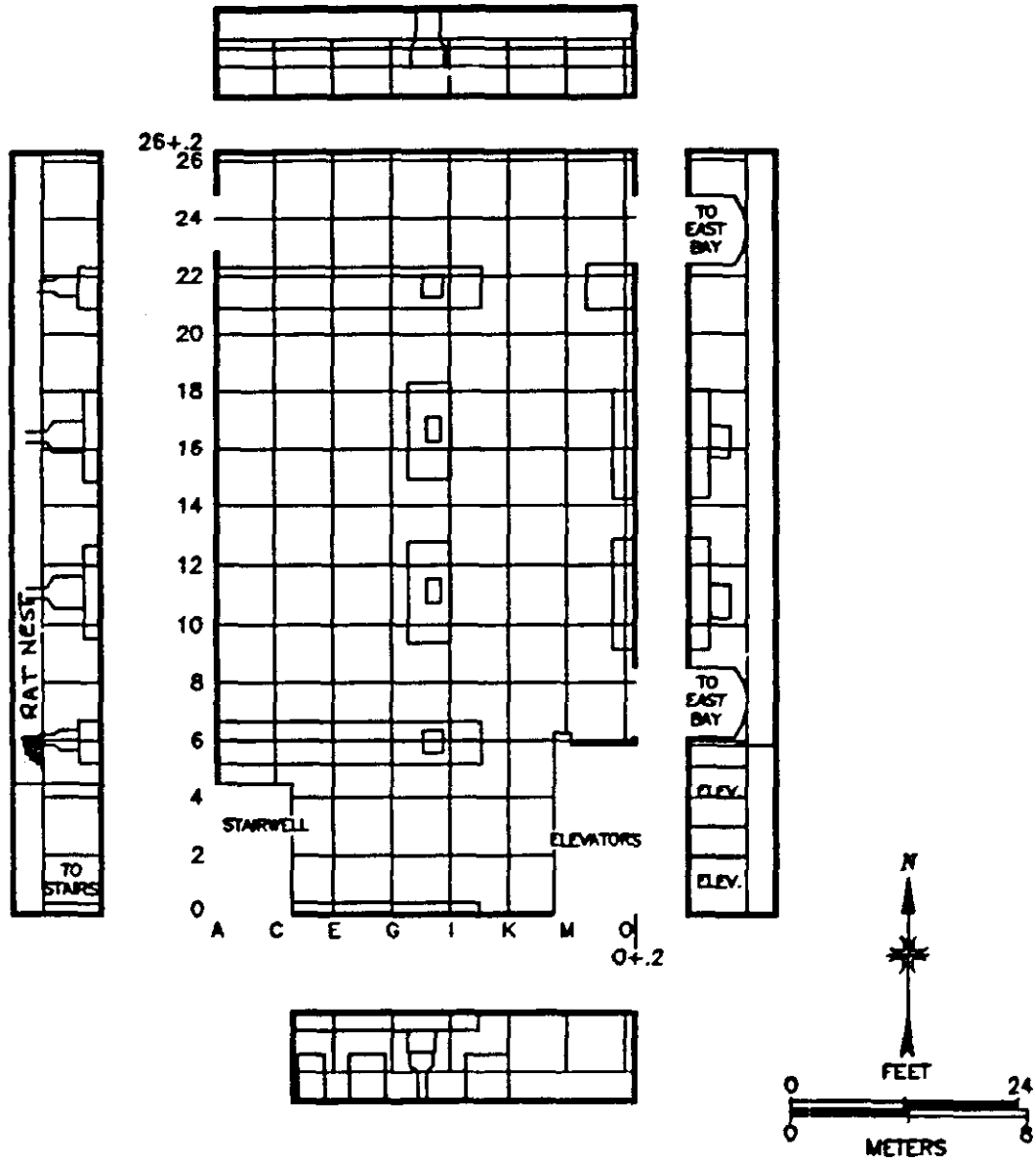


FIGURE : West Bay

## 2.4 ENVIRONMENTAL COMPLIANCE DOCUMENTATION

Documents listed in this section fulfill the NEPA and CERCLA requirements for the Baker and Williams Warehouses site.

	<u>Page</u>
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United States Government

Department of Energy  
Oak Ridge Field Office

# memorandum

DATE: August 7, 1992

REPLY TO  
ATTN OF: EW-93:Hartman

SUBJECT: CATEGORICAL EXCLUSION (CX) DETERMINATION - REMOVAL ACTION AT THE BAKER AND WILLIAMS WAREHOUSES SITE

TO: Carol M. Borgstrom, Director, Office of NEPA Oversight, EH-25, FORS

Attached is a categorical exclusion (CX) determination describing the proposed removal and disposal of radiologically contaminated materials at the Baker and Williams Warehouses site. Removal action at this site is being undertaken as part of DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP) and is being conducted under the expedited response process. I have determined that this action conforms to an existing NEPA Subpart D CX and may be categorically excluded from further NEPA review and documentation. This CX determination was made pursuant to the DOE NEPA Implementing Procedures; Final Rule, 57 FR 15122, Subpart D, Appendix B, p. 15156 (1992), as referenced on the attached determination.

Questions you have concerning NEPA compliance issues may be directed to Patricia W. Phillips, OR NEPA Compliance Officer, at (615) 576-4200.

  
Joe La Grone  
Manager

## Attachment

cc w/attachment:  
C. R. Hickey, BNI  
G. K. Hovey, BNI  
Al Davis, SAIC  
J. L. King, SAIC  
R. S. Scott, EM-20, FORS  
J. W. Wagoner, EM-421, TREV II  
Lynn Lawson, EM-431, TREV II  
L. K. Price, EW-93, OR  
G. S. Hartman, EW-93, OR  
R. E. Kirk, EW-93, OR  
P. W. Phillips, SE-311, OR

**CATEGORICAL EXCLUSION (CX) FOR  
REMOVAL OF RADIOLOGICALLY CONTAMINATED MATERIALS  
AT THE BAKER AND WILLIAMS WAREHOUSES (B&W) SITE**

**PROPOSED ACTION:** Removal of radiologically contaminated materials.

**LOCATION:** Baker and Williams Warehouses (B&W) Site, West 20th Street,  
Manhattan, New York [FUSRAP site]

**DESCRIPTION OF PROPOSED ACTION:** The proposed action is to safely remove, temporarily store, and transport for disposal radiologically contaminated materials at the B&W Site, thereby eliminating potential exposure of workers and the public to contamination exceeding applicable cleanup guidelines. There are no known hazardous wastes at the site; however, if hazardous wastes are determined to be commingled with radioactive waste, removal and temporary storage would be done in accordance with applicable requirements; the mixed waste would then be disposed of at an existing facility designed to accept these wastes. The action includes decontamination of a radiologically contaminated building; temporary storage of wastes on-site or at an existing DOE facility; and packaging, transportation, and disposal of low-level radiologically contaminated materials to an existing appropriately licensed disposal site. In the event that disposal delays require temporary on-site storage of wastes, storage would be conducted in accordance with all applicable regulations. Removal action at this site would be undertaken as part of DOE's Formerly Utilized Sites Remedial Action Program (FUSRAP).

The proposed removal action would be conducted under DOE authorities pursuant to the Atomic Energy Act (AEA), would be consistent with the final remedial action for the site, and meets the eligibility criteria for conditions that are integral elements of actions eligible for categorical exclusion as stated in 57 FR 15154, 15155, April 24, 1992:

1. The proposed action would not threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE orders. All activities would be managed by the FUSRAP program.
2. The proposed action would not require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators and facilities for treating wastewater, surface water, and groundwater). Wastes generated during the proposed action would be disposed of at an existing facility or stored temporarily on-site or at an existing DOE facility pending evaluation of final disposal options.

**CATEGORICAL EXCLUSION (CX) FOR  
REMOVAL OF RADIOLOGICALLY CONTAMINATED MATERIALS  
AT THE BAKER AND WILLIAMS WAREHOUSES (B&W) SITE (continued)**

3. The proposed action would not disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases. The removal action would be conducted in an environmentally responsible manner to ensure site-specific control of environmental contamination.
4. The proposed action would not adversely affect any environmentally sensitive resources defined in the Federal Register Notice referenced below, including archaeological or historical sites; potential habitats of endangered or threatened species; floodplains; wetlands; areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries; prime agricultural lands; special sources of water such as sole-source aquifers; and tundra, coral reefs, or rain forests.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal, and the proposal is not precluded by 40 CFR 1506.1 or Section 1021.211 of the DOE NEPA Implementing Procedures; Final Rule, 57 FR 15122, Subpart D, p. 15146 (1992).

The estimated cost for this action is less than \$2 million and the action would take less than 12 months from the time activities begin on site.

**CX TO BE APPLIED:** From the DOE NEPA Implementing Procedures; Final Rule, 57 FR 15122, Subpart D, Appendix B, p. 15156 (1992), under actions that "Normally Do Not Require EAs or EISs," "B6.1 Removal actions under CERCLA (including those taken as final response actions and those taken before remedial action) and removal-type actions similar in scope under RCRA and other authorities (including those taken as partial closure actions and those taken before corrective action), including treatment (e.g., incineration), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the removal action."

**CATEGORICAL EXCLUSION (CX) FOR  
REMOVAL OF RADIOLOGICALLY CONTAMINATED MATERIALS  
AT THE BAKER AND WILLIAMS WAREHOUSES (B&W) SITE (continued)**

I have concluded that the proposed action meets the requirements for the CX referenced above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

Patricia W. Phillips 7/27/92  
Patricia W. Phillips, OR NEPA Compliance Officer Date

Based on my review and the recommendation of the OR NEPA Compliance Officer, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

William O. Adams 8/5/92  
William O. Adams, Assistant Manager for Environmental Restoration and Waste Management Date

Based on the recommendations of the OR NEPA Compliance Officer and the Assistant Manager for Environmental Restoration and Waste Management, I determine that the proposed action is categorically excluded from further NEPA review and documentation.

Joe LaGrone \_\_\_\_\_  
Joe LaGrone, Manager, DOE Oak Ridge Field Office, OR Date

# memorandum

1990 JUL -6 AM 11:48

Dave

DATE: JUNE 25, 1990

REPLY TO  
ATTN OF: EH-231

SUBJECT: Expedited Procedures for Remedial Actions at Small Sites

TO: J. Fiore, EH-423

## Introduction and Discussion

Current protocol and procedures for implementing the remedial action and associated environmental review process under the Formerly Utilized Sites Program (FUSRAP) were developed with primary consideration given to the larger and higher priority sites. These procedures are designed to ensure that all appropriate engineering and environmental options are evaluated. They also ensure the mitigation of environmental and health impacts, cleanup criteria, disposal options, and so forth, are optimized. These protocol carefully considered and adopted the requirements of the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the CERCLA National Contingency Plan (NCP).

While this approach may represent an effective process for larger and higher priority sites, it can be quite wasteful of Federal resources at smaller FUSRAP sites, particularly those most recently designated and those sites to be designated in the future.

Both NEPA and CERCLA offer the Department considerable flexibility in dealing with smaller sites. The purpose of this proposed supplement to the current protocol is to describe in detail a procedure for dealing with such small sites in a cost effective and environmentally acceptable manner that is in compliance with NEPA and CERCLA. This version of the procedures has been revised to reflect comments received on the January 19, 1990 version from your staff and Oak Ridge Operations (March 30, 1990, Memo from Seay to Wallo) and received in discussions with EIS/NEPA (EH-25) personnel.

One comment in the Seay to Wallo memorandum was not adopted in these recommendations. Oak Ridge felt the roles of the respective offices were not sufficiently different to warrant having both headquarters and the project office sign the certification for a site remediated under the expedited process. I have no problem with the project office taking this responsibility, if they are willing to do so and it is beneficial to streamlining the overall protocol. However, I believe that under most circumstances, headquarters and its designation contractors will be making the judgments that result in approving the release of the largest

portions of most of the property of concern and it does not seem appropriate to require the field to then accept the responsibility for certifying it. I, therefore, did not adopt this recommendation in this proposed procedure. However, as noted, the following only represent recommendations. EM-40 and the FUSRAP project office should make the final decisions regarding how and if they are included in the DOE FUSRAP protocol.

The adoption of this process is likely to require major modification to existing FUSRAP protocols (1986/1987 versions). If these documents are revised, there are several other sections that might warrant consideration for revision as well. The discussion on the use of the FUSRAP guidelines should be expanded. It should note that criteria should be selected such that current use and likely future use of the property will result in doses to users of the site that are a small fraction of the 100 mrem/year limit (on the order of a few mrem/year). The worst plausible scenario (plausible but not likely) may be permitted to allow doses that are somewhat closer to the limit. Guidance provided since the issuance of the protocol should be considered for inclusion in the revised protocol. An example is the guidance provided regarding the level of survey that is required for release of property when there is varied degrees of historical information available concerning the past use of the property or equipment. The protocol should also be reviewed to determine if it contains an acceptable discussion of the CERCLA and NEPA reviews and documents prepared for non-expedited sites. The FUSRAP prioritization procedure should also be reviewed to ensure that it is still acceptable in light of the new Order DOE 5400.5 and the recommendations of such reports as BEIR V and UNSCEAR 88. Similarly, the QA and sample chain of custody requirements should be reviewed to determine if they are adequate.

The remainder of this memorandum contains the recommendations for the establishment of an expedited remedial action process. These recommendations complete the commitment I made earlier this year to revise the previous version. Any further action regarding implementation (and modification, if needed) of the suggested approach is up to EM-40 and the FUSRAP project office. However, if I can be of assistance in the review of revised protocols or plans for implementation of the process please call me at FTS 896-4996.

#### 1.0 Purpose:

Define a supplemental procedure for the FUSRAP protocol that will allow more expeditious and effective remediation of small sites in a manner that is in compliance with current regulations.

## 2.0 Summary and Applicability:

A detailed description of the "Expedited Remediation Process" and its associated elements is provided in the sections to follow; however, conceptually, the process can be divided into four major activities. They are 1) identification and characterization, 2) evaluation and planning, 3) remediation, and 4) certification. The process is shown schematically in Figure 1. The conditions for using and differences between this procedure and the normal FUSRAP protocol include:

- o The designation survey may be more extensive.
- o The environmental and engineering evaluation process and associated documentation are much less extensive.
- o In most cases, the environmental evaluation is completed or at least initiated at headquarters level with more involvement by the designation contractor.
- o Any remedial action conducted under this procedure should only require a few weeks of field operation and it must be clear that the quantity of waste generated is sufficiently small that it may be sent to an existing DOE disposal site.
- o This procedure is limited to sites having relatively small levels of contamination, particularly those with only indoor contamination or where outdoor contamination is so limited that ALARA actions in the field are likely to result in cleanups that represent background levels of radionuclides in the soil.
- o There is virtually no potential for any measurable ground water contamination.
- o The survey data must have been reasonably current or verified and the survey contractor (who will also serve as the verification contractor during remedial action) must have personnel assigned to the project that are familiar with the site. Preferably those involved in the original designation survey or more recent surveys conducted to verify past data.
- o The data collection and analyses must be consistent with CERCLA requirements.

## 3.0 Identification and Characterization:

The first activity is the identification of the contaminated site. This process is generally consistent with the current protocol and basically involves the radiological survey of the facility to identify the extent

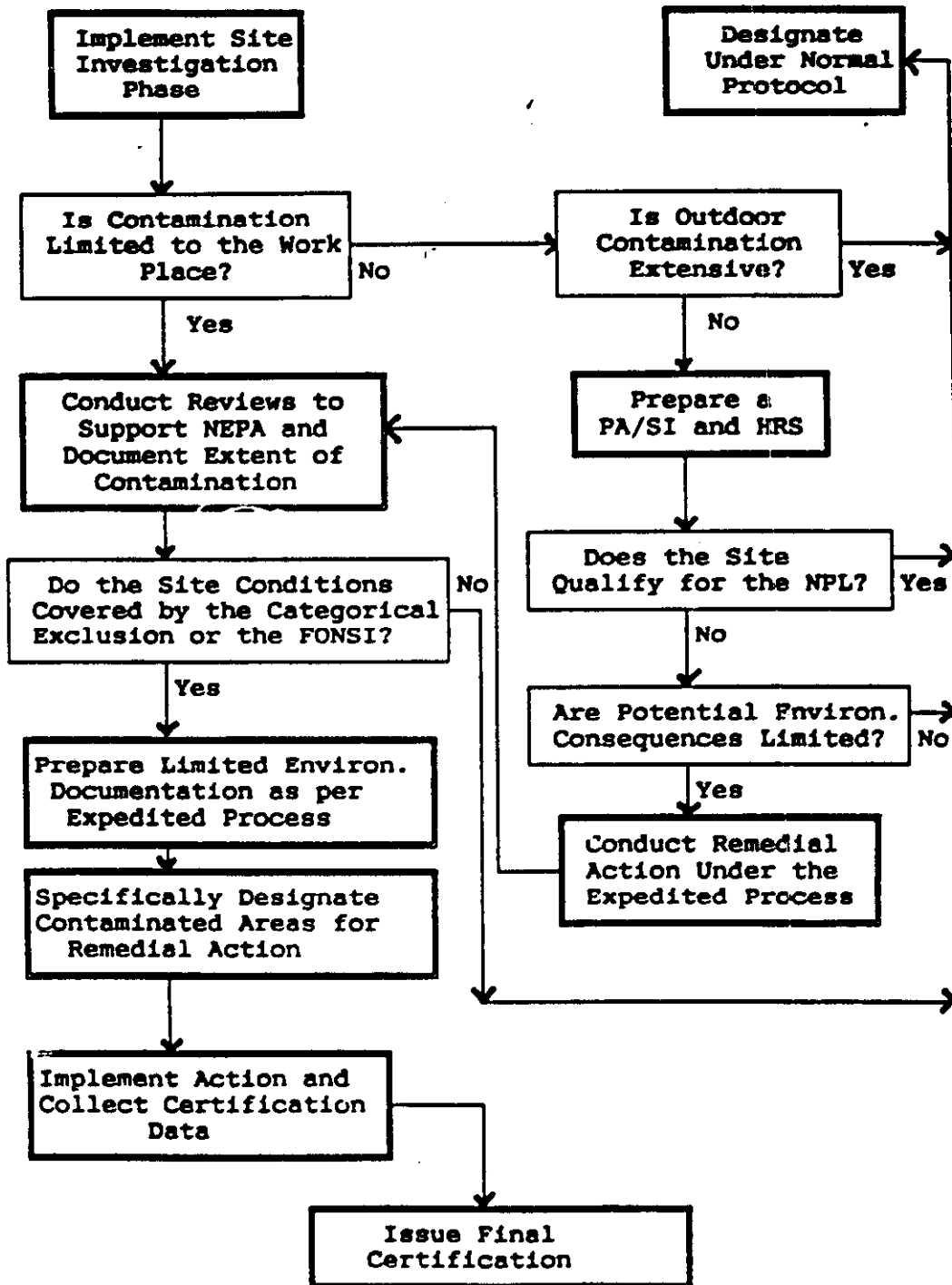


Figure 1. Basic Follow Diagram of Expedited Remedial Action



of contamination. The only difference is the level of detail required for the survey.

Under the current protocol this effort is typically terminated as soon as there are sufficient data to demonstrate the site contains residual radioactivity in excess of guidelines. The complete characterization of the site is then completed after designation of the site for remedial action. When it is anticipated that a site may be remediated under the expedited procedures it is necessary that the designation survey be conducted in a manner that ensures that there is reasonable certainty that the extent of the contamination has been defined.

If the results indicate the extent of the contamination is very limited (i.e., contained within the work place (the building), and/or outdoor contamination is very minor) then this process may be used to conduct the remedial action. In some cases, survey results may be supported by historical data.

It is the responsibility of the DOE designation manager and the designation contractor to identify sites that have potential for utilizing this expedited process and ensuring adequate data are collected to complete the evaluation. If this is determined in the field or before the survey, the survey may be extended by the survey team leader or the onsite DOE representative to collect the required data. If it is determined after the completion of the survey during the review process, the designation manager may send the survey contractor back to the site to collect any necessary data. If the latter occurs, the remedial action contractor should be directed to send an engineering representative onsite during the supplemental survey.

The DOE designation manager should notify and involve the project office and remedial action contractor in this effort as soon as it is suspected that the site may be appropriate for the expedited procedure. Under certain conditions, where resources are available, this will allow the remedial action contractor or the project office the option to have personnel on site for at least the final part of the designation survey. This should only be done, however, when use of the expedited process is reasonably certain.

### 3.1 Special Consideration for Designated Sites

Under certain circumstances, the DOE remedial action managers at the project office may identify sites that warrant consideration for use of the expedited process. These might include sites that were designated

prior to the inclusions of this procedure in the FUSRAP protocol. In some cases, sites that were believed to contain extensive contamination as a result of limited designation survey data may be determined to be eligible for the expedited process on the basis of characterization survey data if it clearly demonstrates that the conditions at the site comply with the requirements set forth for use of the expedited process.

In both these instances, the project office should submit a request to DOE headquarters to include the site in the expedited process. The designation manager and knowledgeable designation survey contractor representatives should review the request and justification and meet with the project office remedial action manager and the characterization survey contractor to ensure that the subject site meets the conditions required under NEPA or CERCLA for the expedited process to be used. In these cases, the evaluation and planning process will proceed as noted in section 4.0; however, the project office and characterization/remedial action contractor will have the lead for preparing the necessary documentation.

#### 4.0 Evaluation and Planning:

If after review of all the data, it is determined that the contamination is limited to the indoor portions of the site only, the expedited process may be used. The DOE headquarters technical support contractor should be tasked to prepare the environmental documentation.

Normal NEPA procedures would only require a memorandum to file for projects of such limited scope, however, DOE policy (SEM 15) no longer permits the use of this option for complying with NEPA. The DOE NEPA office (EH-25) has prepared a request for a categorical exclusion that should cover these limited scope remedial actions. EM-40 should coordinate directly with EH-25 to determine the status and applicability of the specific categorical exclusion. If the categorical exclusion is approved, the protocol should be revised to reflect the level of environmental documentation that is required to demonstrate the site specific action is subject to the exclusion.

If the categorical exclusion approach is not acceptable, EM-40 should immediately begin the preparation of a generic Environmental Assessment (EA) and if appropriate, issue a Finding of No Significant Impact (FONSI) to cover the NEPA requirements for these projects. It may be found that this approach will produce the most timely results. As with the categorical exclusion, some minimal environmental documentation should still be prepared to demonstrate that the conditions of the generic EA and associated FONSI are met by the proposed remedial action. Because the primary goal of the proposed process discussed below is to expedite remedial actions at sites where such actions clearly cause

insignificant environmental impact (small sites). If the environmental analysis indicates that a FONSI cannot be issued, then the scope of the sites and actions covered under the expedited process must be reduced, otherwise the primary goal of insignificant impact is not met.

For those sites where the contamination is limited to the work place, CERCLA documentation should not be necessary; however, it may be desirable to use the format and the data requirements in the CERCLA PA/SI for the data requirements under this process. In addition to the normal FUSRAP priority ranking done on each site, it is also suggested that a CERCLA type Hazard Ranking System (HRS) report be done, even though it is not directly applicable. This will result in consistent documentation with similar actions (discuss below) where outdoor contamination is involved. The field office responsible for remedial action and their contractor should be involved in this process as much as possible to ensure an adequate evaluation and to aid in the remedial action process.

If outdoor contamination exists or there is significant potential for contaminating the environment, the site cannot be directly included in the expedited process. In such cases, an evaluation must be conducted to verify that the contamination poses no significant threat to the environment. Technically, the site must be considered under CERCLA. However, if the Department can ensure that there is no significant environmental impact, the expedited process can still be used. At a minimum a PA/SI and HRS scoring must be done. The process must verify that the site will not qualify for the national priorities list and that the action is not a significant environmental action under NEPA. If the contamination is so limited that cleanup of the outside contamination under the guidelines plus ALARA is likely to result in the soil concentrations after remedial action being equal to background and the volume of waste is such that it can clearly be shipped to an existing DOE disposal site, the expedited process may be utilized. However, if these criteria cannot be met and/or it is determined that the remedial action may be extensive (months rather than weeks) the process should be avoided and the normal protocol used.

It is important that this process be applied over a relatively short period in time (a few years between designation survey and remediation). Otherwise, the Department may be at risk. The process depends significantly on the availability of survey personnel who conducted the initial designation surveys to assist the remedial action contractor in identifying and characterizing the contamination. Use of older survey data may result in poor communication of this data if the principals involved in the survey are not available at the time of the remedial action. This could result in contamination being found during the remedial action or determined to be unclearly defined and, hence, halt the process and force the use of the normal procedures. Such actions would waste rather than conserve resources.

Once it is determined that the expedited process will be used, the remedial action contractor and the designation contractor should visit the site together to clarify the planned remediation. Once the remedial action plans are final, the remedial action can proceed.

The designation contractor is responsible for identifying the contaminated areas for the remedial action contractor so that he can make appropriate plans. The designation contractor should supply drawings that clearly identify the extent and location of the contamination to be remediated and/or where possible, should clearly mark the contaminated areas for the remedial action contractor. It is critical to the success of these projects that the two contractors are in close and frequent communication. It should be the DOE designation manager's and the project office site manager's responsibilities to verify that there is an adequate exchange of information.

#### 5.C Remedial Action:

The remedial action team under the expedited process is different in that it is made up of the remedial action contractor and his health physics personnel (for certifying the remedial action) and the verification contractor (the designation contractor personnel who conducted the survey). Unlike the normal protocol, the remedial action contractor is only responsible for remediating those areas identified by the designation survey as requiring remedial action and he is responsible for certifying the conditions of these areas. The designation contractor is responsible for supplying sufficient information to allow certification of the rest of the site. He also provides verification services for the remediated areas.

Because the scope of these projects is limited, it is anticipated that disputes between the remedial action certification team and the designation/verification contractor will be rare. In most cases, considering ALARA requirements and the small size of the actions involved, the most conservative results should be used. However, if disputes do arise, they must be resolved by DOE personnel. This should be done by either the DOE headquarters designation manager or the DOE project office site remedial action manager. Because the time frame of the remedial action is relatively short, one or the other should be on call at all times either by phone or if necessary on-site. The protocol should be revised to allow either of the DOE managers to take this responsibility; however, before the remedial action team goes into the field, the DOE staff responsible for dispute resolution must be identified. The name and procedure for contacting the specific DOE manager responsible for dispute resolution for a specific action should be listed in the remedial action plan.

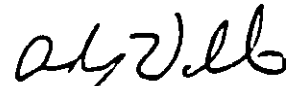
Depending on the site specific conditions, and the magnitude of the former operations, the DOE designation manager or the DOE remedial

action manager may direct the remedial action contractor or the designation contractor to make additional measurements or take additional samples to further verify the condition of the unremediated areas. In most cases, the need for such measurements should be anticipated from the preremedial action survey data. In general, these measurements should be small scale and confirmatory in nature. There should not be any significant characterization survey effort necessary during the remedial action. Such a requirement is indicative of insufficient preremedial action characterization and would indicate that there was not sufficient information available to determine if the site should be remediated under the expedited process.

If during the survey significant new contamination is identified or the contamination is significantly more extensive than anticipated, DOE must be notified to determine if 1) the action should continue and the new material removed, 2) the action should continue as planned and the new areas will be evaluated later, or 3) the action halted and the site reevaluated. Sufficient data should be collected to support these determinations. These decisions should also be the responsibility of the DOE manager on call for the project and identified in the remedial action plan.

#### 6.0 Certification:

Preparation of Certification Documentation as in the normal protocol is the primary responsibility of the field office. However, the survey contractor and headquarters technical support contractor must provide the field office and the remedial action contractor with sufficient information to certify the radiological condition of the site as the remedial action contractor was only responsible for the remediated portions of the site. Similarly, DOE headquarters and the field office should jointly sign the certification statement because of the combined responsibility. The remainder of the process is handled as it is in the normal protocol.



Andrew Wallo  
Environmental Guidance

# Bechtel

## Interoffice Memorandum

To M. E. Kaye File No. 145/7000  
Subject Review of New York Regulations for BWW Date January 10, 1991  
From L. L. Baldy  
of FUSRAP  
Copies to G. Galen At Oak Ridge Ext. 6-4834  
C. Hickey

The following information is a summary of a review of New York regulations which apply to the operations at the Baker and Williams Warehouses Site.

### Waste Classification

The BWW wastes are considered to be solid, low-level radioactive wastes, but not hazardous wastes, by NY state. U.S. Department of Transportation regulations consider the BWW wastes to be hazardous substances.

### Ionizing radiation and airborne contaminants

Applicable standards for permissible occupational doses and concentrations for airborne radioactive materials can be found in NY regulations issued by the Department of Labor.

### Transportation

Under NY regulations a LLRW manifest and transport permit must accompany all LLRW shipments while in transit into, through, or within NY unless an exemption is granted. An exemption may be granted if the NY State Department of Environmental Conservation and the NY State Department of Health determine the LLRW transport cannot impose a potential significant adverse impact human health and the environment.

A LLRW transport permit cannot be issued unless the receiving facility is authorized or licensed, under the laws and regulations of either the federal government or the state in which the facility is located, to accept LLRW for treatment, storage, or disposal.

NY regulations prohibit transporters of LLRW to use several bridges and tunnels (See attached map, restricted facilities are highlighted). The transporter may use all of the marked facilities, except the George Washington Bridge Lower Level, if three criteria are met.



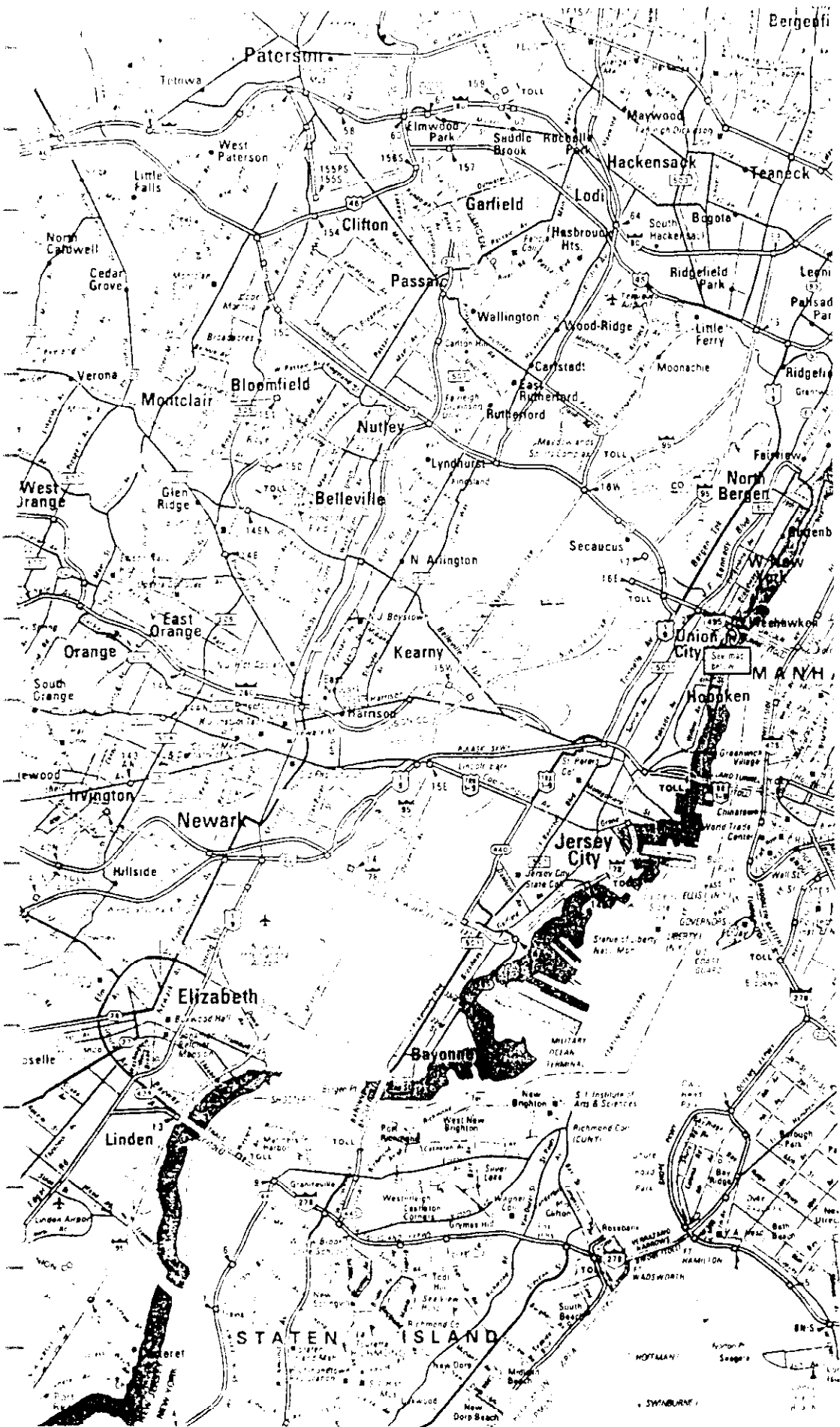
- 2
- (1) The facility is a component of a route selected by the carrier to minimize radiological risk in accordance with the U.S.D.O.T. regulations.
  - (2) The shipment complies with all packaging, labeling, placarding, quantity limitations, and other applicable U.S.D.O.T. requirements.
  - (3) The carrier has proof of financial responsibility in the amounts required by federal regulations.

No regulations have been found restricting use of the George Washington Bridge Upper Level.

U.S.D.O.T. regulations require the BWW wastes to be placarded for transport.

*Lawrence L. Baldy*  
L. L. Baldy







APPLICABLE REGULATIONS

6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes

The Baker and Williams Warehouses' (BWW) wastes are considered solid wastes, but not hazardous wastes by the state of New York (NY). Materials are solid wastes, as defined by NY, if they are abandoned by being accumulated, stored, or treated before or in lieu of being abandoned by being disposed of, burned, or incinerated.

6 NYCRR Part 381 - Low-level Radioactive Waste Transporter Permit and Manifest System

- 381.1** A low-level radioactive waste (LLRW) manifest document and NY State LLRW transport permit must accompany all shipments of LLRW while in transit into, through or within NY state unless specifically exempted.
- 381.5(b)** The commissioner may exempt a person from a manifest or permit requirements upon determination that, based upon the characteristics (including physical and chemical form, half-life, concentration, activity, and toxicity) of the LLRW transported, such transport imposes no potential significant adverse impact on public health, safety and welfare, the environment or natural resources as determined by the NY State Department of Environmental Conservation in consultation with the NY State Department of Health.
- 381.9(a)(1)** A permit may not be issued unless the receiving facility is authorized or licensed under the laws

and regulations of either the federal government or the agreement state in which it is located, to accept LLRW for treatment, storage, or disposal.

\*\* Utah and Washington are agreement states\*\*

12 NYCRR Part 38 - New York State Department of Labor Regulations on Ionizing Radiation Protection, 6 NYCRR Part 380 - Rules and Regulations for Prevention and Control of Environmental Pollution by Radioactive Materials

38.5 No person shall transfer, receive, possess or use any radioactive material without a license.

38.21(a) Permissible occupational doses from external exposure in a controlled area are presented in the following table.

Area of the body	Dose in 13 consecutive weeks (rems)	Dose in 52 consecutive weeks (rems)
Whole body	3	5
Hands and forearms	25	75
Feet and ankles	25	75
Skin of the whole body	10	30

38.21(b) Average concentrations for airborne radioactive material for any 40-hour week in a controlled area should not exceed:

Uranium-238  $1 \times 10^{-10}$   $\mu\text{Ci/ml}$   
Uranium-235  $1 \times 10^{-10}$   $\mu\text{Ci/ml}$

above natural background.

38.22(a)

Permissible dose from external exposure in uncontrolled areas:

0.5 rem whole body in 52 consecutive weeks

2 mrem/hr

100 mrem in 7 consecutive days

38.22(b)

Average concentrations for airborne radioactive material for any year period in an uncontrolled area should not exceed:

Uranium-238  $4 \times 10^{-12}$   $\mu\text{Ci/ml}$

Uranium-235  $5 \times 10^{-12}$   $\mu\text{Ci/ml}$

above natural background.

380

This regulation covers discharges and burials of radioactive materials in the state. Permissible discharge concentrations are the same as those in Part 38.

**6 NYCRR Part 200, 6 NYCRR Part 257 - New York Regulations  
Regarding Air Emissions and Air Quality Standards**

200.6

No person shall allow or permit any air contaminant source to emit air contaminants in quantities which would contravene any applicable ambient air quality standard and/or cause air pollution.

257-3.3

This section contains annual, 30-day, 60-day, and 90-day standards, sampling methods and frequencies for airborne particles. For any 24-hour period, the average concentration of airborne particles should not exceed  $250 \mu\text{g/m}^3$  more than once a year.

Port Authority of New York and New Jersey Transportation Rules  
for Radioactive Material

No vehicle shall enter either a tunnel, the George Washington Bridge Lower Level, or George Washington Expressway if its load includes radioactive residue or waste or any radioactive material.

21 NYCRR Part 1074, 21 NYCRR Part 1075 - New York Regulations  
Governing Use of Triborough Bridge Authority Facilities for  
Transportation of Hazardous Substances

No vehicle carrying a placarded radioactive material shall enter upon the

Triborough Bridge,  
Throgs Neck Bridge,  
Henry Hudson Bridge,  
Marine Parkway Gil Hodges Memorial Bridge,  
Cross Bay Veterans Memorial Bridge,  
Queen Midtown Tunnel,  
Brooklyn Battery Tunnel,  
or the Verrazano-Narrows Bridge Upper and Lower Levels

unless:

- (1) the facility (mentioned above) is a component of a route selected by the carrier to minimize radiological risk in accordance with the U.S.D.O.T. regulations, taking into account accident rates, transit times, population density and activities, time of day and day of week during which transportation will occur;
- (2) the shipment complies with all packaging, labeling, placarding, quantity limitations, and other applicable U.S.D.O.T. requirements; and
- (3) the carrier has proof of financial responsibility in the amounts required by federal regulations.

## INAPPLICABLE REGULATIONS

### 10 NYCRR Part 16 - New York State Department of Health Ionizing Radiation Regulations

Radioactive waste at BWV is subject to a regulation as provided for by law by the State Department of Labor (see 12 NYCRR Part 38 - New York State Department of Labor Regulations on Ionizing Radiation Protection). 12 NYCRR Part 38 is given precedence over 10 NYCRR Part 16; therefore 10 NYCRR Part 16 is inapplicable.

### 6 NYCRR Part 211 - New York State General Prohibitions on Fugitive Air Emissions

This regulation applies to emission of air contaminants to the outdoor atmosphere. The work at BWV will not emit air contaminants to the outdoor atmosphere; all potential contaminants will be in containers before being moved outside the buildings. Therefore this regulation is inapplicable.

### 6 NYCRR Part 201, 6 NYCRR Part 212 - New York Regulations for Constructions and Operations of Source of Air Contaminants

These regulations apply to emission of air contaminants to the outdoor atmosphere. The work at BWV will not emit air contaminants to the outdoor atmosphere; all potential contaminants will be in containers before being moved outside the buildings. Therefore these regulations are inapplicable.

### NYAC 27-1036 - New York City Rules on Demolition Operations

This regulation applies to physical and mechanical demolition of an entire building; therefore it does not apply to the scarifying of a building floor. If the contaminated floor is to be removed, this regulation would apply.

10 NYCRR 23 - New York Regulations on Demolition Operations

This regulation applies to physical and mechanical demolition of an entire building and excavation procedures. The information in this regulation parallels the information found in NYAC 27-1036. There are no sections which apply to scarifying of a building floor.

## 2.5 REAL ESTATE INSTRUMENTS

The documents in this section include real estate instruments that were obtained for the site and adjacent property before remedial action began. Letters from the property owners granting access to Baker and Williams and a nearby utility right-of-way follow:

	<u>Page</u>
"License Agreement" (Baker and Williams Warehouses Building 521-527) March 22, 1991 (BNI CCN 076181).	II-41
Letter from Ronald Kirk (DOE-FSRD) to Louis Sherman, "Signed Remedial Action Agreement of Baker and Williams Building 513-519," December 9, 1992 (CCN 097909).	II-49
Letter from Joseph Galiber, Esq., to DOE-FSRD Division Director, Re: 513-519 20th Street, New York, New York, April 1, 1993 (BNI CCN 102566).	II-55

## LCM-PSW PARTNERSHIP

## LICENSE AGREEMENT

THIS AGREEMENT, entered into this 22 day of March, 1991, effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 1991 between THE UNITED STATES OF AMERICA, (hereinafter called the "Government"), acting through the DEPARTMENT OF ENERGY (hereinafter called "DOE"), and LCM-PSW PARTNERSHIP (hereinafter called the "Licensor") who is the fee owner of the parcel of land (hereinafter called the Premises) which is described in the deed title no. 435-M-01817 filed in the New York County Clerks Office and shown on Exhibit 1, the exhibit being attached hereto and made part hereof.

## WITNESSETH THAT:

WHEREAS, the DOE desires to enter upon Licensor's Premises for the purpose of performing certain remedial actions as part of said program; and

WHEREAS, the Licensor is agreeable to the performance of remedial actions under the terms set forth below:

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto agree as follows:

1. The Licensor hereby grants to the DOE or its designees a License giving: (a.) the right to enter upon the Premises for the purpose of removing low-level radioactive material from the Premises in accordance with the attached Remedial Action Plan; and (b) the right to enter upon the Premises to take soil samples, perform radiological surveys, and to perform or take any other reasonable action consistent with the expeditious completion of the subject remedial action; and (c) the right to periodically enter upon the Premises after completion of the remedial action for the purpose of conducting follow-up radiological surveys.

2. The Government shall be responsible for any loss or destruction of or damage to the Licensor's real or personal property caused by the rights given in this Agreement. This responsibility shall be limited to restoration of said real and personal property to a condition comparable to its original condition by techniques of backfilling, seeding, sodding,



landscaping, rebuilding, repair or replacement (as indicated in the attached Remedial Action Plan), and such other methods as may be agreed to between the parties at the time of restoration work in accordance with terms and conditions of this Agreement and upon certification by the DOE that the Licensor's Premises meet all applicable radiological criteria, the Licensor agrees to release the Government, its contractors, and the officers, employees, servants, and agents of either of them from all further responsibility related to the radioactive contamination and the remedial action covered by this Agreement.

3. The Licensor will notify the DOE in writing if the Premises are, or at any time during the term of this Agreement shall become, leased, sold or otherwise transferred to another party. The Licensor will also give written notice to any purchaser, lessee, or transferee of the applicability of the rights contained in this Agreement when such purchase, lease, or transfer takes place during the term of this Agreement. The Licensor hereby consents to any lessee of the Premises entering into a suitable agreement with the Government to cover any part of the remedial action that may affect such lessee. The conveyance of any interest in the Premises to another by the lessor shall be subject to this license.

4. All notices to the DOE may be given by delivering same to the Department of Energy, Oak Ridge Operations, Director of the Former Sites Restoration Division, Administration Road, Oak Ridge, TN or by mailing same to the Department of Energy, Oak Ridge Operations, Director of the Former Sites Restoration Division, P. O. Box 2001, Oak Ridge, TN 37831-8723.

5. No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made a corporation for its general benefit.

6. The Licensor warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees and bona fide established commercial or selling agencies maintained by the Licensor for the purpose of securing business. For breach or

violation of this warranty, the Government shall have the right to annul this Agreement without liability or in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

7. This Agreement shall terminate upon completion of the restoration work in accordance with the terms and conditions of this Agreement and upon certification by the DOE that the Licensor's Premises meet applicable radiological criteria to the maximum extent practicable.

8. The Government and the DOE agree to indemnify and save harmless the Licensor for any damages or claims for damages arising out of or in connection with said remedial action plan described in this Agreement. To the extent that provisions of this Agreement call for the expenditure of funds, such obligations of the Government hereunder shall be subject to the availability of funds appropriated by Congress which the DOE may legally spend for such purposes and nothing in this Agreement implies that Congress will appropriate funds to perform this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

BY: DEPARTMENT OF ENERGY

BY: Lester K. Price  
Lester K. Price

TITLE: Director, Former Sites  
Restoration Division

DATE: 3/14/91

LCM - FSN Partnership  
Printed Name of Property Owner

Leonard J. Masucci  
Signature of Owner PATINEI

Signature of Owner (if Multiple)

DATE: 3/22/91

PHONE: 212-241-1177

076181

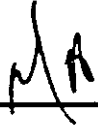
If the signatory is a corporation or a company, please complete the following:

**CORPORATE CERTIFICATE**

I, \_\_\_\_\_, certify that I am the duly qualified \_\_\_\_\_ of the corporation named herein as the owner; that \_\_\_\_\_, who signed this consent form on behalf of the owner, was then \_\_\_\_\_ of said corporation by authority of its governing body and is within the scope of its powers. Witness my hand and the seal of said corporation.

SEAL

\_\_\_\_\_



Name

Date

### Remedial Action Plan

Work will commence on or about April 1, 1991. Barring unforeseen circumstances work will be completed by May 31, 1991.

Work will not interfere with the normal activities of licenser, except in the area directly affected by the Remedial Action Plan.

Radiological surveys have shown that small amounts of low-level radioactive contamination are present on various surfaces on the property. For the contaminated areas identified on the first floor of building 521-527, a temporary partition will be constructed to establish a controlled area and prevent migration of dust from the work area. The first floor storage area will be HEPA vacuumed. The contaminated bituminous material removed from the floor will be placed in approved waste containers. The method utilized to remove the bituminous material will minimize the volume of material removed. The current method selected for remedial action utilizes a scarifier machine which will remove the bituminous material contamination. Although the removal method identified is the preferred technology, the possibility exist that the removal method may be altered to facilitate changing field conditions. Contaminated material at the interface of the floors/walls/columns will be removed by hand with a pavement breaker. After removal of the contaminated material, the floor will again be HEPA vacuumed.

In addition to the radiologically contaminated area in the first floor of building 521-527, another area has been identified in the basement. In the basement, a controlled area will be established using magenta rope. The contaminated concrete surfaces located in the basement area will initially be HEPA vacuumed. Chemical cleaning agents will be applied and removed in accordance with the manufacturer's directions. The chemicals will be applied with paint brushes and removed with a water spray and vacuum system. Waste water will be collected in a 55 gallon drum.

All waste containers will be weighed and labeled in accordance with established procedures and stored at the facility until the permanent disposition of the waste is identified.

First floor and basement decontamination activities will be performed concurrently.

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The following are the cash settlement items:

The use of trash service at \$850.00 per month

The use of electricity and water at \$200.00 per month

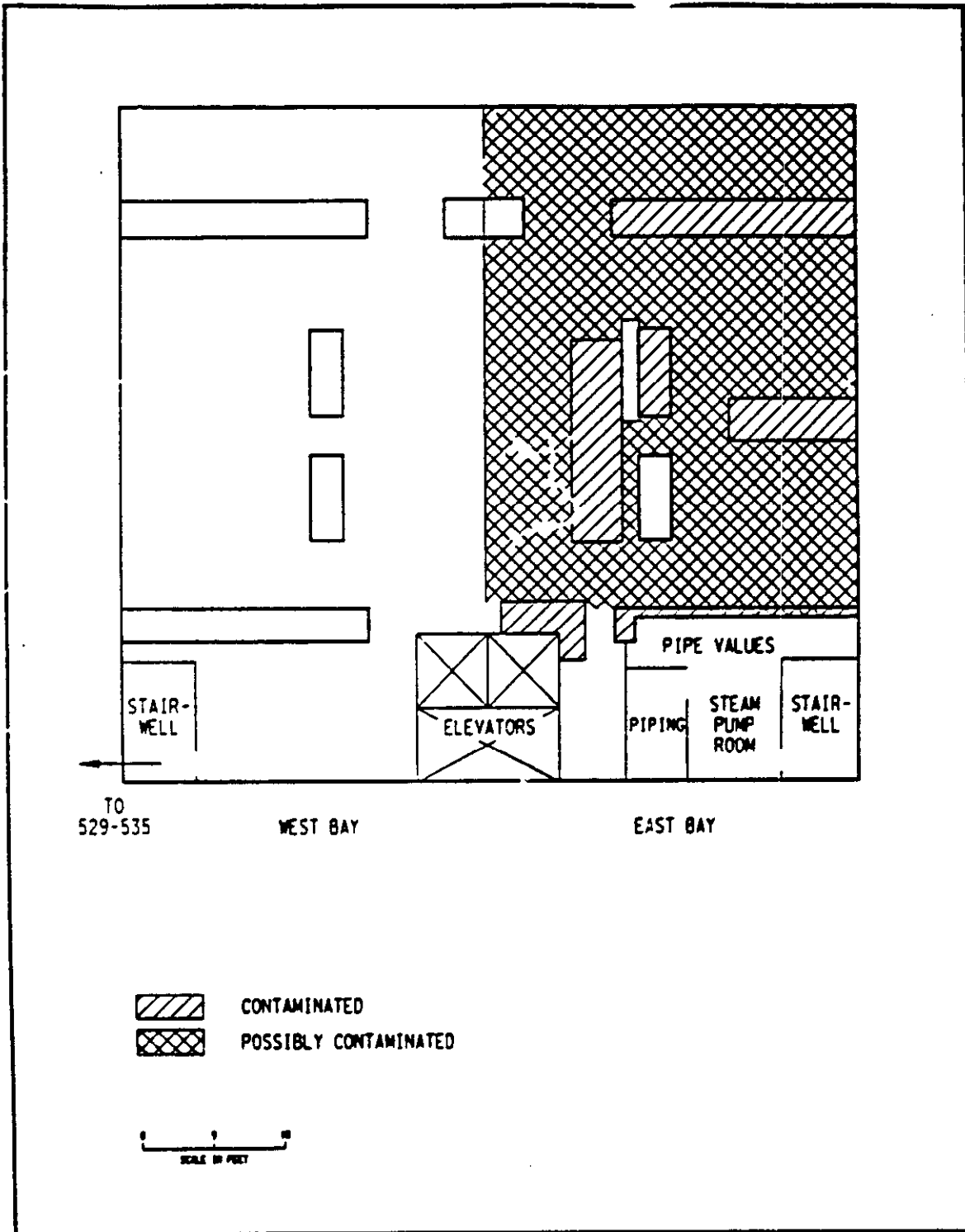
The use of Licensor personnel at a rate of \$28.00 per hour as requested and approved by DOE in order to facilitate remedial action for the duration of activities.

The temporary use of 250 sq. ft. of storage space at \$8.00 per sq. ft. per month.

The Licensor will be paid the sum of \$29,000.00 as compensation for the replacement of the concrete flooring.

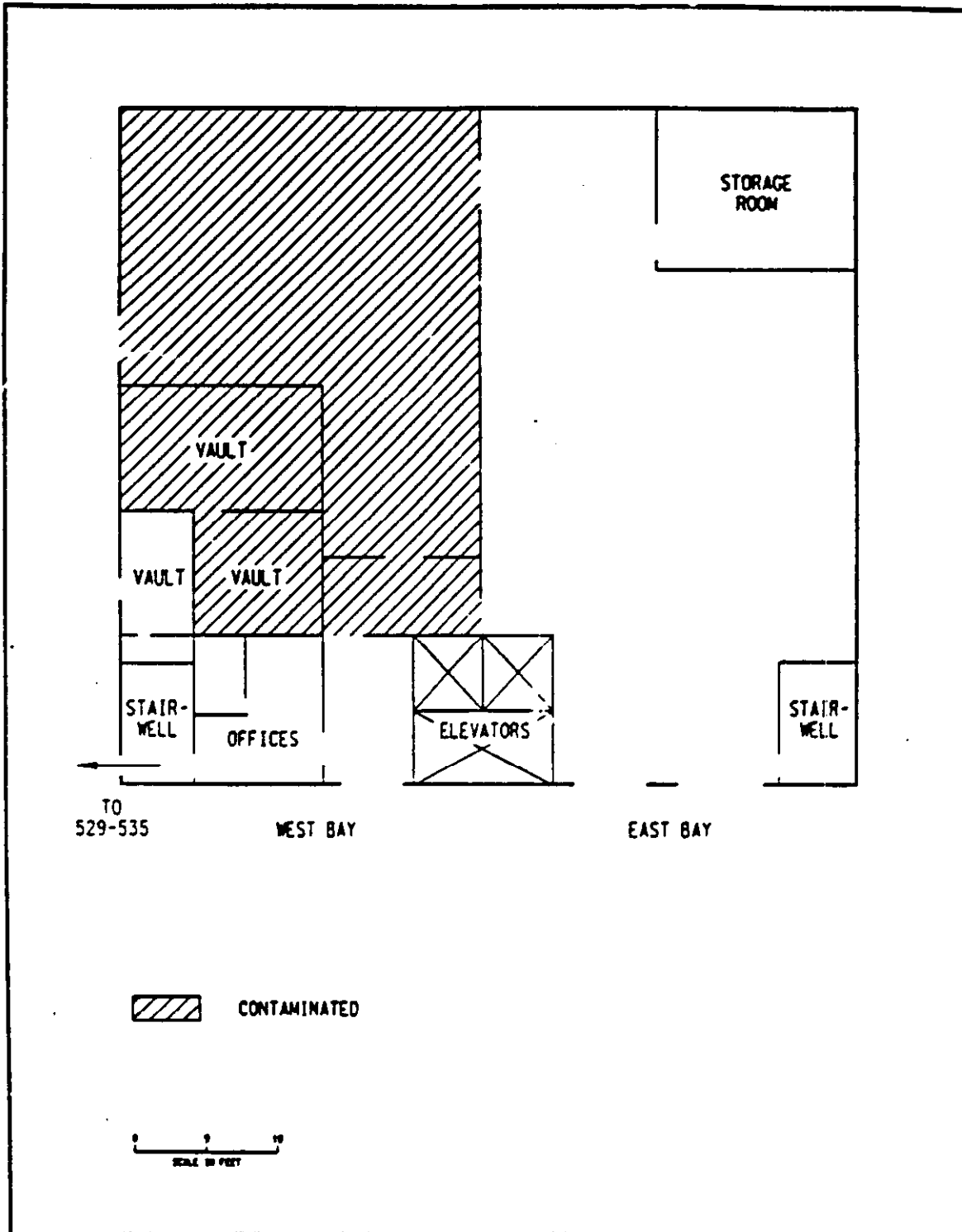
If the vault floor requires remediation a sum of \$1792.00 (4 men x 16 hours x 28.00/hr) will be paid to the licensor for the removal of said floor by April 1, 1991.

A sum of \$7070.00 will be paid to the licensor as compensation for the vault floor if remedial action is required.



145F003.DGN C1C0

EXHIBIT 1  
521-527 W. 20TH STREET  
BASEMENT WORK AREA



145F002.DGN G100

EXHIBIT 1  
BUILDING 521-527  
FLOOR PLAN OF FIRST FLOOR



Department of Energy  
Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

02-814

097909

December 8, 1992

Mr. Louis Sherman  
Hofheimer Gartler and Gross  
633 Third Avenue  
New York, New York 10017

Dear Mr. Sherman:

**BAKER AND WILLIAMS WAREHOUSE - BUILDING 513-519 - REMEDIAL ACTION LICENSE AGREEMENT**

Enclosed please find two fully executed originals of the Remedial Action License Agreement for the Baker and Williams Warehouse Building 513-519 located at West 20th Street, New York, New York. I will notify your office when the arrangements have been completed for payment for the services identified in paragraph 2. of the agreement.

If you have any questions, please contact me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*

Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

Enclosures



REMEDIAL ACTION LICENSE AGREEMENT

097909

THIS AGREEMENT, entered into this 30<sup>th</sup> day of November, 1992, between the UNITED STATES OF AMERICA (hereinafter called the "Government"), acting through the DEPARTMENT OF ENERGY (hereinafter called "DOE"), and JOSEPH GALIBER, RECEIVER (hereinafter called the "Receiver"), relates to and involves the property located at 513-519 West 20th Street, New York, New York (hereinafter called the "Premises").

WITNESSETH THAT:

WHEREAS, the DOE has previously conducted a low-level radioactive waste remedial action program in the vicinity of the Premises, and now, through its contractor, Bechtel National Inc., wishes to complete said low-level radioactive waste remedial action program; and,

WHEREAS, the DOE desires to enter upon the Premises for the purpose of performing the completion remedial actions of said program; and,

WHEREAS, the Receiver is agreeable to the performance of remedial actions under the terms set forth below:

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto agree as follows:

1. The Receiver hereby grants to the DOE or its designees a License (effective on the earlier of: (i) August 1, 1993, or (ii) the date Receiver notifies DOE that the provisions of paragraphs 2(a) and 2(b) have been fulfilled) giving DOE the following rights:

(a) The right to enter upon the Premises for the purpose of removing low-level radioactive material from the Premises in

accordance with the Remedial Action Plan (the "Plan") to be attached hereto;

(b) The right to enter upon the Premises to take soil samples, to perform chemical surveys, and to perform or take any other reasonable action consistent with the expeditious completion of the subject remedial action;

(c) The right to reasonably restrict access to such parts of the Premises as may be necessary, to facilitate remedial action; and,

(d) The right to enter upon the Premises after completion of the remedial action for the purpose of conducting follow-up radiological survey(s).

2. Prior to August 1, 1993, the Receiver shall cause: (a) Globe Storage & Moving Company, Inc. (hereinafter called the "Tenant"), the entity presently occupying the Premises, to vacate the Premises, and to take all necessary steps to properly relocate all items located inside the Premises, including but not limited to, the large number of retrievable containers and files which are currently being commercially stored for hundreds of Tenant's customers (hereinafter called the "Premise Contents"); and (b) the Tenant to deliver a document to the DOE absolving DOE of any responsibility for any problems associated with the indexing or relocating of the Premise Contents. Upon the execution of the Agreement the DOE shall pay to the Receiver partial compensation in the amount of Sixty Thousand Dollars (\$60,000.00) in return for the Receiver complying with the foregoing paragraphs 2(a) and (b), who

shall hold it in escrow until the terms of the foregoing paragraphs 2(a) and 2(b) have been fulfilled at which time the \$60,000 shall be non-refundable and Receiver may release same from escrow. In the event that the terms of the foregoing paragraphs 2(a) and 2(b) are not fulfilled, the Receiver shall return the \$60,000 to the DOE.

3. The Government shall be responsible for any loss or destruction of or damage to the Premises caused by the activities of the DOE or its designees. This responsibility shall be limited to restoration of said Premises to a condition comparable to its original condition by rebuilding, repair or replacement (as indicated in the Plan.)

4. Based upon certification by the DOE that the Premises meet all applicable radiological criteria, the Receiver to the extent permitted by law agrees to release the Government and the DOE, its contractors and the officers, employees, servants, and agents from all further responsibility related to the radioactive contamination and the remedial action covered by this Agreement.

5. The Receiver shall notify the DOE in writing if the Premises are, or at any time during the term of this Agreement shall become leased, sold or otherwise transferred to another party. The Receiver shall also give written notice to any purchaser, lessee, or transferee of the applicability of the rights contained in this Agreement when such purchase, lease, or transfer takes place during the term of this Agreement. The conveyance of any interest in the Premises to another party by either the Tenant

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or the Receiver shall be subject to this Agreement during the term hereof.

6. The Receiver warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee excepting bona fide employees and bona fide established commercial or selling agencies maintained for the purpose of securing business. For breach of violation of this warranty, the Government shall have the right to annul this Agreement without liability or in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

7. This Agreement shall terminate upon the earlier of: (a) completion of the remediation and restoration work in accordance with the terms and conditions of this Agreement and upon certification by the DOE that the Premises meet applicable radiological criteria to the maximum extent possible; or (b) December 31, 1993.

8. Obligations of the Government hereunder shall be subject to the availability of funds appropriated by Congress which the DOE may legally spend for such purposes. Nothing in this Agreement implies that Congress will appropriate funds to perform this Agreement.

9. All notices to the DOE may be given by delivering same to:

097909

Former Sites Restoration Division Director  
U.S. Department of Energy, OR Operations  
P.O. Box 2001  
Oak Ridge, TN 37831-8723

• **same to:** All notices to the Receiver may be given by delivering

Joseph Galiber, Esq.  
840 Grand Concourse  
Bronx, New York 10451

with a copy to:

Eagle & Fein, P.C.  
488 Madison Avenue - Suite 1100  
New York, New York 10022  
Attn: Sidney Eagle, Esq.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year written above.

THE UNITED STATES OF AMERICA

BY: DEPARTMENT OF ENERGY

*Lester K. Price 11/20/92*  
✓ Lester K. Price, Director  
Former Sites Restoration Division

JOSEPH GALIBER, ESQ., RECEIVER

BY: E. T. MARSHALL & ASSOCIATES,  
Receiver's Agent

By: *[Signature]*  
Title: *[Signature]*

102566

010 APR -5 PM 1:02

JOSEPH GALIBER, ESQ., RECEIVER  
513-519 WEST 20th STREET  
NEW YORK, NEW YORK

April 1, 1993

Former Sites Restoration  
Division Director  
U.S. Department of Energy,  
OR Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

Re: 513-519 West 20th Street  
New York, New York

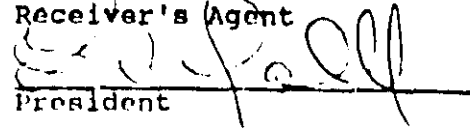
Dear Sir/Madam:

Please be advised that pursuant to our remedial action license agreement dated November 30, 1992 relating to the above premises (the "License"), I hereby certify to you that the provisions of ¶¶ 2(a) and 2(b) of the License have been fulfilled. Accordingly, we will release the \$60,000 escrow we are holding to the former tenant and you are authorized to enter upon the premises pursuant to the terms of the License.

Very truly yours,

JOSEPH GALIBER, ESQ., RECEIVER

By: E.T. MARSHALL & ASSOCIATES, INC.  
Receiver's Agent

By:   
President

cc: Hofheimer Cartlir & Gross  
Attn: Donald Weisberg, Esq.

## 2.6 POST-REMEDIAL ACTION REPORTS

The following reports document the remedial action and the post-remedial action radiological status for each of the locations at the Baker and Williams Warehouses site.

	<u>Page</u>
Bechtel National, Inc. <i>Post-Remedial Action Report for Building 521-527, Baker and Williams Warehouses Site, New York, New York, DOE/OR/21949-301, Oak Ridge, Tenn., February 1992.</i>	Ref. 5
Bechtel National, Inc. <i>Post-Remedial Action Report for Building 513-519, Baker and Williams Site, New York, New York, DOE/OR/21949-381, Oak Ridge, Tenn., May 1994.</i>	Ref. 9

## 2.7 VERIFICATION STATEMENT, INTERIM VERIFICATION LETTERS TO PROPERTY OWNERS, AND VERIFICATION REPORTS

This section contains the documents related to the successful decontamination of the subject properties, including the verification statement and the IVC's verification reports.

	<u>Page</u>
Letter from Phyllis R. Cotten (ORISE) to Alexander Williams (DOE-HQ), "Verification and Designation Surveys: Baker and Williams Warehouses," June 4, 1991 (BNI CCN 078360).	II-58
Letter from Ronald Kirk (DOE-FSRD) to Edward T. Marshall "Baker and Williams Warehouses - Completion of Remediation of Building 513-519," CCN 108712, September 21, 1993.	II-60
ORISE. <i>Verification Survey of the Baker and Williams Warehouses, Building 521-527, New York, New York</i> , Final Report, ORISE 92/E-041, May 1992.	Ref. 6
ORISE. <i>Verification Survey of the Baker and Williams Warehouses, Building 513-519, New York, New York</i> , Final Report, June 1994.	Ref. 10



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Oak Ridge  
Associated  
Universities Post Office Box 117  
Oak Ridge, Tennessee 37831-0117

Energy  
Environment  
Systems Division

JUN 10 11:15

June 4, 1991

Dr. W. Alexander Williams  
Designation and Certification Manager  
Off-Site Branch (EM-421)  
Division of Eastern Area Programs  
Office of Environmental Restoration  
U.S. Department of Energy  
Washington, DC 20555

Subject: VERIFICATION AND DESIGNATION SURVEYS: BAKER AND WILLIAMS  
WAREHOUSES

Dear Dr. Williams:

During the period between April 20 through May 2, 1991, the Environmental Survey and Site Assessment Program of Oak Ridge Associated Universities (ORAU) performed a verification survey of Building 521-527 at the Baker and Williams Warehouses. The survey areas included the Basement, the West Bay of the first level, and the Vault. Measurements performed by ORAU identified several small locations of residual activity, in the basement, on the first level on the floor, and in the Vault area on the floor. These areas were brought to the attention of Bechtel National Inc. (BNI) and promptly remediated. ORAU resurveyed these areas and found each to be within or well below the surface guideline values.

In March of this year, during the characterization survey of Building 521-52 ORAU initiated a designation survey in Building 513-519 of the Basement and on floor levels 1 through 3. Building 513-519 is an 8 story (including the basement) operating warehouse facility, which is currently leased by Globe Moving and Storage Company. The floor and wall space is typically covered by items placed in the warehouse for storage; therefore, the survey was limited to accessible areas. The survey detected residual contamination on the floor of the Basement and on the floor on levels 1 through 3. Based on these findings, an additional survey activities were scheduled for the period in April to immediately proceed the verification survey of Building 521-527. Surface scans and direct measurements for alpha, beta, and gamma activity were performed on the floor and lower walls.

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Alexander Williams

- 2 -

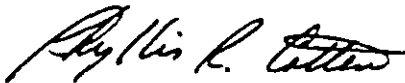
June 4, 1991

As a result of the two surveys in Building 513-519, residual activity, exceeding surface guidelines, has been identified in the basement and on levels 1 through 5. Total activity for alpha and beta-gamma ranged from <70-3900 dpm/100 cm<sup>2</sup> and <930 - 140,000 dpm/100 cm<sup>2</sup>, respectively. The highest levels of residual activity were detected on the floor of the Basement and 3rd level; alpha and beta-gamma activity ranged from <70-9100 dpm/100 cm<sup>2</sup> and <930-710,000 dpm/100 cm<sup>2</sup>, respectively.

Surface scans of the 6th and 7th levels did not detect elevated activity in accessible areas. However, based on these findings, ORAU recommends that an extensive characterization be conducted in Building 513-519 when the current occupants vacate the building.

If you have any additional questions, please contact me at FTS 626-3355 or Michele Landis at FTS 626-2908.

Sincerely,



Phyllis R. Cotton  
Staff Health Physicist  
Environmental Survey and  
Site Assessment Program

PRC:jljs

cc: J. Wagoner, DOE/HQ  
W. Seay, DOE/OR  
J. Hart, DOE/OR  
M. Landis, ORAU



108712 93 . 7 4 2

**Department of Energy**

Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

September 21, 1993

Mr. Edward T. Marshall  
President  
Marshall and Associates, Inc.  
121 Pinebrook Boulevard  
New Rochelle, New York 10804

Dear Mr. Marshall:

**BAKER AND WILLIAMS WAREHOUSES - COMPLETION OF REMEDIATION OF BUILDING 513-519**

The purpose of this letter is to inform you of the completion of the U.S. Department of Energy's (DOE) cleanup activities at the former Baker and Williams Warehouse Building 513-519 located at West 20th Street, New York, New York. The Baker and Williams Warehouses were remediated under DOE's Formerly Utilized Sites Remedial Action Program.

The remediation of the building was completed in July and shipment of the remaining contaminated material for disposal was completed earlier this month. As part of the cleanup activities at the site, Bechtel National, Inc. (BNI), DOE's project management contractor for the work, conducted surveys and collected samples for analysis to insure that contamination in the building had been removed. In addition, DOE's independent verification contractor, Oak Ridge Associated Universities, conducted additional surveys and reviewed the documentation provided by BNI. The independent survey measurements and their review have indicated that the cleanup was effective in that residual concentrations of radionuclides at the site are below DOE guidelines.

The cleanup of Building 513-519 completes DOE's remedial actions for the three former Baker and Williams Warehouses. The certification docket is scheduled to be issued in 1994. The docket will compile the documentation that supports DOE's certification of the successful radiological decontamination of the buildings.

If you have any questions concerning DOE's cleanup of the site, please contact me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*  
Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

cc: Mr. R. Hargrove, EPA, Region II  
Dr. L. Solon, New York City Department of Health  
Dr. P. Merges, New York State Department of Environmental  
Conservation  
Mr. G. Kasyk, New York State Department of Labor  
Mr. W. Condon, New York State Department of Health  
Mr. D. Weisberg, Hofheimer, Gartler, and Gross

## 2.8 STATE, COUNTY, AND LOCAL COMMENTS ON REMEDIAL ACTION

The State of New York, the City of New York, and the Manhattan Borough, as well as the U.S. Environmental Protection Agency, were kept fully informed of all DOE activities conducted at the Baker and Williams Warehouses in New York, New York.

	<u>Page</u>
Letter from William Seay (DOE-FSRD) to Dr. Frank Bradley (New York State Department of Labor), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 27, 1990 (BNI CCN 071634).	II-63
Letter from William Seay (DOE-FSRD) to Dr. Leonard Solon (New York City Department of Health), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 27, 1990 (BNI CCN 071634).	II-65
Letter from William Seay (DOE-FSRD) to Dr. Paul Merges (NYSDEC), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 24, 1990 (BNI CCN 071551).	II-67
Letter from William Seay (DOE-FSRD) to Mr. Robert Hargrove (U.S. EPA), "Designation of the Former Baker and Williams Warehouses into DOE's Formerly Utilized Sites Remedial Action Program," September 24, 1990 (BNI CCN 071552).	II-69
Letter from Ronald Kirk (DOE-FSRD) to William J. Condon (New York State Department of Health), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).	II-71
Letter from Ronald Kirk (DOE-FSRD) to Dr. Robert Kulikowski (New York City Department of Health), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137)	II-72
Letter from Ronald Kirk (DOE-FSRD) to Ms. Rita Aldrich (New York State Department of Labor), "Baker and Williams Warehouses Site - Completion of Cleanup Activities," April 20, 1993 (BNI CCN 103137).	II-73

Letter from Ronald Kirk (DOE-FSRD) to Dr. Paul Merges  
(NYSDEC), "Baker and Williams Warehouses Site - Completion  
of Cleanup Activities," April 20, 1993 (BNI CCN 103137).

II-74



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**Department of Energy**

Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-

September 27, 1990

Dr. Frank Bradley  
Principle Radiophysicist  
New York State Department of Labor  
1 Main Street  
Brooklyn, NY 11201

Dear Dr. Bradley:

**DESIGNATION OF THE FORMER BAKER AND WILLIAMS WAREHOUSES INTO DOE'S FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM**

The purpose of this letter is to inform you that on August 9, 1990, the site of the former Baker and Williams warehouses, currently owned by Ralph Ferrara, Inc., located on West 20th Street in New York City, was designated into the Department of Energy's (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP). This information was discussed with Dr. Leonard Solon, Director of the Bureau of Radiation Control, New York City Department of Health, on September 24, 1990. It was his request that I forward this information to you. This designation was based on results of a radiological survey performed by Oak Ridge Associated Universities (ORAU), an independent contractor to DOE. A Designation Summary (Enclosure 1) and other supplemental information is provided with this letter. Additionally, a copy of the final designation report, which indicates areas of contamination, has been provided for your information (Enclosure 2).

Historical information indicates that this site, which consists of three adjacent warehouses, was used by the Manhattan Engineer District (MED) for short-term storage of approximately 219,000 pounds of uranium concentrates. One of the three warehouses, at 521-527 West 20th Street, was found to contain residual radioactive contamination in excess of DOE guidelines on the basement level floor and lower walls, and on the first level floor.

Based on DOE's analysis of the site conditions, this site would normally have a low priority. All contamination was founded to be fixed and radiation exposure limits were below the DOE guideline value. There is currently no significant risk to workers or members of the public from the residual contamination in the facility. However, the owner is planning an extensive renovation in the near future in areas found to be contaminated. This could result in the spread of contamination and renovation workers may receive doses approaching the dose limits. Thus, the site has been assigned a medium priority under the FUSRAP protocol.

Dr. Frank Bradley

2

Because the limited contamination is contained entirely inside the warehouse building, DOE is proposing to proceed with remedial action of the site using an Expedited Remediation Process (ERP) procedure, as described in Enclosure 3. The ERP approach has been developed by DOE for small site cleanup. The DOE protocol is in the process of development, however, the Baker and Williams warehouse is proposed as a trial site which will aid in the development of the protocol.

DOE envisions two goals to this effort: (1) the cleanup of the warehouse, and (2) the demonstration of the usefulness of the expedited process at small sites.

We are presently in the process of obtaining an access agreement with the owner of the site with hopes that remedial action activities will begin this calendar year.

Enclosure 4 provides copies of reference information on the Baker and Williams warehouse site for your information and files.

It is our hope that all interested parties can benefit from use of this expedited procedure with the cleanup of this small FUSRAP site. If you need any additional information, please do not hesitate to call me at (615) 576-1830.

Sincerely,



William M. Seay, Deputy Director  
Technical Services Division

Enclosures

cc: C. R. Hickey, BNI  
P. Merges, NYSDEC  
L. Solon, NYCDOH  
W. A. Williams, GTN



071634

90 731

**Department of Energy**  
Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-

September 27, 1990

Dr. Leonard Solon  
Director, Bureau of Radiation Control  
New York City Department of Health  
111 Livingston Street  
Brooklyn, NY 11201

Dear Dr. Solon:

**DESIGNATION OF THE FORMER BAKER AND WILLIAMS WAREHOUSES INTO DOE'S FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM**

As discussed in our telephone conversation on September 24, 1990, this letter is to inform you in writing that on August 9, 1990, the site of the former Baker and Williams warehouses, currently owned by Ralph Ferrara, Inc., located on West 20th Street in New York City, was designated into the Department of Energy's (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP). This designation was based on results of a radiological survey performed by Oak Ridge Associated Universities (ORAU), an independent contractor to DOE. A Designation Summary (Enclosure 1) and other supplemental information is provided with this letter. Additionally, a copy of the final designation report, which indicates areas of contamination, has been provided for your information (Enclosure 2).

Historical information indicates that this site, which consists of three adjacent warehouses, was used by the Manhattan Engineer District (MED) for short-term storage of approximately 219,000 pounds of uranium concentrates. One of the three warehouses, at 521-527 West 20th Street, was found to contain residual radioactive contamination in excess of DOE guidelines on the basement level floor and lower walls, and on the first level floor.

Based on DOE's analysis of the site conditions, this site would normally have a low priority. All contamination was founded to be fixed and radiation exposure limits were below the DOE guideline value. There is currently no significant risk to workers or members of the public from the residual contamination in the facility. However, the owner is planning an extensive renovation in the near future in areas found to be contaminated. This could result in the spread of contamination and renovation workers may receive doses approaching the dose limits. Thus, the site has been assigned a medium priority under the FUSRAP protocol.

Because the limited contamination is contained entirely inside the warehouse building, DOE is proposing to proceed with remedial action of the site using an Expedited Remediation Process (ERP) procedure, as described in Enclosure 3.



Dr. Leonard Solon

2

The ERP approach has been developed by DOE for small site cleanup. The DOE protocol is in the process of development, however, the Baker and Williams warehouse is proposed as a trial site which will aid in the development of the protocol.

DOE envisions two goals to this effort: (1) the cleanup of the warehouse, and (2) the demonstration of the usefulness of the expedited process at small sites.

We are presently in the process of obtaining an access agreement with the owner of the site with hopes that remedial action activities will begin this calendar year.

Enclosure 4 provides copies of reference information on the Baker and Williams warehouse site for your information and files.

It is our hope that all interested parties can benefit from use of this expedited procedure with the cleanup of this small FUSRAP site. If you need any additional information, please do not hesitate to call me at (615) 576-1830.

Sincerely,



William M. Seay, Deputy Director  
Technical Services Division

Enclosures

cc: F. Bradley, NYSDOL  
C. R. Hickey, BNI  
P. Merges, NYSDEC (Encl. 2 only)  
W. A. Williams, GTN

**Department of Energy**

Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831 - 8723

September 24, 1990

Dr. Paul Merges  
Director, Bureau of Radiation  
New York State Department of Environmental  
Conservation  
50 Wolfe Road  
Albany, NY 12233-7255

Dear Dr. Merges:

**DESIGNATION OF THE FORMER BAKER AND WILLIAMS WAREHOUSES INTO DOE'S FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM**

The purpose of this letter is to inform you that on August 9, 1990, the site of the former Baker and Williams warehouses, currently owned by Ralph Ferrara, Inc., located on West 20th Street in New York City, was designated into the Department of Energy's (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP). This designation was based on results of a radiological survey performed by Oak Ridge Associated Universities (ORAU), an independent contractor to DOE. A Designation Summary (Enclosure 1) and other supplemental information is provided with this letter.

Historical information indicates that this site, which consists of three adjacent warehouses, was used by the Manhattan Engineer District (MED) for short-term storage of approximately 219,000 pounds of uranium concentrates. One of the three warehouses, at 521-527 West 20th Street, was found to contain residual radioactive contamination in excess of DOE guidelines on the basement level floor and lower walls, and on the first level floor.

Based on DOE's analysis of the site conditions, this site would normally have a low priority. All contamination was found to be fixed and radiation exposure limits were below the DOE guideline value. There is currently no significant risk to workers or members of the public from the residual contamination in the facility. However, the owner is planning an extensive renovation in the near future in areas found to be contaminated. This could result in the spread of contamination and renovation workers may receive doses approaching the dose limits. Thus, the site has been assigned a medium priority under the FUSRAP protocol.

Because the limited contamination is contained entirely inside the warehouse building, DOE is proposing to proceed with remedial action of the site using an Expedited Remediation Process (ERP) procedure, as described in Enclosure 2.

Dr. Paul Merges

2

The ERP approach has been developed by DOE for small site cleanup. The DOE protocol is in the process of development, however, the Baker and Williams warehouse is proposed as a trial site which will aid in the development of the protocol.

DOE envisions two goals to this effort: (1) the cleanup of the warehouse, and (2) the demonstration of the usefulness of the expedited process at small sites.

We are presently in the process of obtaining an access agreement with the owner of the site with hopes that remedial action activities will begin this calendar year.

Enclosure 3 provides copies of reference information on the Baker and Williams warehouse site for your information and files.

It is our hope that all interested parties can benefit from use of this expedited procedure with the cleanup of this small FUSRAP site. If you need any additional information, please do not hesitate to call me at (615) 576-1830.

Sincerely,



William M. Seay, Deputy Director  
Technical Services Division

Enclosures

cc: W. A. Williams, GTN  
C. R. Hickey, BNI



**Department of Energy**  
Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

September 24, 1990

Mr. Robert Hargrove  
U. S. Environmental Protection Agency  
Region II, Room 500  
26 Federal Plaza

Dear Mr. Hargrove:

**DESIGNATION OF THE FORMER BAKER AND WILLIAMS WAREHOUSES INTO DOE'S FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM**

The purpose of this letter is to inform you that on August 9, 1990, the site of the former Baker and Williams warehouses, currently owned by Ralph Ferrara, Inc., located on West 20th Street in New York City, was designated into the Department of Energy's (DOE) Formerly Utilized Sites Remedial Action Program (FUSRAP). This designation was based on results of a radiological survey performed by Oak Ridge Associated Universities (ORAU), an independent contractor to DOE. A Designation Summary (Enclosure 1) and other supplemental information is provided with this letter.

Historical information indicates that this site, which consists of three adjacent warehouses, was used by the Manhattan Engineer District (MED) for short-term storage of approximately 219,000 pounds of uranium concentrates. One of the three warehouses, at 521-527 West 20th Street, was found to contain residual radioactive contamination in excess of DOE guidelines on the basement level floor and lower walls, and on the first level floor.

Based on DOE's analysis of the site conditions, this site would normally have a low priority. All contamination was found to be fixed and radiation exposure limits were below the DOE guideline value. There is currently no significant risk to workers or members of the public from the residual contamination in the facility. However, the owner is planning an extensive renovation in the near future in areas found to be contaminated. This could result in the spread of contamination and renovation workers may receive doses approaching the dose limits. Thus, the site has been assigned a medium priority under the FUSRAP protocol.

Because the limited contamination is contained entirely inside the warehouse building, DOE is proposing to proceed with remedial action of the site using an Expedited Remediation Process (ERP) procedure, as described in Enclosure 2.

Mr. Robert Hargrove

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The ERP approach has been developed by DOE for small site cleanup. The DOE protocol is in the process of development, however, the Baker and Williams warehouse is proposed as a trial site which will aid in the development of the protocol.

DOE envisions two goals to this effort: (1) the cleanup of the warehouse, and (2) the demonstration of the usefulness of the expedited process at small sites.

We are presently in the process of obtaining an access agreement with the owner of the site with hopes that remedial action activities will begin this calendar year.

Enclosure 3 provides copies of reference information on the Baker and Williams warehouse site for your information and files.

It is our hope that all interested parties can benefit from use of this expedited procedure with the cleanup of this small FUSRAP site. If you need any additional information, please do not hesitate to call me at (615) 576-1830.

Sincerely,



William M. Seay, Deputy Director  
Technical Services Division

Enclosures

cc: W. A. Williams, GTN  
C. R. Hickey, BNI



**Department of Energy**  
Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831— 8723

April 20, 1993

Mr. William J. Condon  
Chief, Environmental Radiation Section  
Bureau of Environmental Radiation Protection  
New York State Department of Health  
11 University Place  
Albany, New York 12203-3313

Dear Mr. Condon:

**BAKER AND WILLIAMS WAREHOUSES SITE - COMPLETION OF CLEANUP ACTIVITIES**

The purpose of this notice is to inform you about further scheduled cleanup activities to be conducted by the Department of Energy (DOE) at 513-519 West 20th Street in New York, New York. This property is one of three buildings that make up the site of the former Baker and Williams warehouses.

Final remediation of this site by DOE is scheduled for May and June 1993. I have enclosed for your information a summary fact sheet describing these pending cleanup activities and the past cleanup activities at the other two warehouses located at this site (521-527 and 529-535 West 20th Street). I have also enclosed a copy of DOE's remediation schedule and a copy of the radiological survey report that documents the results of the surveys performed at 513-519 in March and April 1991.

If you need any additional information, please do not hesitate to call me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*  
Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

Enclosures



**Department of Energy**  
Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831— 8723

April 20, 1993

Dr. Robert Kulikowski  
Director, Bureau of Radiation Control  
New York City Department of Health  
111 Livingston Street  
Brooklyn, New York 11201

Dear Dr. Kulikowski:

**BAKER AND WILLIAMS WAREHOUSES SITE - COMPLETION OF CLEANUP ACTIVITIES**

The purpose of this notice is to inform you about further scheduled cleanup activities to be conducted by the Department of Energy (DOE) at 513-519 West 20th Street in New York, New York. This property is one of three buildings that make up the site of the former Baker and Williams warehouses.

Final remediation of this site by DOE is scheduled for May and June 1993. I have enclosed for your information a summary fact sheet describing these pending cleanup activities and the past cleanup activities at the other two warehouses located at this site (521-527 and 529-535 West 20th Street). I have also enclosed a copy of DOE's remediation schedule and a copy of the radiological survey report that documents the results of the surveys performed at 513-519 in March and April 1991.

If you need any additional information, please do not hesitate to call me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*  
Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

Enclosures



**Department of Energy**

Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

April 20, 1993

Ms. Rita Aldrich  
Principle Radiophysicist  
Division of Safety and Health  
New York State Department of Labor  
1 Main Street  
Brooklyn, New York 11201

Dear Ms. Aldrich:

**BAKER AND WILLIAMS WAREHOUSES SITE - COMPLETION OF CLEANUP ACTIVITIES**

The purpose of this notice is to inform you about further scheduled cleanup activities to be conducted by the Department of Energy (DOE) at 513-519 West 20th Street in New York, New York. This property is one of three buildings that make up the site of the former Baker and Williams warehouses.

Final remediation of this site by DOE is scheduled for May and June 1993. I have enclosed for your information a summary fact sheet describing the pending cleanup activities and the past cleanup activities at the other two warehouses located at this site (521-527 and 529-535 West 20th Street). You will also find enclosed a copy of DOE's remediation schedule and a copy of the radiological survey report that documents the results of the surveys performed at 513-519 in March and April 1991. In addition, as requested by your colleague, Ms. Rose Maria Pratt, I have enclosed a copy of the September 27, 1990, letter to Dr. Frank Bradley indicating the designation of the Former Baker and Williams warehouses into DOE's Formerly Utilized Sites Remedial Action Project.

If you need any additional information, please do not hesitate to call me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*  
Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

Enclosures

cc w/o enclosures:  
Rose Marie Pratt, NYSDOL





## Department of Energy

Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831— 8723

April 20, 1993

Dr. Paul Merges  
Chief, Bureau of Radiation  
New York State Department of Environmental Conservation  
50 Wolf Road  
Room 506  
Albany, New York 12233-7255

Dear Dr. Merges:

### **BAKER AND WILLIAMS WAREHOUSES SITE - COMPLETION OF CLEANUP ACTIVITIES**

The purpose of this notice is to inform you about further scheduled cleanup activities to be conducted by the Department of Energy (DOE) at 513-519 West 20th Street in New York, New York. This property is one of three buildings that make up the site of the former Baker and Williams warehouses.

Final remediation of this site by DOE is scheduled for May and June 1993. I have enclosed for your information a summary fact sheet describing these pending cleanup activities and the past cleanup activities at the other two warehouses located at this site (521-527 and 529-535 West 20th Street). I have also enclosed a copy of DOE's remediation schedule and a copy of the radiological survey report that documents the results of the surveys performed at 513-519 in March and April 1991.

If you need any additional information, please do not hesitate to call me at (615) 576-7477.

Sincerely,

*Ronald E. Kirk*  
Ronald E. Kirk, Site Manager  
Former Sites Restoration Division

Enclosures

## 2.9 RESTRICTIONS

There are no radiologically based restrictions on the future use of the subject properties.

## 2.10 FEDERAL REGISTER NOTICE

This section contains a copy of the published *Federal Register* notice. It documents the certification that the subject property is in compliance with all applicable decontamination criteria and standards.

Education, National Assessment Governing Board, Suite 825, 800 North Capitol Street NW., Washington, DC, from 8:30 a.m. to 5 p.m.

Roy Truby,

Executive Director, National Assessment Governing Board.

[FR Doc. 95-25557 Filed 10-13-95; 8:45 am]

BILLING CODE 4000-01-M

## DEPARTMENT OF ENERGY

### Notice of Certification of the Radiological Condition of the Baker and Williams Warehouses Site, New York, NY, 1991-1993

**AGENCY:** Office of Environmental Management, Department of Energy (DOE).

**ACTION:** Notice of certification.

**SUMMARY:** The Department has completed remedial action to decontaminate warehouses (Buildings 513-519, 521-527, and 529-535 West 20th Street) in New York, New York, and the certification docket is available. Two of the three warehouses were found to contain radioactive surface contamination from short-term storage of uranium concentrates for the Manhattan Engineer District (MED). Radiological surveys show that the site now meets applicable requirements for unrestricted use.

**ADDRESSES:**

Public Reading Room, Room 1E-190, Forrestal Building, U.S. Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585  
Public Document Room, Oak Ridge Operations Office, U.S. Department of Energy, Oak Ridge, Tennessee 37831.

**FOR FURTHER INFORMATION CONTACT:** James W. Wagoner II, Director, Off-Site/Savannah River Program Division, Office of Eastern Area Programs, Office of Environmental Management (EM-421), U.S. Department of Energy, Washington, DC 20585, (301) 903-2531 Fax: (301) 903-2461.

**SUPPLEMENTARY INFORMATION:** The Department's Office of Environmental Management has implemented a remedial action project at the former Baker and Williams Warehouses Site, 513-535 West 20th Street, New York, New York, as part of the Formerly Utilized Sites Remedial Action Program (FUSRAP). The objective of the program is to identify and clean up or otherwise control sites where residual radioactive contamination remains from activities carried out under contract to the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC)

during the early years of the Nation's atomic energy program. In June 1990, the Baker and Williams Warehouses Site was designated for cleanup under an expedited protocol.

During the early 1940s, the former Baker and Williams Warehouses Site was a delivery point for uranium for subsequent distribution to U.S. Government facilities. Since the 1940s, the warehouses have been leased by several businesses.

At DOE's request, in 1989 and 1991, representatives of the Environmental Survey and Site Assessment Program of Oak Ridge Associated Universities (now known as the Oak Ridge Institute for Science and Education (ORISE)) conducted designation surveys of the property. The surveys indicated that the site contained residual radioactive contamination from MED/AEC activities. In 1991, ORISE conducted characterization surveys of Buildings 521-527 and 529-535 and accessible surfaces in Building 513-519. Surface scans of Building 529-535 did not identify any residual contamination. Remedial actions at Buildings 521-527 and 513-519 were conducted by Bechtel National, Inc., from April 1 through April 26, 1991, and from May through July 1993, respectively.

Post-remedial action surveys have demonstrated, and DOE has certified, that the subject property is in compliance with DOE residual radioactive contamination criteria and standards, which are established to protect members of the general public and occupants of the site and to ensure that future use of the property will result in no radiological exposure above applicable guidelines to the general public or the site occupants. These findings are supported by the DOE *Certification Docket for the Remedial Action Performed at the Baker and Williams Site in New York, New York, 1991-1993*. Accordingly, this property is released from FUSRAP.

The certification docket will be available for review between 9:00 a.m. and 4:00 p.m., Monday through Friday (except Federal holidays) in the U.S. Department of Energy Public Reading Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. Copies of the certification docket will also be available in the DOE Public Document Room, U.S. Department of Energy, Oak Ridge Operations Office, Oak Ridge, Tennessee.

The Department through the Oak Ridge Operations Office, Former Sites Restoration Division, has issued the following statement:

### Statement of Certification: Baker and Williams Warehouses Site Former MED Operations

The U.S. Department of Energy (DOE), Oak Ridge Operations Office, Former Sites Restoration Division, has reviewed and analyzed the radiological data obtained following remedial action at the Baker and Williams Warehouses site, (Block 692; Lots 15, 19, and 23; New York County. Based on analysis of all data collected, DOE certifies that the following property is in compliance with DOE radiological decontamination criteria and standards. This certification of compliance provides assurance that future use of the property will result in no radiological exposure above applicable guidelines established to protect members of the general public or site occupants.

Property owned by Mr. Rouhollah Kalimian: Baker and Williams Warehouses, 513-535 West 20th Street, New York, New York 10011.

Issued in Washington, DC on October 5, 1995.

James Owendoff,

Deputy Assistant Secretary for Environmental Restoration.

[FR Doc. 95-25592 Filed 10-13-95; 8:45 am]

BILLING CODE 6450-01-P

### Record of Decision Dual Axis Radiographic Hydrodynamic Test Facility

**AGENCY:** Department of Energy.

**ACTION:** Record of decision.

**SUMMARY:** The Department of Energy (DOE) is issuing this Record of Decision (ROD) regarding the DOE's proposed Dual Axis Radiographic Hydrodynamic Test (DARHT) facility at Los Alamos National Laboratory (LANL) in northern New Mexico. DOE has decided to complete and operate the DARHT facility at LANL while implementing a program to conduct most tests inside steel containment vessels, with containment to be phased in over ten years. The environmental analysis to support this decision was issued by DOE in the August 1995, DARHT Facility Final Environmental Impact Statement (EIS), DOE/EIS-0228, which identified the Phased Containment Option of the Enhanced Containment Alternative as DOE's preferred alternative. DOE has decided to implement the preferred alternative.

**DATES:** This ROD is effective immediately. On January 27, 1995, DOE was enjoined from further procurement or construction of the DARHT facility pending completion of the DARHT EIS.

## 2.11 APPROVED CERTIFICATION STATEMENT

The following memorandum and statement document the certification of the subject property for future use without radiological restrictions.

# memorandum

OCT 26 3 35 PM '95

DATE: OCT 12 1995

REPLY TO  
ATTN OF: EM-421 (W. A. Williams, 903-8149)

SUBJECT: Recommendation for Certification of Remedial Action at the Baker and Williams Warehouses Site in New York, New York, 1991-1993

TO: J. Owendoff, EM-40

I am attaching for your signature the Federal Register notice regarding the cleanup of contamination at the Baker and Williams Warehouses site in New York, New York.

The Office of Eastern Area Programs, Off-Site/Savannah River Program Division, has implemented a remedial action project at the Baker and Williams Warehouses, 513-535 West 20th Street, New York, New York, as part of the Formerly Utilized Sites Remedial Action Program. The objective of the program is to identify and clean up or otherwise control sites where residual radioactive contamination remains from activities carried out under contract to the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) during the early years of the Nation's Atomic Energy Program. In June 1990, the Baker and Williams Warehouses site was designated for cleanup under an expedited cleanup protocol.

During the early 1940s, the former Baker and Williams Warehouses were a delivery point for receipt of uranium from suppliers. The uranium was subsequently distributed to U.S. Government facilities. Since the 1940s, the warehouses have been leased by several businesses. The Baker and Williams Warehouses are currently owned by Chase Manhattan Bank.

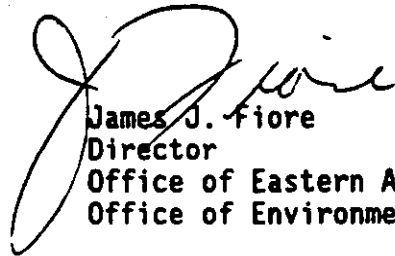
At DOE's request, in 1989 and 1991, representatives of the Environmental Survey and Site Assessment Program of Oak Ridge Associated Universities (now known as Oak Ridge Institute for Science and Education (ORISE)) conducted designation surveys of the property. The surveys indicated that the site contained residual radioactive contamination from MED/AEC activities. In 1991, ORISE conducted characterization surveys of Buildings 521-527 and 529-535 and accessible surfaces in 513-519. Surface scans of Building 529-535 did not identify any residual contamination. Remedial actions at Buildings 521-527 and 513-519 were conducted by Bechtel National, Inc., from April 1 through April 26, 1991, and from May through July 1993, respectively.

Post-remedial action surveys have demonstrated, and DOE has certified, that the subject property is in compliance with DOE residual radioactive contamination criteria and standards. The standards are established to protect members of the general public and occupants of the site and to ensure that future use of the property will result in no radiological exposure above applicable guidelines to the general public or the site occupants. These findings are supported by the DOE Certification Docket for the Remedial Action Performed at the Baker and Williams Site in New York, New York, 1991-1993.

Based on a review of all documents related to the subject properties, we have concluded that they should be certified to be in compliance with the criteria and standards that were established to be in accordance with DOE guidelines and orders, to be consistent with other appropriate Nuclear Regulatory Commission and Environmental Protection Agency guidelines, and to protect public health and the environment.

The Office of Eastern Area Programs, Off-Site/Savannah River Program Division, is preparing the certification docket for the subject property. The Federal Register notice will be part of the docket.

I recommend that you sign the attached Federal Register notice, as well as the transmittal memorandum to the Federal Liaison Officer. This office will notify interested State and local agencies, the public, local land offices, and the property owners of the certification actions by correspondence and local newspaper announcements, as appropriate. The documents transmitted with the certification statements and the Federal Register notice will be compiled in final docket form by the Office of Eastern Area Programs, Off-Site/Savannah River Program Division, for retention in accordance with DOE Order 1324.2 (Disposal Schedule 25).



James J. Fiore  
Director  
Office of Eastern Area Programs  
Office of Environmental Restoration

Attachments

[Docket No. 6450-01-P]  
DEPARTMENT OF ENERGY

Notice of Certification of the Radiological Condition of the Baker and  
Williams Warehouses Site, New York, New York, 1991-1993

AGENCY: Office of Environmental Management, Department of Energy (DOE)

ACTION: Notice of Certification

SUMMARY: The Department has completed remedial action to decontaminate  
warehouses (Buildings 513-519, 521-527, and 529-535 West 20th  
Street) in New York, New York, and the certification docket is  
available. Two of the three warehouses were found to contain  
radioactive surface contamination from short-term storage of  
uranium concentrates for the Manhattan Engineer District (MED).  
Radiological surveys show that the site now meets applicable  
requirements for unrestricted use.

ADDRESSES: Public Reading Room  
Room 1E-190  
Forrestal Building  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585



Public Document Room  
Oak Ridge Operations Office  
U.S. Department of Energy  
Oak Ridge, Tennessee 37831

FOR FURTHER INFORMATION CONTACT:

James W. Wagoner II, Director  
Off-Site/Savannah River Program Division  
Office of Eastern Area Programs  
Office of Environmental Management (EM-421)  
U.S. Department of Energy  
Washington, D.C. 20585  
(301) 903-2531 Fax: (301) 903-2461

SUPPLEMENTARY INFORMATION:

The Department's Office of Environmental Management has implemented a remedial action project at the former Baker and Williams Warehouses Site, 513-535 West 20th Street, New York, New York, as part of the Formerly Utilized Sites Remedial Action Program (FUSRAP). The objective of the program is to identify and clean up or otherwise control sites where residual radioactive contamination remains from activities carried out under contract to the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) during the early years of the Nation's atomic energy program. In June 1990, the Baker and Williams Warehouses Site was designated for cleanup under an expedited protocol.

During the early 1940s, the former Baker and Williams Warehouses Site was a delivery point for uranium for subsequent distribution to U.S. Government facilities. Since the 1940s, the warehouses have been leased by several businesses.

At DOE's request, in 1989 and 1991, representatives of the Environmental Survey and Site Assessment Program of Oak Ridge Associated Universities (now known as the Oak Ridge Institute for Science and Education (ORISE)) conducted designation surveys of the property. The surveys indicated that the site contained residual radioactive contamination from MED/AEC activities. In 1991, ORISE conducted characterization surveys of Buildings 521-527 and 529-535 and accessible surfaces in Building 513-519. Surface scans of Building 529-535 did not identify any residual contamination. Remedial actions at Buildings 521-527 and 513-519 were conducted by Bechtel National, Inc., from April 1 through April 26, 1991, and from May through July 1993, respectively.

Post-remedial action surveys have demonstrated, and DOE has certified, that the subject property is in compliance with DOE residual radioactive contamination criteria and standards, which are established to protect members of the general public and occupants of the site and to ensure that future use of the property will result in no radiological exposure above applicable guidelines to the general public or the site occupants. These findings are supported by the DOE Certification Docket for the Remedial Action Performed at the Baker and Williams Site in New York, New York, 1991-1993. Accordingly, this property is released from FUSRAP.

The certification docket will be available for review between 9:00 a.m. and 4:00 p.m., Monday through Friday (except Federal holidays) in the U.S. Department of Energy Public Reading Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. Copies of the certification docket will also be available in the DOE Public Document Room, U.S. Department of Energy, Oak Ridge Operations Office, Oak Ridge, Tennessee.

The Department through the Oak Ridge Operations Office, Former Sites Restoration Division, has issued the following statement:

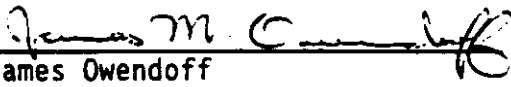
**STATEMENT OF CERTIFICATION: BAKER AND WILLIAMS WAREHOUSES SITE  
FORMER MED OPERATIONS**

The U.S. Department of Energy (DOE), Oak Ridge Operations Office, Former Sites Restoration Division, has reviewed and analyzed the radiological data obtained following remedial action at the Baker and Williams Warehouses site, (Block 692; Lots 15, 19, and 23; New York County. Based on analysis of all data collected, DOE certifies that the following property is in compliance with DOE radiological decontamination criteria and standards. This certification of compliance provides assurance that future use of the property will result in no radiological exposure above applicable guidelines established to protect members of the general public or site occupants.

Property owned by Mr. Rouhollah Kalimian:

Baker and Williams Warehouses  
513-535 West 20th Street  
New York, New York 10011

Issued in Washington, D.C. on October 5, 1995.

  
James Owendoff  
Deputy Assistant Secretary  
for Environmental Restoration

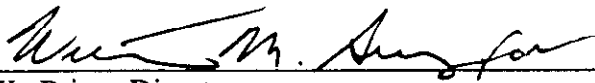
**STATEMENT OF CERTIFICATION: BAKER AND WILLIAMS WAREHOUSES SITE  
FORMER MED OPERATIONS**

The U.S. Department of Energy (DOE), Oak Ridge Operations Office, Former Sites Restoration Division, has reviewed and analyzed the radiological data obtained following remedial action at the Baker and Williams Warehouses site (Block 692; Lots 15, 19, and 23; New York County). Based on analysis of all data collected, DOE certifies that the following property is in compliance with DOE radiological decontamination criteria and standards. This certification of compliance provides assurance that future use of the property will result in no radiological exposure above applicable guidelines established to protect members of the general public or site occupants.

Property owned by Mr. Rouhollah Kalimian:

Baker and William Warehouses  
513-535 West 20th Street  
New York, New York 10011

RSK

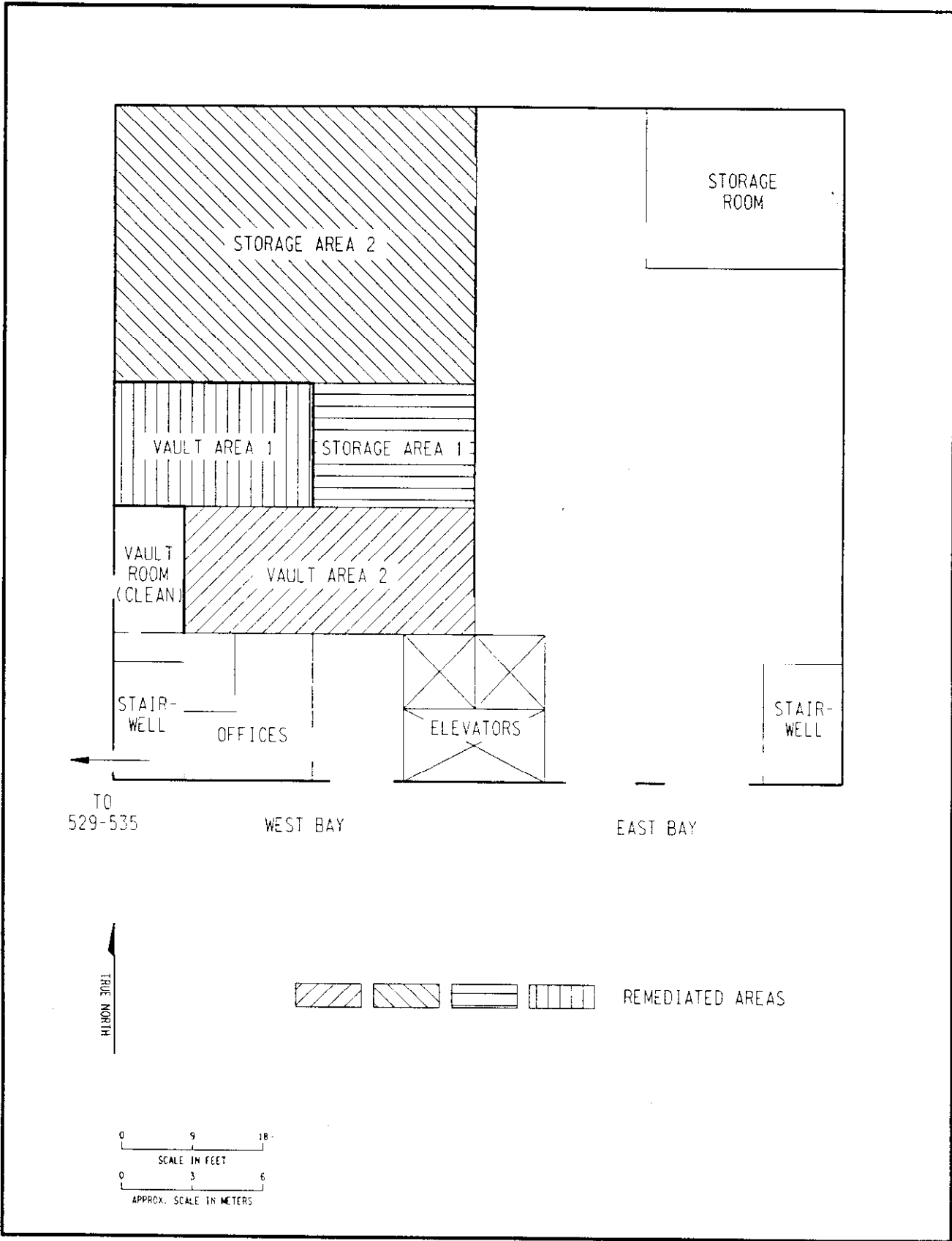


L. K. Price, Director  
Former Sites Restoration Division  
Oak Ridge Operations Office  
U.S. Department of Energy

Date: 9/13/95

**EXHIBIT III**  
**DIAGRAMS OF THE REMEDIAL ACTION PERFORMED AT THE**  
**BAKER AND WILLIAMS WAREHOUSES SITE**  
**IN NEW YORK, NEW YORK, 1991-1993**

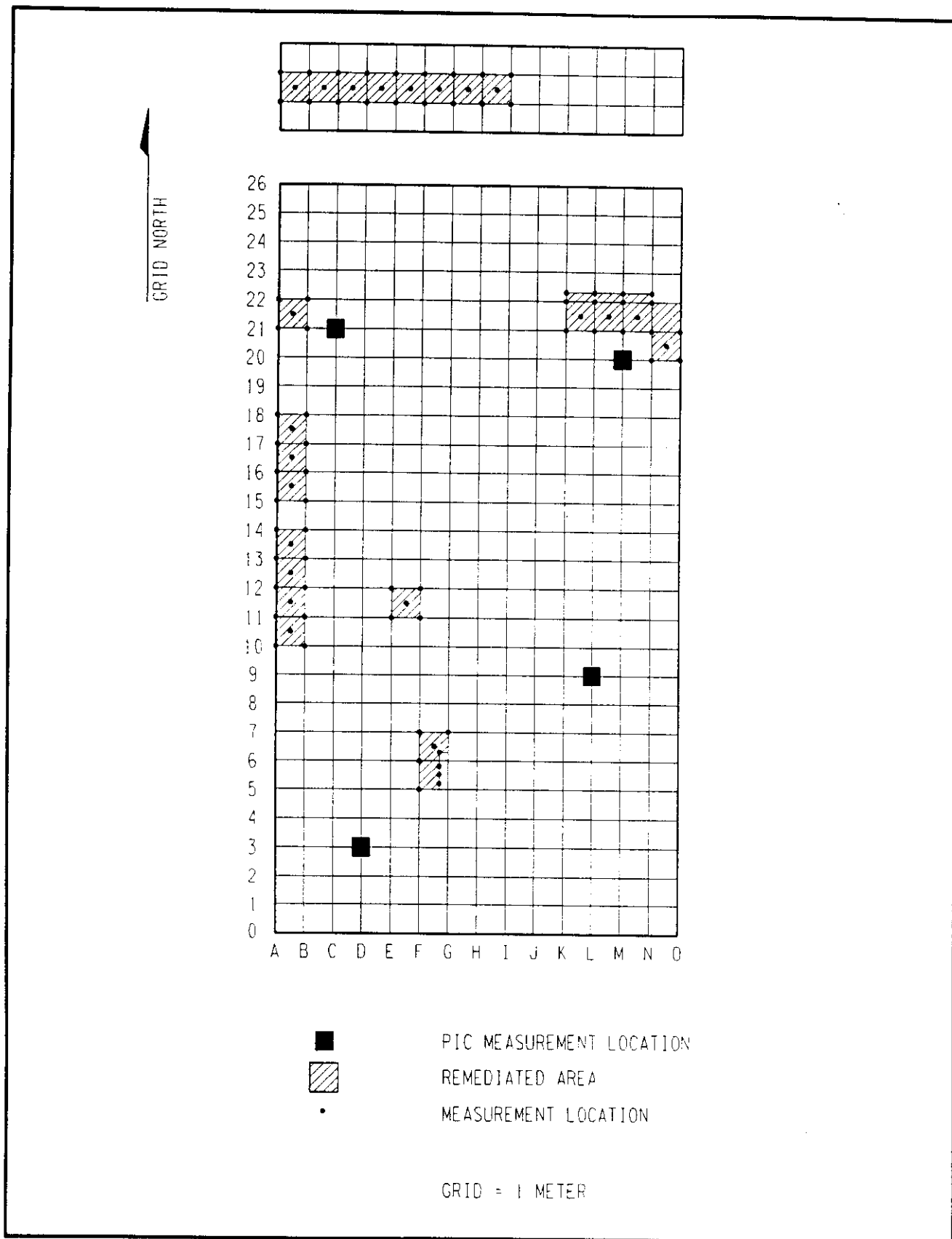
The figures on the following pages are from the post-remedial action reports; they illustrate the extent of remedial action performed at the subject properties.



R59F001.DGN GIGC

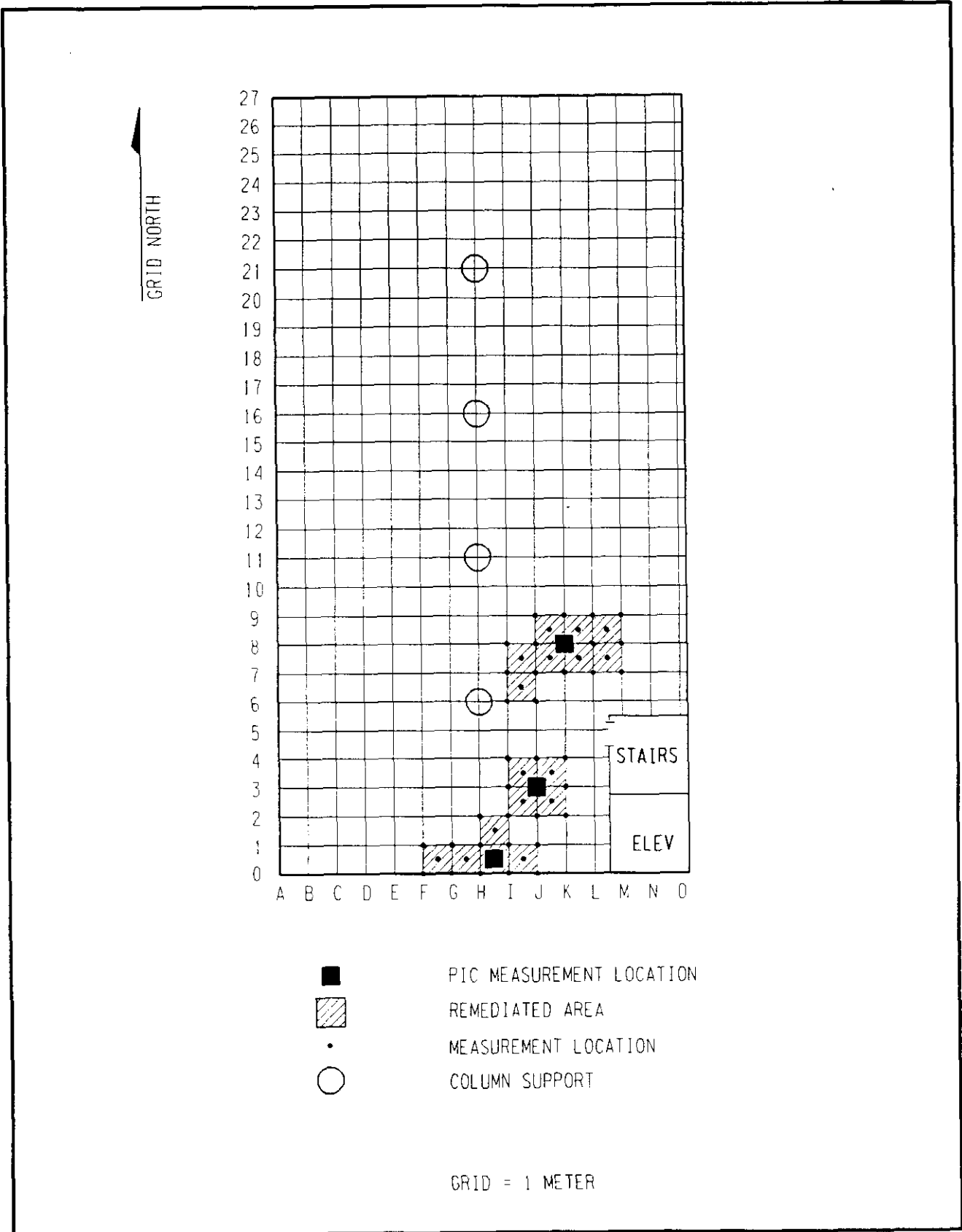
**Figure III-1**  
**Remediated Areas on the**  
**First Floor of Building 521-527**





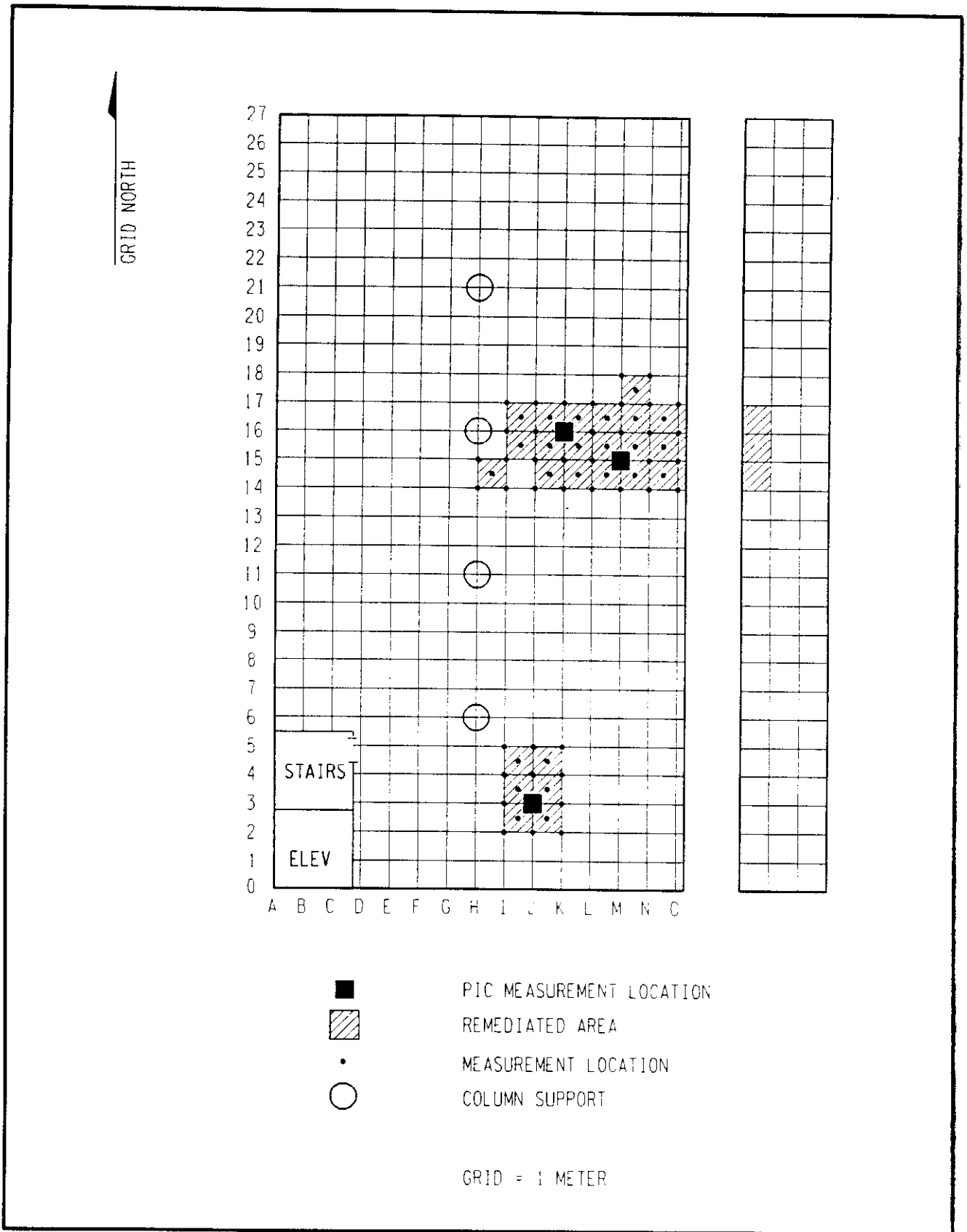
R59F 002.06A

Figure III-2  
Remediated Areas and Measurement Locations  
on the Basement East Bay of Building 521-527



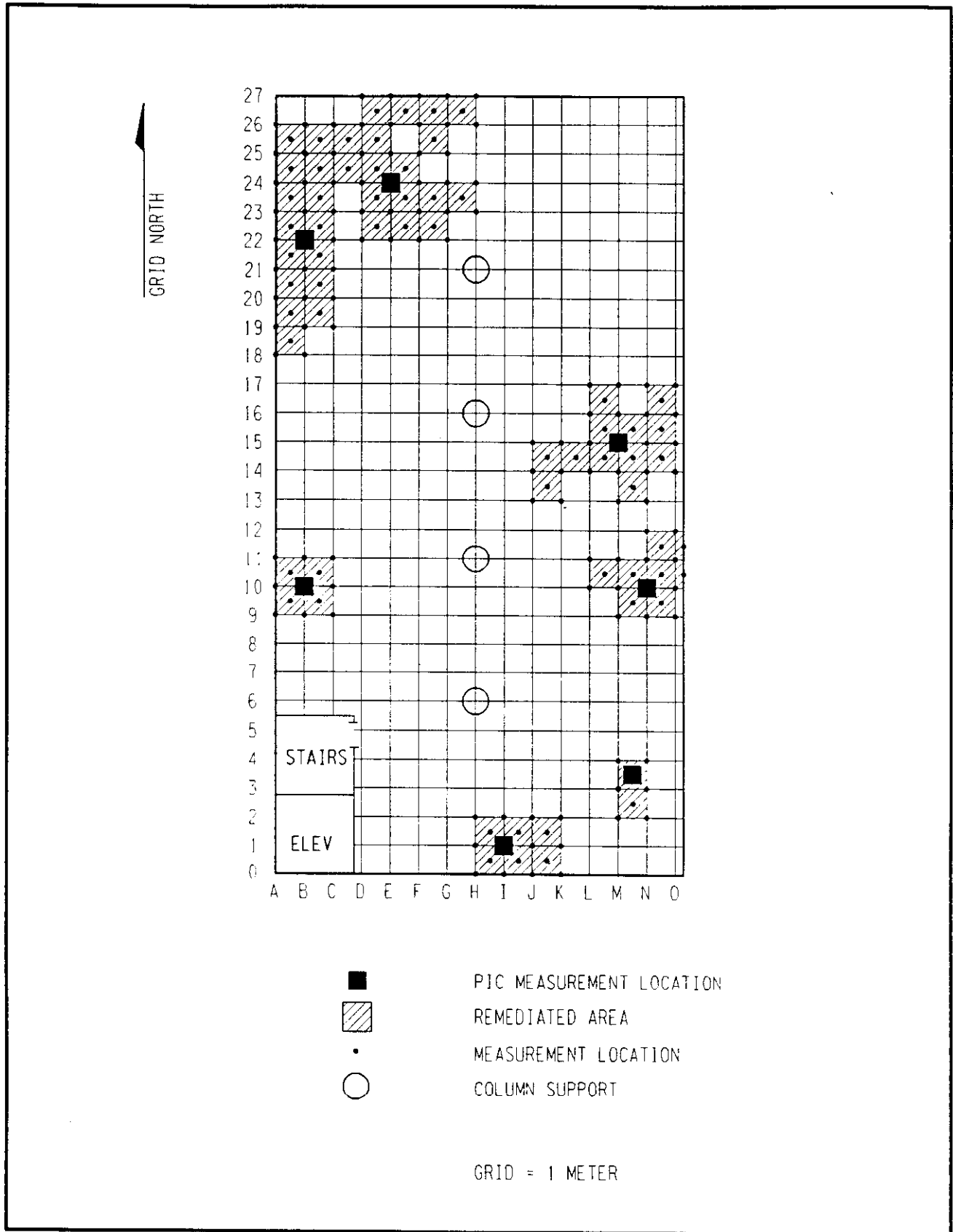
R59F003.DGN

**Figure III-3**  
**Remediated Areas and Measurement Locations**  
**on the Basement West Bay of Building 513-519**



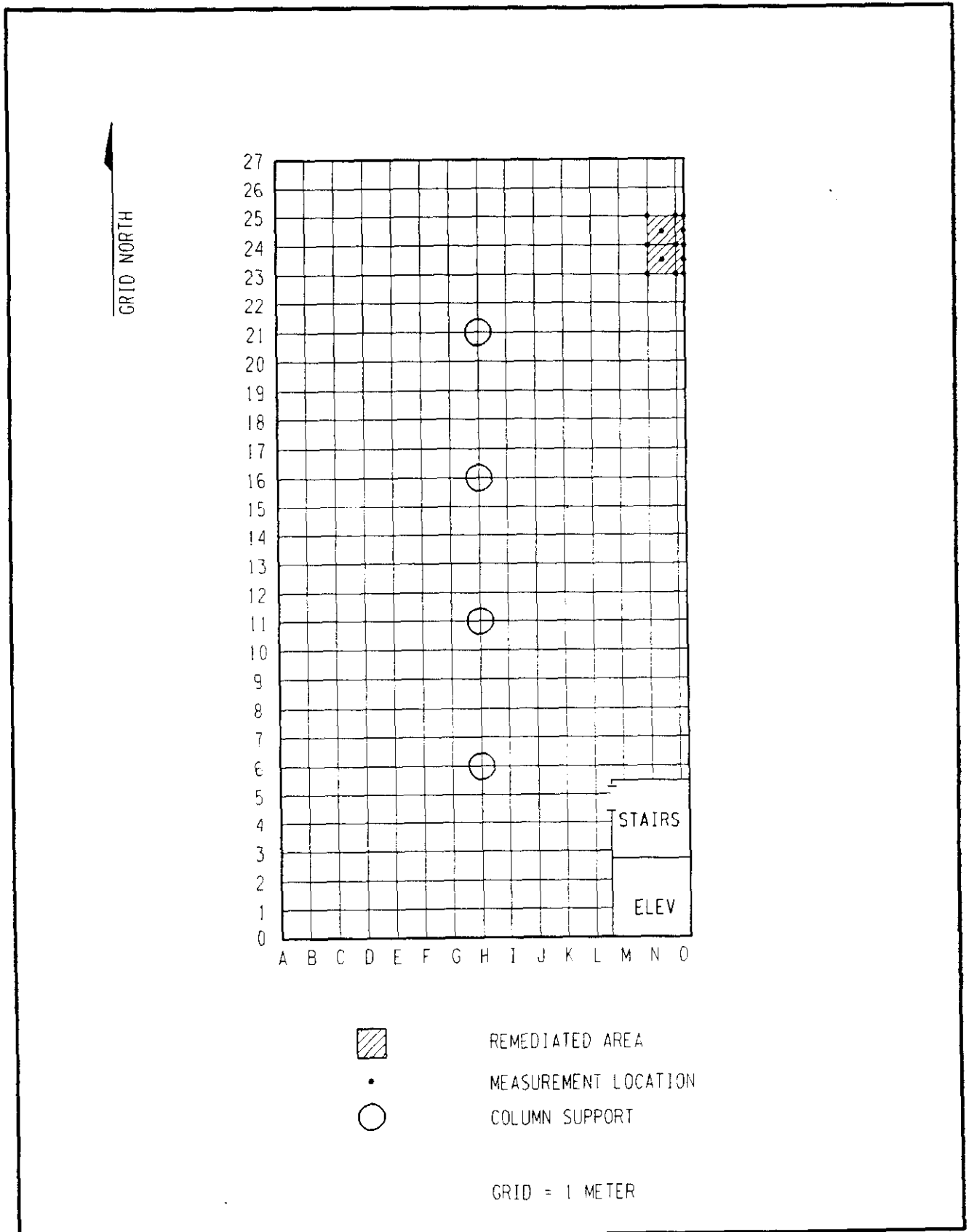
R59F 004, DGN

Figure III-4  
Remediated Areas and Measurement Locations  
on the Basement East Bay of Building 513-519



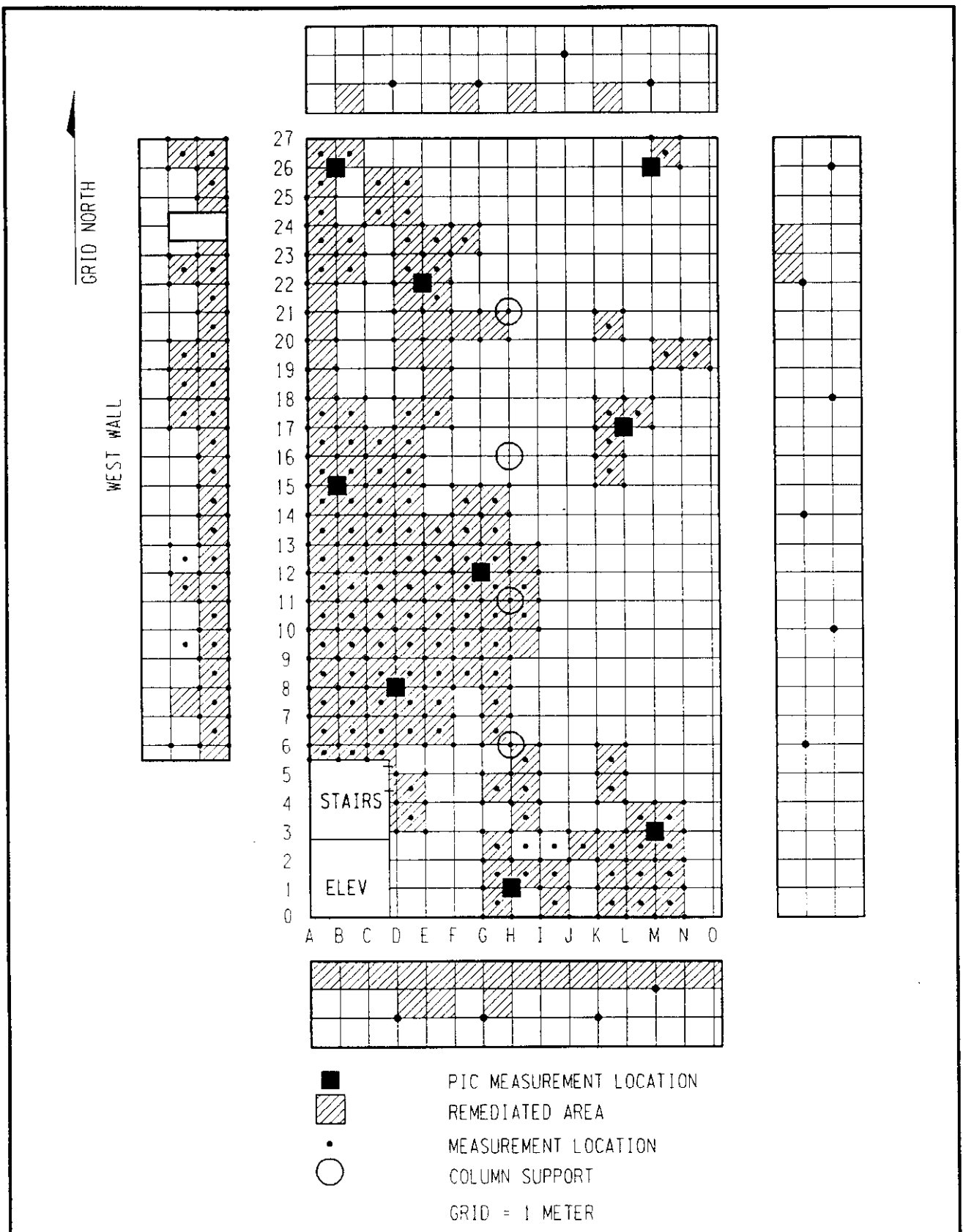
R59F005.DGN

Figure III-5  
Remediated Areas and Measurement Locations  
on the First Floor East Bay of Building 513-519



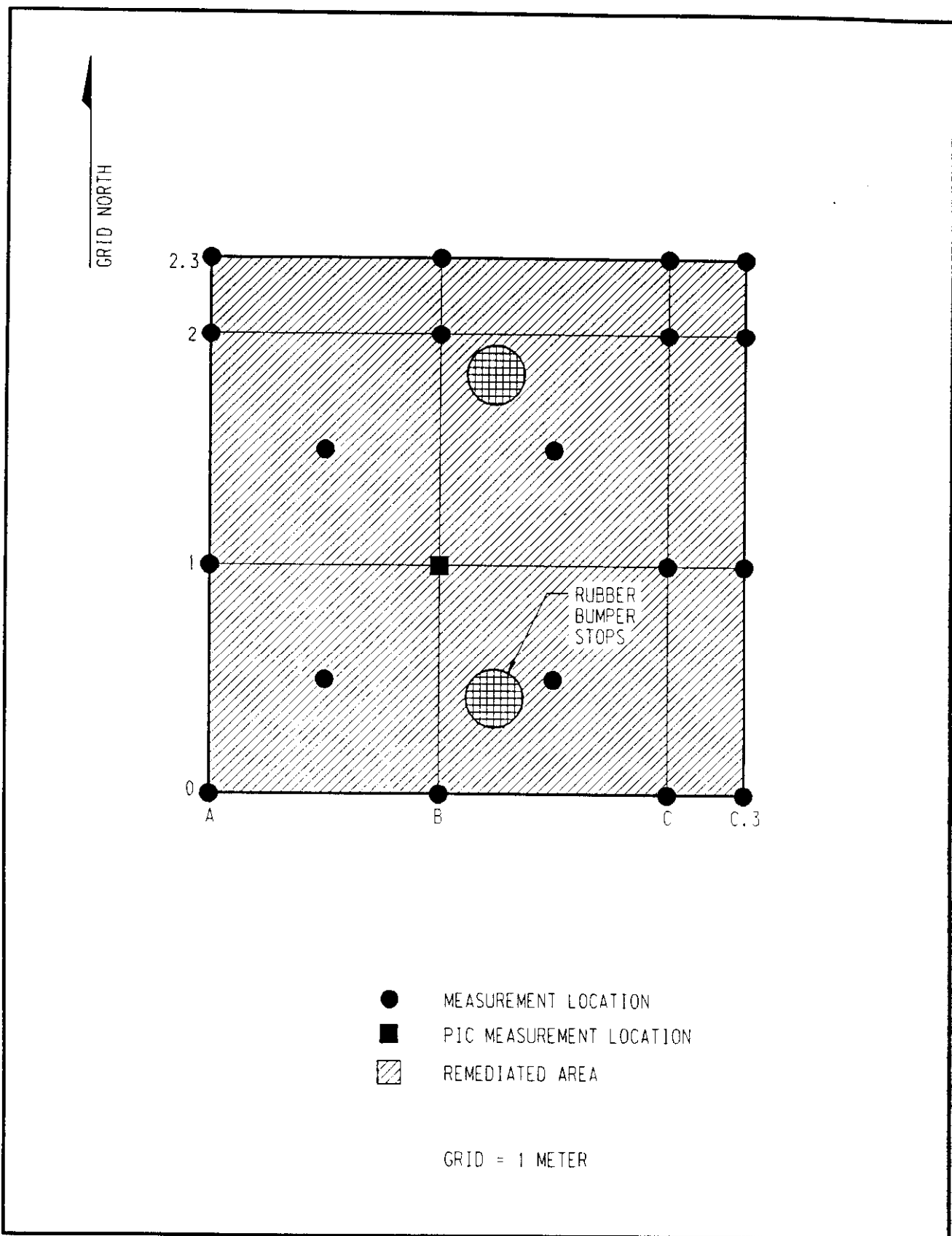
R59F006.DGN

**Figure III-6**  
**Remediated Areas and Measurement Locations**  
**on the Third Floor East Bay of Building 513-519**



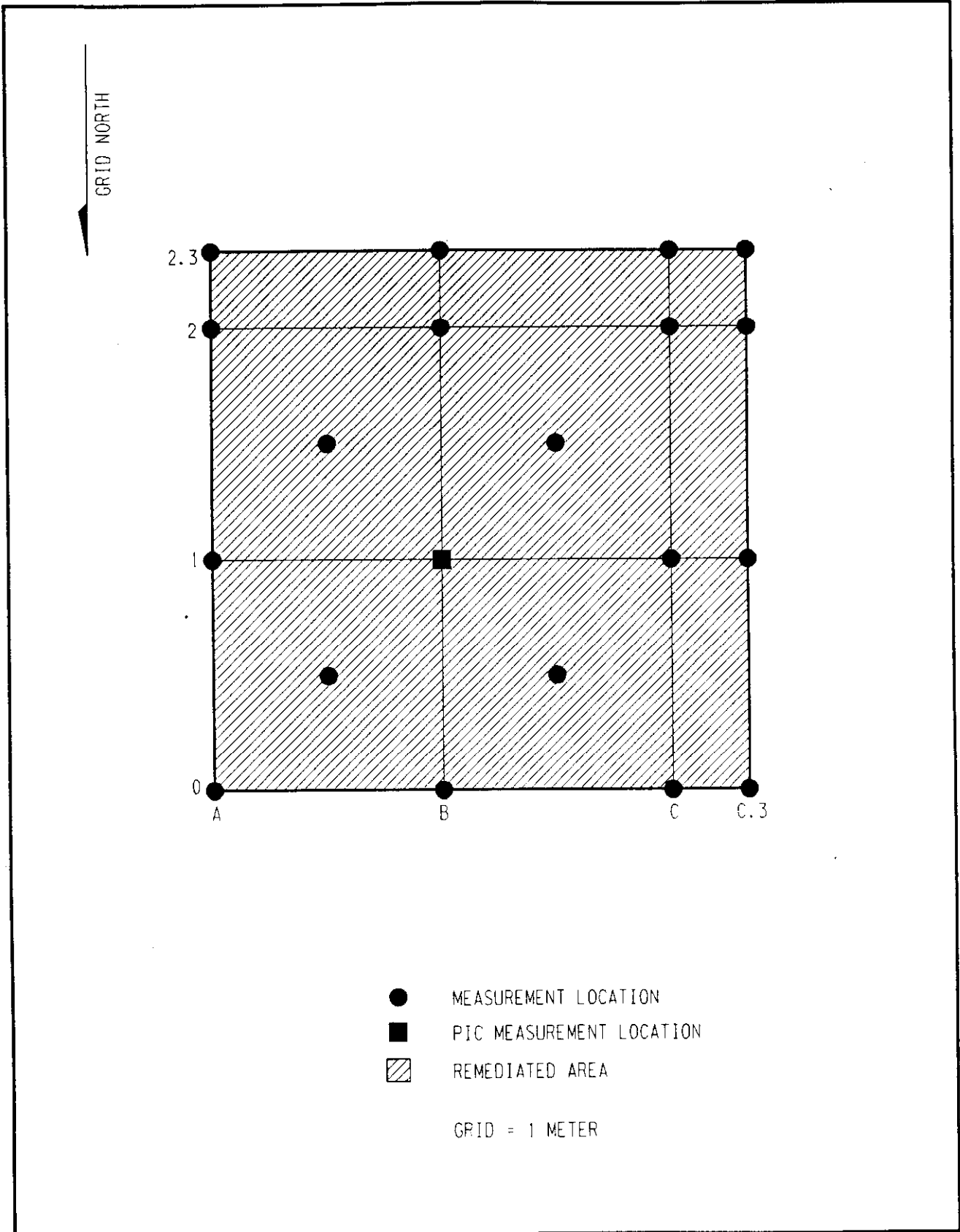
R59F007.DGN

**Figure III-7**  
**Remediated Areas and Measurement Locations**  
**on the Third Floor East Bay of Building 513-519**



R59F008.DGN

Figure III-8  
Remediated Areas and Measurement Locations  
on the East Bay Elevator Pit of Building 513-519



R59F009.DGN

**Figure III-9**  
**Measurement Locations on the Underside**  
**of the East Bay Elevator Pit of Building 513-519**