OVERSIZE PAGES

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Admin Record

9907200001

BWX Technologies, Inc.
Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

ESC-128/99
July 19, 1999

99-TC/07-19

Mr. Richard B. Provencher, Director
Miamisburg Environmental Management Project
U.S. Department of Energy
P.O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Dewain Eckman

SUBJECT: Contract No. DE-AC24-97OH20044
BUILDINGS GH & GP-1: DELIVERY OF FINAL BUILDING DATA PACKAGES

REFERENCE: Statement of Work Requirement C 7.1e -- Regulator Reports

Dear Mr. Provencher:

In response to public review comments received from the MMCIC, BWO has revised the Building Data Packages for Buildings GH and GP-1. Art Kleinrath of MEMP has authorized the release of the revised and "Final" document versions to USEPA, OEPA, and ODH. Copies will also be distributed to MMCIC and the Public Reading Room.

Please advise if additional copies are required for distribution within DOE. If you require further information, please contact Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Manager, Environmental Safeguards & Compliance

LRB/nmg

Enclosures as stated

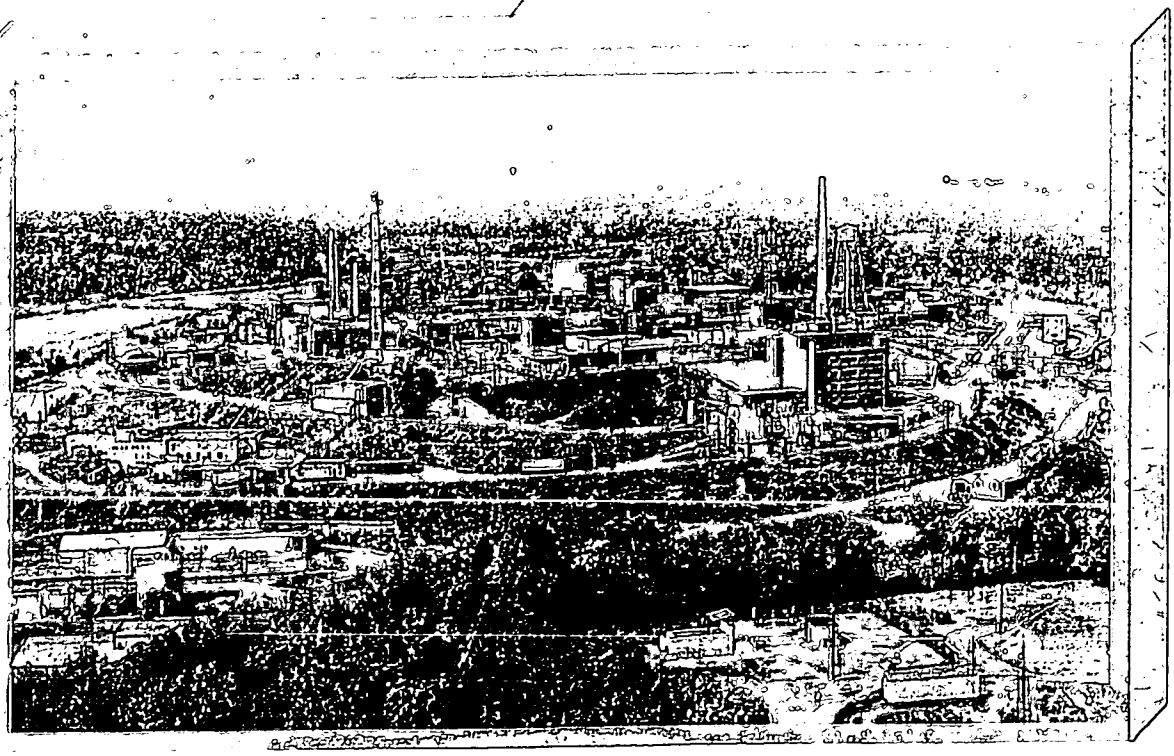
cc: Tim Fischer, USEPA, (1) w/attachment
Brian Nickel, OEPA, (1) w/attachment
Ruth Vandegrift, ODH, (1) w/attachment
Art Kleinrath, MEMP, (1) w/attachment
Terrence Tracy, DOE/HQ, (1) w/attachment
Budd Thompson, BWO, (2) w/attachment
Dann Bird, MMCIC, (1) w/attachment
Public Reading Room, (5) w/attachment
Administrative Record, (2) w/attachment
DCC

9907200001

MOUND

Environmental Restoration Program

MOUND PLANT
Building Data Package
GH Building
Located within Release Block H



BDP Building GH

REV	DESCRIPTION	DATE
WORKING DRAFT		Nov. 09, 1998
DRAFT 1		Nov. 16, 1998
DRAFT 2	Updated/changed information incorporated. Information concerning discovery and remediation of radiological contamination detected since issue of previous document version is also incorporated.	Jan. 27, 1999
DRAFT PROPOSED FINAL	Binning adjustments incorporated. Appendix G narrative modified and soil data moved to Appendix L. Appendix D underground line diagram colors adjusted.	Feb. 23, 1999
PUBLIC REVIEW DRAFT		March 17, 1999
FINAL	MMCIC comments and Core Team response to comments are incorporated.	July 13, 1999

MOUND

Environmental Restoration Program

MOUND PLANT BUILDING DATA PACKAGE

Notice of Public Review Period

The following Building Data Packages will be available for public review in the CERCLA Public Reading Room, 305 E. Central Ave., Miamisburg, Ohio beginning March 17, 1999. Public comment will be accepted on these packages from March 17, 1999, through April 17, 1999.

BDP GP-1 Bldg.: Guard Post 1
BDP GH Bldg.: Placement Center

Written comments may be sent to U.S. Department of Energy, c/o Paul Lucas, P.O. Box 66, Miamisburg, Ohio 45343-0066 or by E-Mail to: *paul.lucas@em.doe.gov*. Questions can be referred to DOE, Paul Lucas at (937) 865-4578

The Mound Core Team
P.O. Box 66
Miamisburg, Ohio 45343-0066

Mr. Dann Bird
Planning Manager
MMCIC
P.O. Box 232
Miamisburg, OH
45342-0232

Dear Mr. Bird:

Thank you for your comments concerning the Building Data Package for Building GH. Our responses are attached. The Core Team, consisting of the U.S. Department of Energy Miamisburg Environmental Management Project (DOE-MEMP), U.S. Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA), appreciates the input provided by the public stakeholders of the Mound facility. The public stakeholders have significantly contributed to the forward progress that has been made establishing the safety of the Mound property prior to its return to public use after remediation and residual risk evaluation.

Should the responses to comments require additional detail, please contact Arthur W. Kleinrath at (937) 865-3597, and we will gladly arrange a meeting or telephone conference.

Sincerely,

DOE/MEMP: Arthur W. Kleinrath
Arthur W. Kleinrath, Remedial Project Manager

USEPA: Timothy J. Fischer
Timothy J. Fischer, Remedial Project Manager

OEPA: Brian K. Nickel
Brian K. Nickel, Project Manager

MMCIC Comments
Building GH Data Package
March 17, 1999

Comment:

The data package notes that asbestos-containing materials are located within Building GH, as recorded in DOE's *Asbestos Program Manual*, MD-10391. Section 4.2.2.5 states that three damaged locations have been repaired. However, no listing or documentation of these materials or other asbestos-containing materials in the building was provided in the data package. Mr. Rakel and Mr. Gault (B&W of Ohio) indicated that an asbestos survey had been performed for Building GH, probably within the last eight years by Barge, Waggoner, Cannon, and Sumner, a civil and environmental engineering firm. As the Building GH data package should be, in general, a stand-alone document and was compiled with the purpose of releasing the building to another entity (namely MMCIC); it would be appropriate to include in this data package a data summary sheet of the asbestos within the building, either from the original survey or the *Asbestos Program Manual*. This element has not always been included in previous building data packages and may be irrelevant to the public for buildings which are binned for demolition. However, for those data packages that included a previous Phase I Environmental Site Assessment (such as those for Building 87, Buildings 35/59, Building DS, etc.), an asbestos data summary sheet (if a survey had been performed) was included in the attached Phase I report. The Phase I report available for Building GH was not included in its entirety in this Building Data Package.

Response:

The Building Data Package is designed to present existing environmental information as appropriate to assist in determining if the transfer of a building (NFA binning) is protective of human health and the environment. An existing ASTM Phase I study for this building is referenced in the Building Data Package. The asbestos survey report you mentioned did address Building GH and the results have been added to the Building Data Package. The *Asbestos Program Manual* does indicate asbestos is present. The relevant pages of the *Asbestos Program Manual* have been included in the Building Data Package. The existing information, as well as the walk-through done as a normal part of the clean-up operation, indicates all visible asbestos is non-friable and in good repair.

As a matter of clarification, buildings which are intended for demolition do not go through the binning process. However, the Core Team agrees that all existing environmental information for these buildings will be included in the Building Data Package.

Comment:

The radiological Survey Plan included as Appendix G with the Building GH data package states that fixed alpha contamination was detected at two locations, originally noted on Radiological Survey Data Sheet 98-GH-06. Another Radiological Data Sheet, 98-GH-10, shows two elevated direct alpha readings of a similar order of magnitude as those on Radiological Survey Data Sheet 98-GH-06. These readings are 330 dpm/100 cm^2 and 435 dpm/100 cm^2 for location described as "evaluation of intake vents and weekly survey of FCA-GH-01." Another note in different handwriting states "(attributable to radon)." Does this note apply to these two elevated readings and, if so, what is the supporting rationale for this opinion? If this note does not apply to these readings, was any follow-up sampling and analysis performed?

In a follow-up conversation held on April 22, 1999, Mr. Gault indicated that he had attempted to contact the BWO Project Manager in charge of Building GH to ask him about the two elevated readings on Radiological Survey Data Sheet 98-GH-10. The appropriate person is out of town for two weeks, so Mr. Gault arranged to have BWO Health Physics technicians from BWO's Main Hill Non-Rad Project team to retest the two rooms in question. The testing was done on April 19, 1999. The radiological testing was performed twice in two spots in question. During the first time, the building's HVAC system was running. The static from the operation of the HVAC system, as well as the presence of naturally-occurring radon, can cause interference with the radiological test results. The first test detected disintegrations per minute in the same order of magnitude as before. The second attempt for radiological testing was performed after the building's HVAC system was turned off. All of the direct contamination readings collected during this second attempt were below the DOE Order 5400.5 criteria and Mound's Radiological Control Program criteria (i.e., less than 100 disintegrations per minute per 100 cm^2 alpha radiation and less than 5,000 dpm/100 cm^2 beta radiation). Mr. Gault indicated that this information will be incorporated in the final Building GH Data Package.

Response:

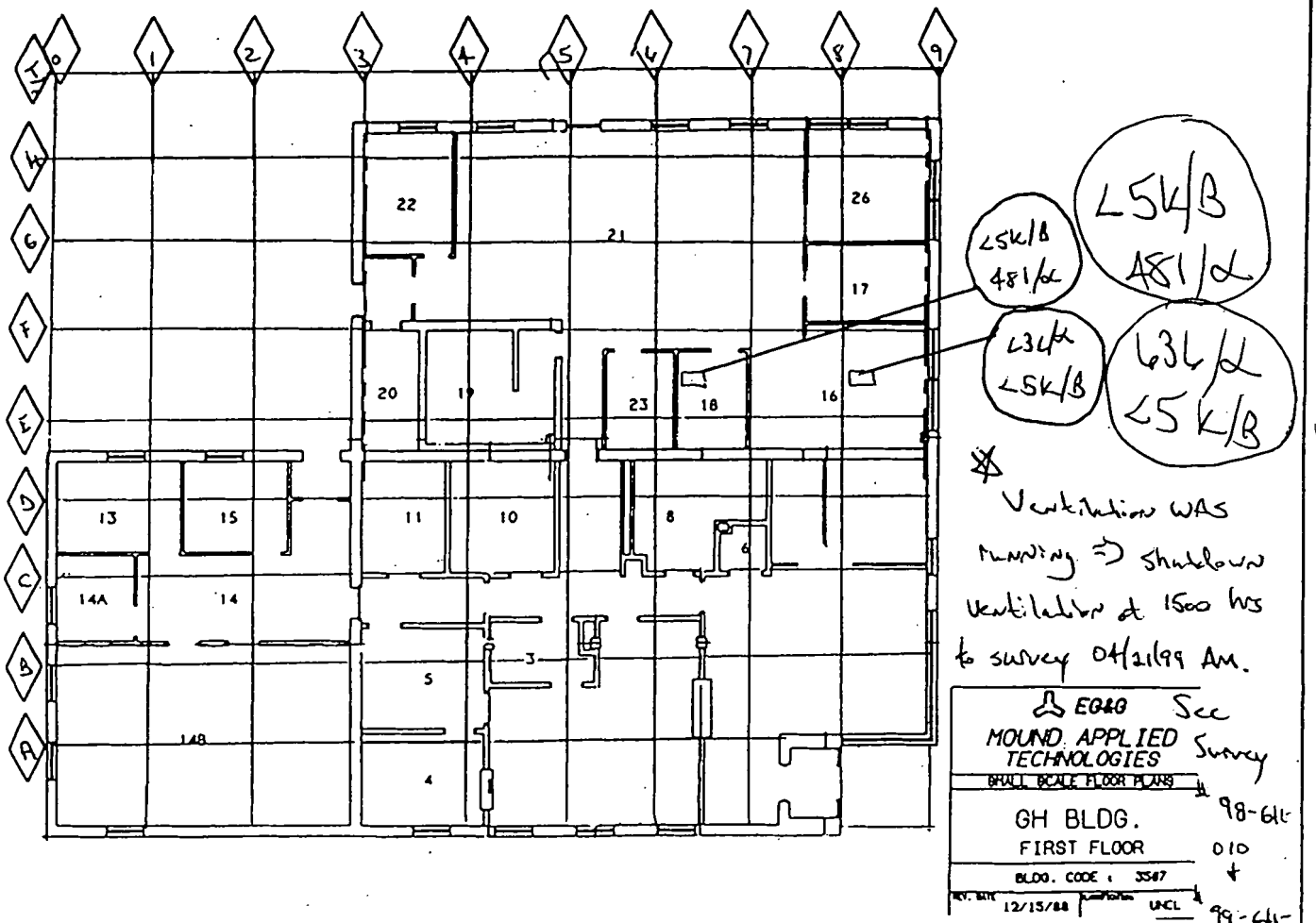
Radiological surveys were performed to demonstrate that the elevated readings were attributable to static charge or radon. As shown on the radiological surveys attached to this response, when the ventilation system was on, the readings were still above limits (Survey No. 99-GH-004). However, when the ventilation system was turned off and the static charge and radon were allowed to decay, the readings fell below limits (Survey No. 99-GH-005). The static from the operation of the HVAC system, as well as the presence of naturally occurring radon, can cause interference with the radiological test results.

RADIOLOGICAL SURVEY DATA SHEET

Hi

LOCATION: (BLDG./AREA/ROOM) GH - Rm 18 & 16	SURVEY NO. 99-GH-004
PURPOSE: Verify Ventilation Duct Readings	RWP NO. N/A
	DATE: 4/20/99
	TIME: 1300

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5336/5254	10/16/99

[redacted]

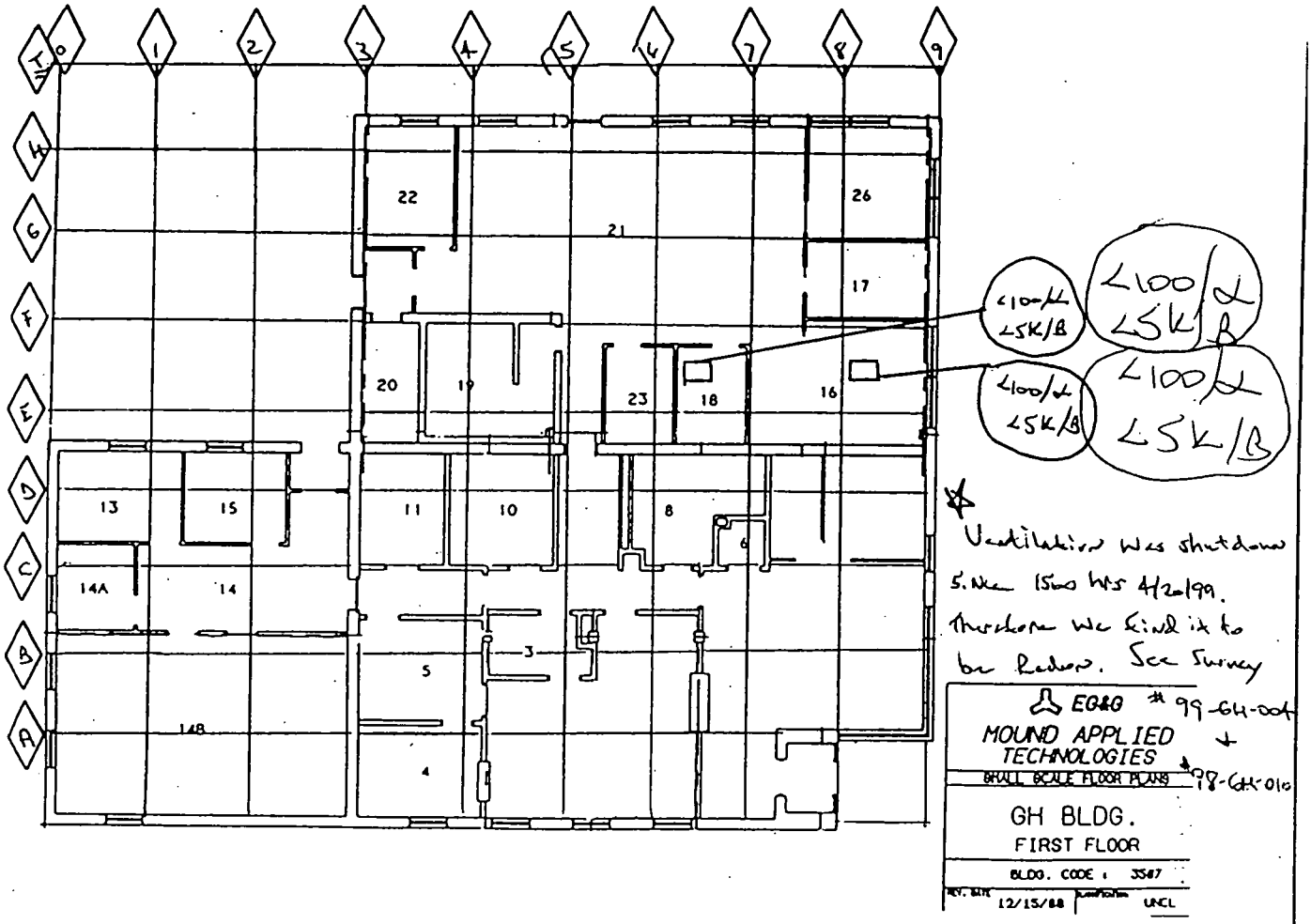
HP# 7889	Date: 4/20/99
HP#	Date:
HP# 5520	Date: 4-21-99

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GH Rm 18 & 16	SURVEY NO. 99-GH-005
PURPOSE: Verify Ventilation Ducts After Ventilation Shutdown	RWP NO. N/A
	DATE: 04/21/99
	TIME: 0730

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
(#) = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
DE Eberline	533L/5284	10/16/99
	N	
	A	

[redacted]

HP#	Date:
7889	4/21/99
HP#	Date:
HP#	Date:
5520	4-21-99

ML-9620 (2-98)

MOUND PLANT RECOMMENDATION

GH BUILDING

Background:

GH building is a 5,347 square foot single story concrete block structure with a metal built-up membrane coal tar and asphalt roof, and a utility penthouse. It has a brick facing. The building was constructed in 1948 and served originally as a visitor control point and office space. Additions to the building were constructed in 1951 and 1966. It was used as the Mound Plant transition center from 1994 to 1998. GH Building is currently not used in any functional capacity.

Recommendation:

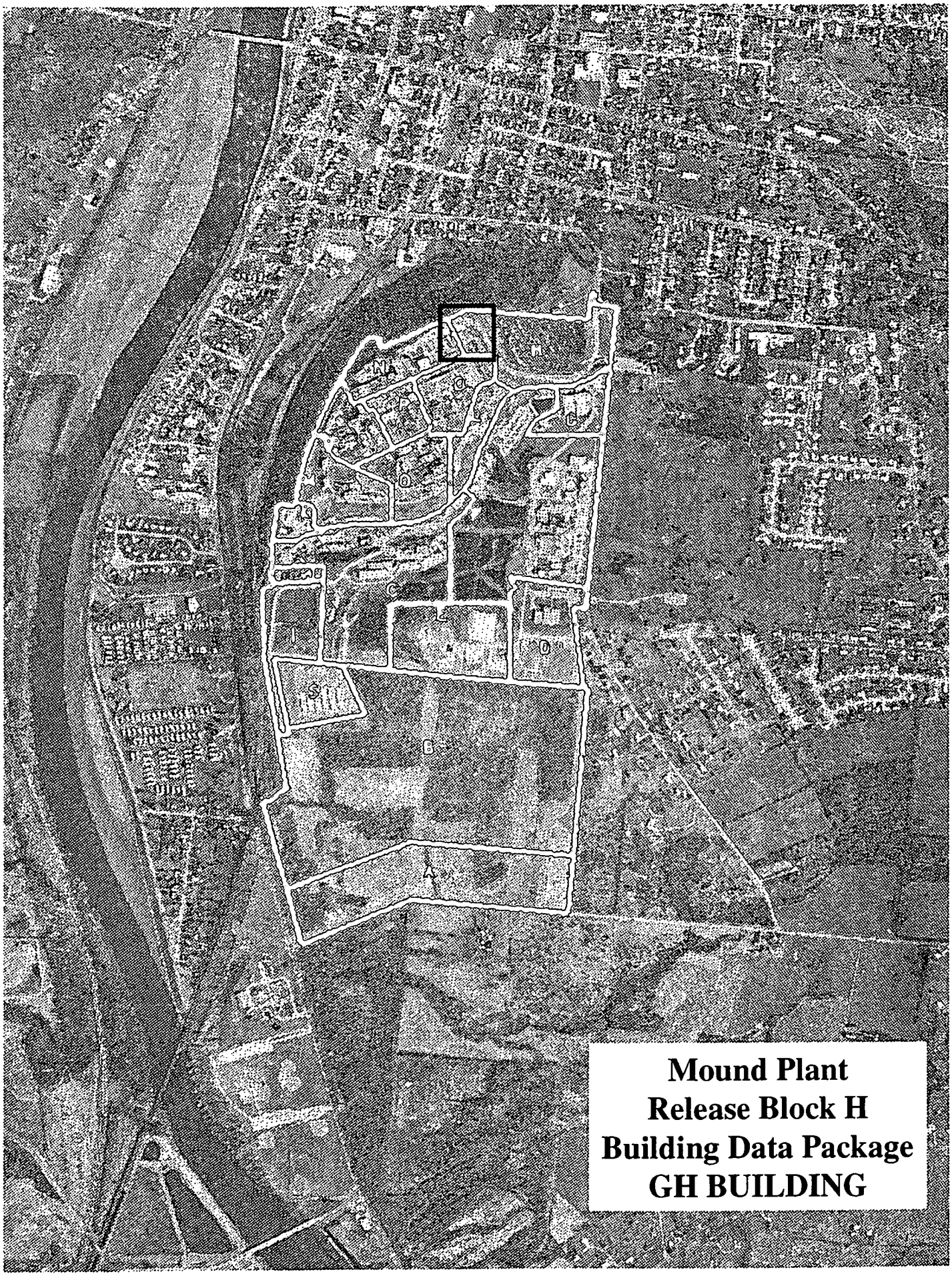
After thorough review of the environmental data and the Building Data Package, the Core Team agrees that all existing environmental issues associated with GH Building have been resolved. Future use of GH Building will be restricted to commercial/industrial use. The Core Team hereby recommends that the U.S. Department of Energy submit a letter to the Administrator of the U.S. EPA for final approval of the lease or sale of this property, as required by Section 120(h) of CERCLA.

Concurrence:

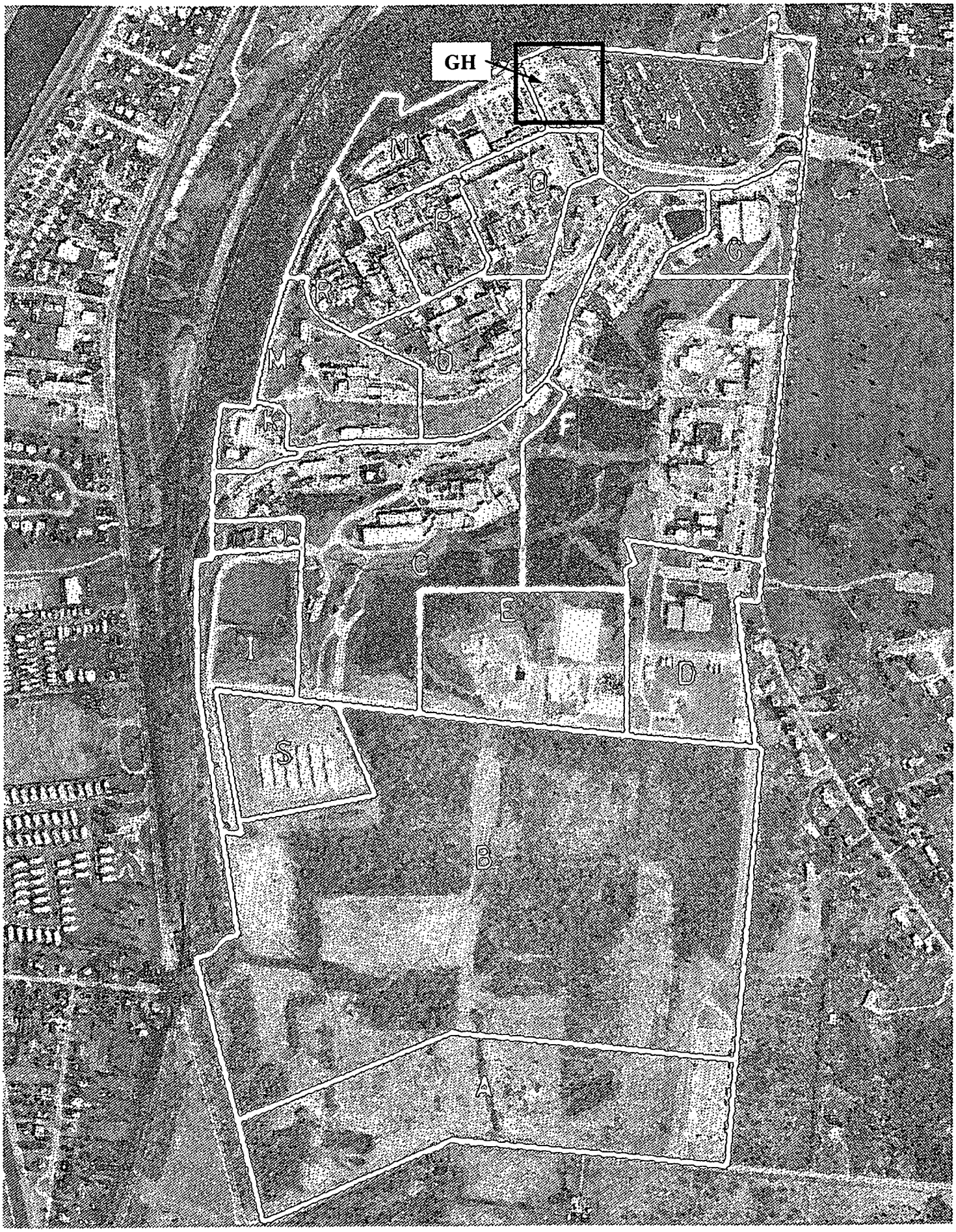
DOE/MEMP: Art Kleinrath — Feb 9, 1999
Art Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer — 2/9/99
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel — 2/9/99
Brian K. Nickel, Project Manager (date)



Mound Plant
Release Block H
Building Data Package
GH BUILDING


GH
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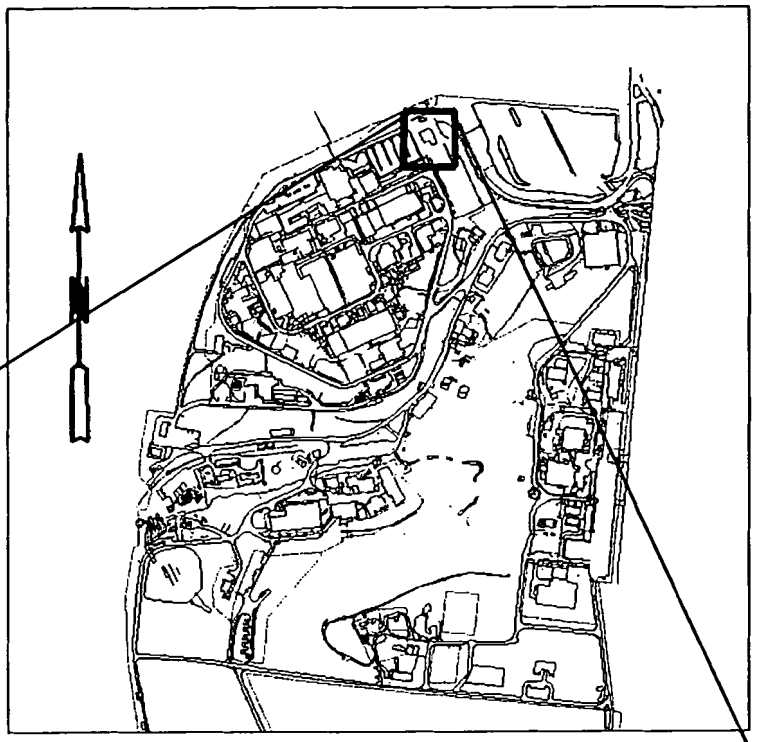
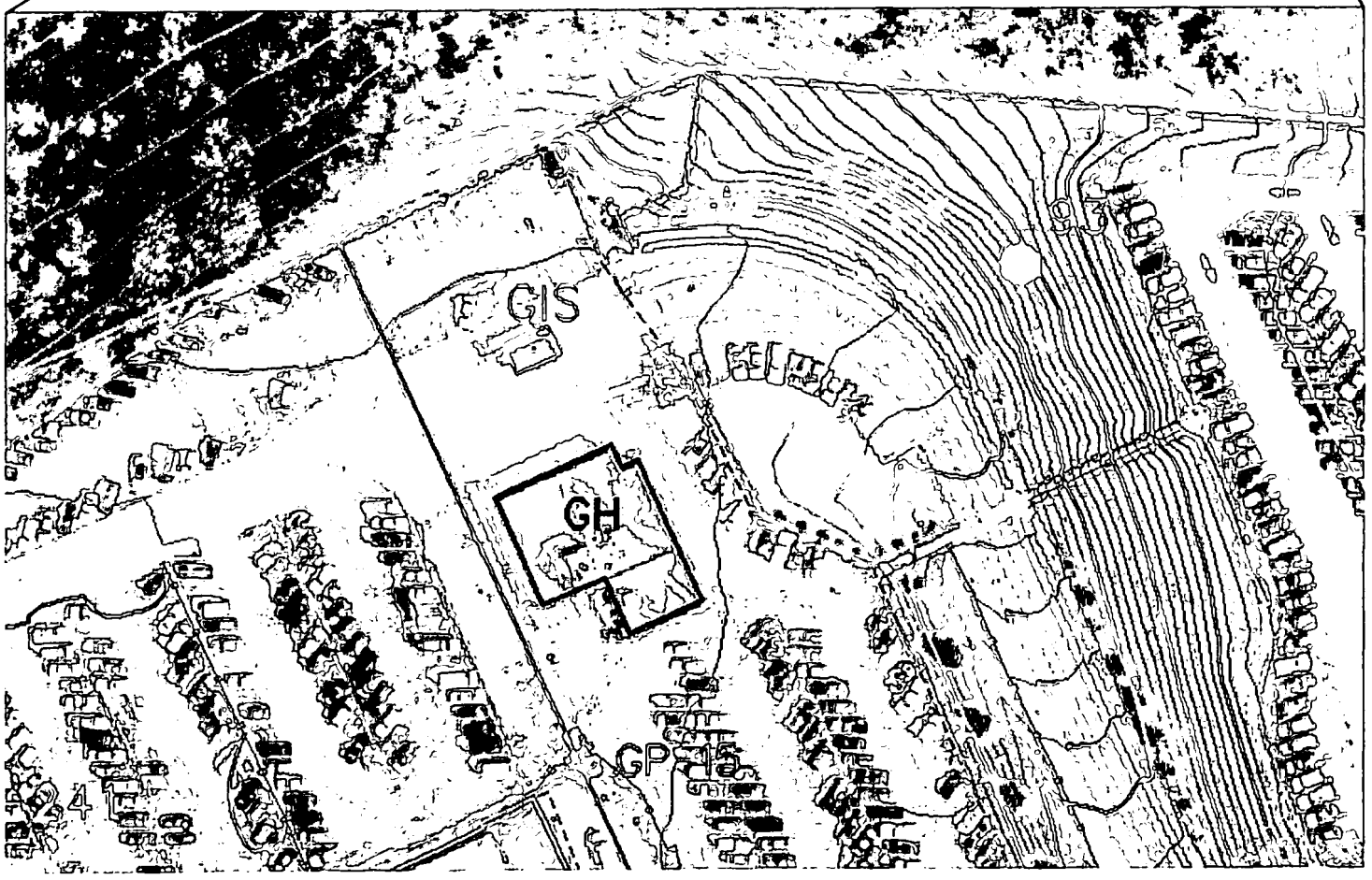
Mound Plant
GH Building

Old Visitor Control

Release Block H

On the map below:
- Building number and location shown in black
- PRS locations and numbers shown in blue
- Surrounding buildings shown in yellow
- Fencing shown in red
- Elevation contours shown in brown





GH BUILDING

BUILDING DATA PACKAGE (BDP)

GH BUILDING

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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Appendix M Occurrence Report (There are no occurrence reports.)
Appendix N PRS Information
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1.0 General Overview

1.1 Introduction

The purpose of this Building Data Package is to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property. The intended building disposition is "transfer." Ultimate disposition is a function of building condition and DOE/EPA evaluation.

Recognized Environmental Condition – The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a likely release, a past release, or a material threat of a release of any hazardous substances or petroleum into structures or into the ground, ground water, or surface water near the building.

1.2 Scope

This document has been prepared in response to an agreement between the Department of Energy (DOE), the U.S. Environmental Protection Agency, and the Ohio Environmental Protection Agency. It is a Building Data Package of GH Building located at the DOE Mound Plant in Miamisburg, Ohio. This investigation was performed to support procedures as found in ASTM Standard Practice for Environmental Site Assessments; Phase I Environmental Site Assessment Process (Designation E 1527-94).

The scope of the investigation included the building, the soil beneath, and a 15-foot wide perimeter border around the building. Soil sampling results are noted in Appendix L. This perimeter includes roadways, sidewalks, pavement, and grass covered areas. The investigation of GH Building included the following.

1) A building and perimeter inspection.
2) An examination of historical aerial photographs and maps.
3) A review of federal and state regulatory agency records.
4) Personnel interviews.
5) A review of Mound Plant records for:
   A) History of spills and releases
   B) Past sampling data
      - Radiological survey
      - Soil Sampling
      - Lead paint
      - Asbestos
      - Radon

The building investigation was conducted by BWO personnel between October 1st and November 3rd, 1998.

This report used a variety of previous assessments completed by BWO and/or its subcontractors. The reports used were as follows:

- Characterization of Mound's Hazardous, Radioactive, and Mixed Wastes (August 1990)
- OU-9 Site Scoping Report, Volumes 1-12
- Mound Facility Physical Characterization, December 1992
- Active Underground Storage Tank Plan, November 1994
- OU-9 Hydrological Investigation, Bedrock Report, January 1994
- OU-9 Hydrological Investigation, Buried Valley Aquifer Report, March 1994
- Environmental Appraisal of the Mound Plant, March 1996
- Phase I Environmental Site Assessment of DOE Mound Building GH
- Title Search
- Lease Information
- EDR Report
- Building Prints
- PRS Information

2.0 Building Specific Overview

Mound Plant is located in the southern portion of the corporation limits of Miamisburg, Ohio. The entire Mound Plant facility is situated on 306 acres of land and contains approximately 130 buildings. The subject property consists of Mound Plant GH Building footprint and an arbitrary 15-foot wide perimeter around the building. GH Building contains 5,347 square feet. It was originally constructed in 1948, with additions in 1951 and 1966. No waste was stored in GH Building.

2.1 Current Uses of GH Building

The building is currently maintained in an in-active state; having served most recently as the Mound Plant Transition center from 1994 until 1998.

2.2 Past Uses of GH Building

The building was originally used as a visitor control point and for office space.

2.3 Summary of Environmental Concerns and Findings

DESCRIPTION	COMMENT	RESOLUTION	REFERENCE
Lead Paint	Due to the age of the building, it is assumed lead paint is present.	Damaged paint has been repaired. Damaged paint did not contain lead.	Para. 4.2.2.4 Appendix J.
Asbestos	Three locations of damaged asbestos insulation	Has been repaired.	Para 4.2.2.5 Appendix I
Subgrade Vault	REC* from previous assessment (HOK/K)	Vault researched. No hazardous chemicals associated with vault.	Appendix O
Steel Cap in Asphalt	REC* from previous assessment (HOK/K)	Cap is cover to sewage clean-out.	Appendix O
Oil Stain in Room 10	REC* from previous assessment (HOK/K)	Condensate pump lubricant cleaned and contained.	Appendix O
Radiological	Main Door Threshold - Fixed contamination	Contamination removed.	Para. 4.2.2.1 Appendix G
Radiological	Manhole cover - Fixed contamination	Cover replaced	Para. 4.2.2.1 Appendix G

*REC = Recognized Environmental Condition

2.4 Radiological Characterization Summary For GH Building Structure

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm²)	Surface Contamination Guidelines (dpm/100 cm²) (Note 2)	Comments
Highest Alpha Smearable Activity	98-GH-03	Cubicle 15 Floor	6.05	20	
Highest Alpha Fixed Activity	Note 1	Note 1	<100	100	
Highest Beta Smearable Activity	98-GH-02	Cubicle 2 Floor	11.03	1,000	
Highest Beta Fixed Activity	Note 1	Note 1	<5000	5,000	
Highest Tritium Smearable Activity	98-GH-02	Cubicle 5 Floor	31.32	10,000	

Note 1: All RSDS' associated with the confirmatory survey were <100 dpm/100 cm² alpha, and <5000 dpm/100 cm² beta once the fixed contamination was removed from the manway cover and building threshold. (See Appendix G.) RSDS' associates with GH Building release include: 98-GH-02, 98-GH-03, 98-GH-04, 98-GH-05, 98-GH-06, 98-GH-07, 98-GH-08, 98-GH-10, 99-GH-001, 99-GH-002, and 99-GH-003.
Note 2: Core Team determined values.
RSDS: Data sheet that provides radiological monitoring survey results.

2.5 Associated PRS Table for GH Building

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 241	CERCLA	NFA	See Appendix N.
PRS 99/100	CERCLA	FA	See Appendix N.

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

GH Building is located at the U.S. Department of Energy Facility known as Mound Plant. Mound is situated in the city of Miamisburg, Miami Township, Montgomery County, state of Ohio.

The Mound facility is situated on 306 acres of land and contains approximately 130 buildings with a total of approximately 1.4 million square feet of floor space (the number of buildings diminishes as buildings are decommissioned and either sold or demolished). The original 182-acre site, purchased by the Manhattan Engineer District in 1946, consists of two hills and an intervening valley that runs approximately east and west. GH Building is located on the main hill of the Mound site. The 124-acre tract acquired in 1981 is an undeveloped mixture of fields and woods that undulates and slopes downward to the west, away from the main site. This area was acquired to serve as a buffer and has been used as a staging area and parking area for contractors working on-site.

To the west lies a Conrail Railroad line and the north south trending Miami-Erie Canal. The northern boundaries of the site abut the historic residential area of Miamisburg, Ohio. Mound Road marks the northern half of the eastern perimeter of the facility then veers east, away from the southern half of the eastern boundary. A public golf course (belonging to the City of Miamisburg), the Miamisburg Mound Memorial Park, old agricultural fields, residential lots, and vacant wooded lots border against the facility along Mound Road. Benner Road forms the southern property line of the Mound Plant, with agricultural fields and farms occupying the lands beyond.

3.2 Description of Structures, Roads, Other Improvements Related to GH Building

GH Building is a one-story, 5,347 square foot concrete block structure with a built-up membrane coal tar roof and a utility penthouse. It has a brick facing. The building has HVAC for cooling, as well as central steam.

Potable water and sanitary services at GH Building are provided by the Plant. The Mound Plant operates a potable water treatment plant (Building 24) that provides drinking water to the facility using groundwater produced from three on-site production wells. The Mound facility also operates an on-site sanitary sewer treatment plant (Building 57) to manage the plant's sanitary wastewater pursuant to a Nation Pollutant Discharge Elimination System (NPDES) permit issued by OEPA. A sanitary lift station is located in Room 10.

3.3 Current and Past Uses of Buildings Adjacent To GH Building

Proximity to GH Building	Building Area (Sq. Ft.)	Current Use	Past Use	Direction From Building
Guard Post-1	8,000	Security Personnel Training/Offices	Security Personnel Training/Offices	Southwest

4.0 Records Review

4.1 General/Historical CERCLA Information

The Mound Plant site was identified as a contaminated site on the National Priority List under CERCLA (Superfund) in 1989. The Mound Plant site was originally listed as a consequence of VOC contamination in the western end of the lower valley areas. The clean-up of the Mound Site was originally to be accomplished under the CERCLA mandated procedures for regulating Superfund Sites using the operable unit (OU) system to define and characterize clean-up areas. As the clean-up effort went forward, it became apparent that the Mound Site did not fit the profile for a clean-up strategy based on the operable units. The Department of Energy (DOE), the United States Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA) designed a new decision making process for the clean-up of Mound. The new process is known formally as a "removal site evaluation process" and informally as the "Mound 2000 process." The Mound 2000 process system divided Mound into 19 Release Blocks containing over 400 Potential Release Sites (PRSs) with approximately 200 concerned with potentially contaminated soils, and the balance with potential contamination in buildings or associated primarily with building operations. For a detailed description of this process, refer to the *Work Plan for Environmental Restoration of the DOE Mound Site, the Mound 2000 Approach*.

In compliance with permit requirements under RCRA, the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Clean Air Act (CAA), Mound Plant has applied for or has received permits for its surface water discharges, air emissions, and hazardous waste program. Mound Plant is currently operating hazardous waste storage facilities under a RCRA Part B permit dated October 18, 1996. Mound Plant also maintains a NPDES surface water discharge permit with Facility I.D. number OH 009857. Permits for the open burning of wastes involving explosives and other fuels have been issued by the Regional Air Pollution Control Agency (RAPCA). Other operations that produce particulate or vaporous emissions are registered with RAPCA and OEPA. Mound Plant also submits annual Emergency and Hazardous Chemical Inventory forms to the OEPA, pursuant to SARA, Title III, the Emergency Planning and Community Right-to-Know Act. The 1998 version of this report indicated that no chemicals are stored in GH Building in quantities above the regulatory thresholds.

4.2 Specific Record Sources

4.2.1 History of Occurrences, Spills, and Releases

4.2.1.1 Occurrence Reports

None.

4.2.1.2 Spills and Releases

A sump south of the building has been noted to occasionally fill with liquid. This liquid is assumed to be water. No overflow has been noted by the Building Manager or past occupants.

4.2.1.3 Associated PRS Overview

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the FFA/DOE ER program, DOE and BWO have tabulated all the Potential Release Sites (PRSs) identified under the various regulatory programs in effect at the site. Many additional contaminants of concern and types of operations were identified beyond the original NPL listing of site activities. A total of 420 PRSs have been identified. None of these 420 PRSs is attributed to GH Building. PRS 241, binned "No Further Assessment" and identified as Soil Contamination - Mail Hill Parking Area, is related by geographic proximity. PRS 99/100, binned "Further Assessment" and identified as Waste Disposal Site - Area 6/F may require consideration during assessment/response activities. See Appendix N.

4.2.2 Sampling Data

4.2.2.1 Radiation Surveys

GH Building radiological surveys have been accomplished. Refer to paragraph 2.4 for further information. Fixed radiological contamination was found on the main door threshold and an adjacent manhole cover. The threshold was scabbled to remove the contamination and the manhole cover was replaced. (See Appendix G.)

4.2.2.2 Soil Sampling Data Summary

See Appendix L.

4.2.2.3 Chemical History/Removal (As Applicable)

As verified by current Mound Plant chemical inventory data bases, there are no known hazardous materials, petroleum products or chemicals other than janitorial housekeeping supplies associated with current operations at GH Building.

4.2.2.4 Lead Paint

Congress established maximum lead concentrations in residential paint in 1978. This building was constructed in 1948. Damaged paint was determined not to be lead containing, and has been repaired. (See Appendix J.)

4.2.2.5 Asbestos

Mound's Technical Manual, *Asbestos Program Manual, MD-10391*, indicates that (known, assumed, suspected) asbestos is found in GH Building. See Appendix I. Three damaged locations have been repaired. All asbestos observed is not friable. This conclusion is supported by an asbestos survey and report - Mound Asbestos Survey Building Summary, Building GH. Again, see Appendix I.

4.2.2.6 Radon

The results of a 1989-90 Mound Indoor Radon study indicated an average radon concentration of 0.5 picoCuries/liter in GH Building. The EPA recommended standard for radon is 4.0 picoCuries/liter. (See Appendix H.)

4.3 Aerial Photographs

Aerial photographs from 1994, 1983, 1973, 1968, 1965, 1959, and 1949 were reviewed and copies are found in Appendix E.

The 1949 photographs show the completed initial phase of construction on the Mound Plant Main Hill. Approximately fourteen (14) buildings are visible. Roadways on both the Main Hill and the Eastern Hill are present.

The overall Mound Plant facilities, as depicted in subsequent years, continue to show change and expansion.

GH Building is visible in the photograph dated 1949.

5.0 Site Reconnaissance/Inspections: Findings, Observations

See Appendix F. Findings have been addressed; verified by teleconference with Building Manager on September 24, 1998.

5.1 Hazardous Substances in Connection with Identified Uses

5.1.1 Space

None.

5.1.2 Heating/Cooling

HVAC units provide the building's air conditioning. Central steam is also provided. The building has fire sprinkler service. These systems will continue in operation.

5.1.3 Stains or Corrosion

Oil stain in Room 10. See Section 2.3

5.1.4 Drains and Sumps

The building is serviced by sanitary and storm sewer systems. There is a sanitary lift station in the building mechanical room (Room 10). There are two sumps, one in the building mechanical room (Room 10) and the other outside at the SW corner of the building. These are to provide access to underground steam and condensate lines. They both have some standing water.

5.1.5 Wastewater

Potable water and sanitary service is provided for GH Building. The Mound Plant facility operates an on-site sanitary and storm water sewer treatment plant (Building 57) to manage the plant's storm water and sanitary wastewater pursuant to a National Pollutant Discharge Elimination System (NPDES) permit issued by OEPA.

5.1.6 Septic Systems

There is no evidence of septic systems (such as leaching field or septic tank vent pipes) in the vicinity of GH Building. A sewer ejector station is found in Room 10. This station is necessary as the elevation of this area is below the mound sanitary sewer line.

5.1.7 Suspected Asbestos Containing Material

ACM in buildings can be found in five (5) forms: sprayed or troweled on ceilings and walls (surfacing materials); insulation around pipes, ducts, boilers and tanks (pipe and boiler insulation); transite (in ground piping); and in roofing materials (shingles and roofing felts); other products such as ceiling and floor files and wall boards (miscellaneous materials).

Past records indicate asbestos is found in the building. Three damaged areas have been repaired. All asbestos observed is not friable. See Appendix I.

5.1.8 Paint

Lead based paint was used in the U.S. prior to 1978 when congress established the limits on the maximum lead concentration allowable in residential buildings. The risk of a lead based paint hazard exists only when painted surfaces are damaged (cracked, chipped, loosened, or chewed).

Because of the age of the building, it is likely that lead based paint has been used. Damaged paint was found in Room 20. It was determined not to contain lead, and was repaired. (See Appendix J.)

5.2 Hazardous Substance Containers and Unidentified Substance Containers

No unidentified substances were found in or near GH Building.

5.3 Storage Tanks

No storage tanks are associated with GH Building.

5.4 Indications of PCBs

Fluorescent lighting is used in this building. It is assumed they contain PCBs. They will be replaced with normal maintenance. PCBs not are found in the building transformer.

5.5 Indication of Solid Waste Disposal

No solid waste other than office type waste was observed in the building. No evidence of hazardous waste was noted in the immediate vicinity of the building.

5.6 Physical Setting Analysis, If Migrating Hazardous Substances Are An Issue

Migrating hazardous substances are not an issue.

5.7 Other conditions of Concern

None.

5.8 Recent Interviews

5.8.1 Building Manager Interview

The current Building Manager of GH Building, Mr. Gary Weidenbach, has been employed at the plant for 22 years and has been the Building Manager of GH Building for the last 1.5 years.

Additionally, the maintenance supervisor, Mr. James Times, was interviewed. He has been in charge of GH Building maintenance for three years and has been employed at the Plant for 27 years.

5.8.2 Telephone Interviews

None.

5.9 Historical Interviews

None.

Appendix A

Acronyms

AEA	Atomic Energy Act of 1954
AEC	Atomic Energy Commission
ACM	Asbestos Containing Materials
AL	Action Level
ASTM	American Society for Testing and Materials
BDP	Building Data Package
BUSTR	Bureau of Underground Storage Tank Regulations
BWO	Babcock and Wilcox of Ohio
CAA	Clean Air Act
CEG	Conditionally Exempt Generator
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DPM	Disintegrations Per Minute
EMF	Electromagnetic Field
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration (Program)
ERDA	Energy Research and Development Administration
ERNS	Emergency Response Notification System

FFA	Federal Facility Agreement
FINDS	Facility Index System
FS	Feasibility Study
GSA	General Services Administration
HEPA	High Efficiency Particulate Air
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
M&O	Maintenance and Operations
MAT	Mound Applied Technologies
MCC	Monsanto Chemical Company
MEMP	Mound Environmental Management Project
MMCIC	Miamisburg Mound Community Improvement Corporation
MRC	Monsanto Research Corporation
NPDES	National Pollutant Discharge Elimination System
OEPA	Ohio Environmental Protection Agency
ORPS	Occurrence Reporting and Processing System
OU	Operable Unit
PADS	PCB Activity Database
PCB	Polychlorinated Biphenyls
PRS	Potential Release Site

RAPCA	Regional Air Pollution Control Agency
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RI	Remedial Investigation
RSDS	Radiological Survey Data Sheet
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SQG	Small Quantity Generator
SWMU	Solid Waste Management Unit
TRIS	Toxic Chemical Release Inventory System
TSD	Treatment, Storage, & Disposal Facility
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

Appendix B

Map of Montgomery County

Appendix C

Site Plan

Appendix D

Building Drawings

ISS	DATE	REVISION	DV	CHKR	DWG	LPREQ	APVD	R
0	12/12/91	ASBUILT ISSUE	DCB				DVD	

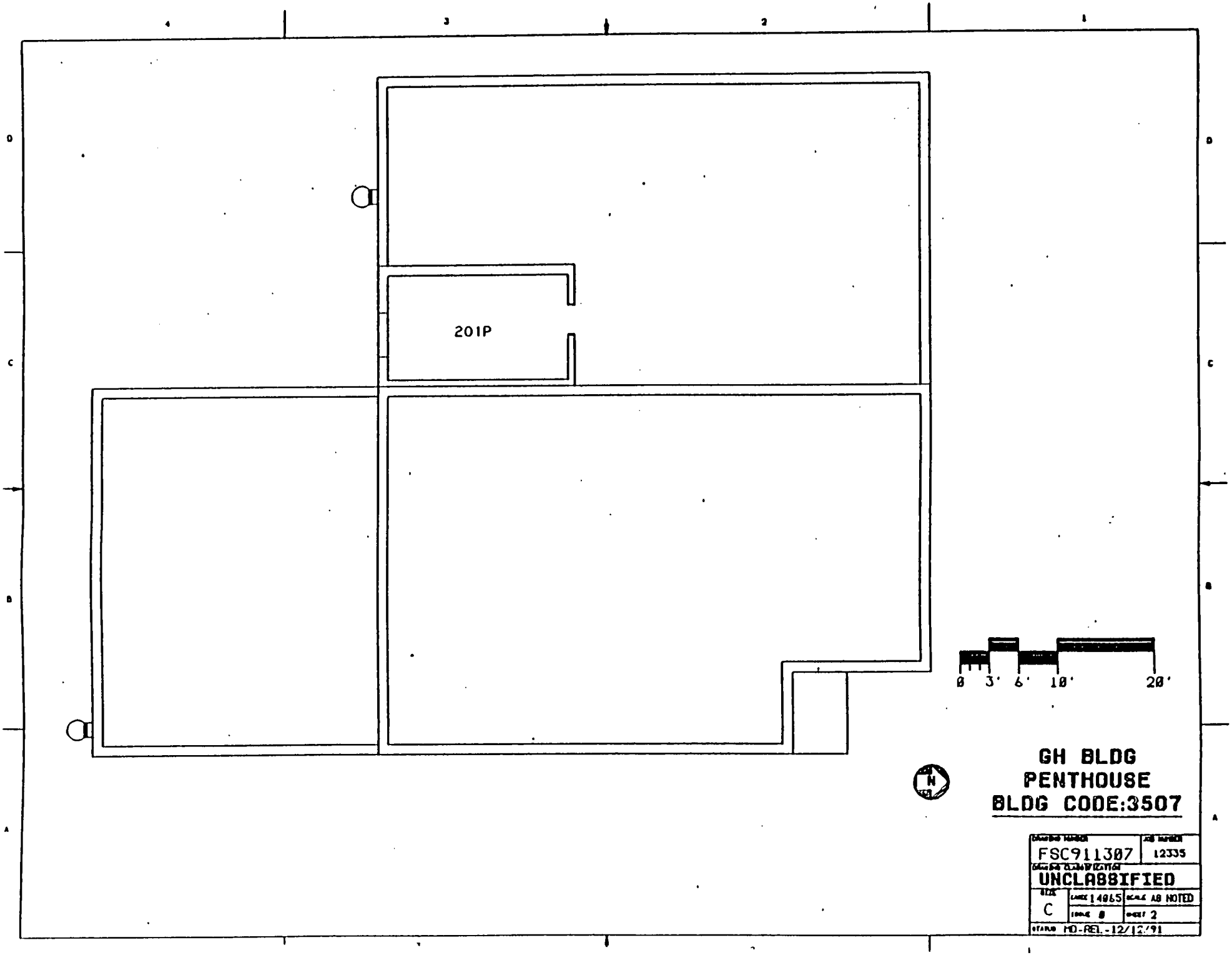
0 3' 6' 10' 20'

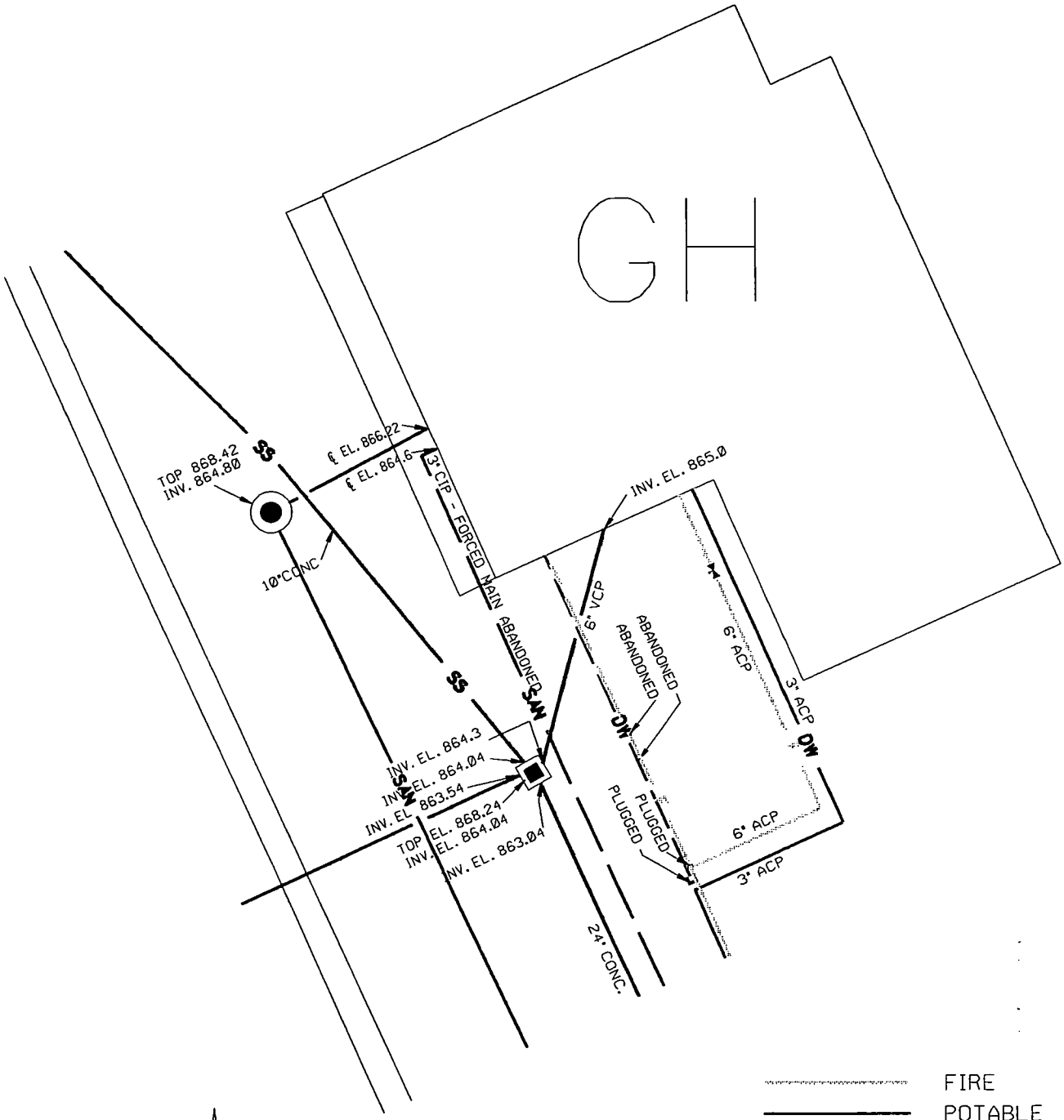
GH BLDG
FIRST FLOOR
BLDG CODE:3507

SHEET	1	2	3	4	5	6	TITLE (U) TITLE CLASSIFICATION: GH BLDG FLOOR PLANS
ISSUE	0	0					
FINAL CLASSIFICATION							
DRAWING CLASSIFICATION: UNCLASSIFIED							ITEM: C
DRAWING NUMBER: FSC911307							JOB NUMBER: 12335
DWG TYPE: SFP	PROJ: GH BLDG	CODE: 14865	SCALE: AS NOTED	SHEET 1 OF 2			
STATUS: MD-REL-12/12/91	ORIGIN: MD-BR3-V3.0						

APPROVALS: DATE:
SAFETY COMMITTEE REQUIRED:
___ NONE ___ SRUDOC ___ TEDOC ___ EDOC
TECH. REVP. ___
GR. MGR. ___
SRUDOC ___
TEDOC ___
EDOC ___

DESIGN CHK	PROJ MGR
ENGR	CHK SUPV
LP & CC	PROD REV
CHK MGR	
APVD	DATE


201P
0 3' 6' 10' 20'
N
GH BLDG
PENTHOUSE
BLDG CODE:3507
FSC911307
12335
UNCLASSIFIED
C
14065
AS NOTED
2
MD-REL.-12/12/91



FIRE
POTABLE
RAW
SANITARY
STORM
RADIOLOGICAL

ISS	DATE	REVISION	BY	CHKR	ENG	LPMCC	APVD	N
	02/22/99		MR					

MOUND
Environmental Restoration Geographic Information System

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE																					

SHEET	1	2	3	4	5	6
ISSUE						

PART CLASSIFICATION

UNDERGROUND WATER & WASTE LINES GH-BLDG.

DRAWING CLASSIFICATION: UNCLASSIFIED
SIZE
DRAWING NUMBER: gh_plan.dgn
JOB NUMBER
DWG TYPE: STE
PRNG
CADEC
SCALE: NONE
SHEET
STATUS: MD-REL-02/22/99
ORIGIN: MSTATION 5.0

Appendix E

Aerial Photographs

Appendix F

Environmental Appraisal Report of the Mound Plant (Extract)

9.8 BUILDING GH

9.8.1 Scope of Building GH Report

In late 1995 and the early months of 1996, EG&G MAT performed a review of environmental conditions at the Mound Plant. The purpose was to develop a performance baseline, and to identify areas for improvement on a building and a sitewide basis. EG&G MAT did not perform a "due diligence" or Phase I Environmental Site Assessment as specified by ASTM 1527 or ASTM 1528. The scope of the appraisal effort and a discussion of the appraisal methodology are detailed in Sections 2.0 and 5.0, found in Volume 1 of this report.

The appraisal team performed a walk-through of Building GH on the morning of February 7, 1996. The Environmental Appraisal Checklist (EAC) was used to record findings. The EAC is presented as Attachment 1 (Section 9.8.6.1). The appraisers were not accompanied by the building manager. Bob Race, an outplacement professional and a contractor to EG&G MAT, has an office in the building. He was present for the walk-through. Other information was supplied by the building manager and recorded on the Building Manager's Questionnaire (BMQ), included as Attachment 2 (Section 9.8.6.2).

9.8.2 Description of Building GH

Building GH houses the Mound Transition Center. It is located on the northern main hill of the site, and is surrounded by parking lots. It is northeast of Building W and south of Building GIS. Its location is shown in Attachment 3 (Section 9.8.6.3).

The building is a 5347-square-foot concrete block structure with a brick face. It has a utility penthouse, and a built-up-membrane coal tar roof. The building is supplied with central steam and has package HVAC units (a self-contained heating and air conditioning unit). It was constructed in 1948. The floor plans are shown in Attachment 4 (Section 9.8.6.4).

The building is currently used as an outplacement office for the Transition Center. It was previously used as visitor control and as office space. It was converted to use as the Transition Center in 1994.

9.8.3 Summary of Findings

Building GH appeared to be a clean, well-maintained facility. Some issues of environmental concern were identified during the walk-through and review of reference materials.

9.8.4 Observations

9.8.4.1 Air Emissions

There is no active process or fuel-burning unit in the building. There is no evidence of fugitive dust. No permit applications have been submitted for activities in the building.

9.8.4.2 Wastewater Emissions

The Mound Facility has three wastewater collection systems: a sanitary wastewater system; a storm water system; and a radioactively contaminated process wastewater system. Sanitary wastewater is treated at an onsite tertiary treatment plant and subsequently discharged by hard pipe to the Great Miami River. Storm water and any non-process wastewater, single pass cooling water, and softener backwash may be discharged directly to the Great Miami River, via the Miami-Erie Canal, or may be diverted to a 3.1-million-gallon holding pond for settling prior to discharge. Radioactively contaminated wastewater is treated in Building WD by physical-chemical treatment. If appropriate, wastewater may be discharged by hard pipe to the Great Miami River. If concentrations of radioactive contaminants cannot be reduced to acceptable levels, wastewater is solidified and shipped to the Nevada Test Site or Envirocare for disposal. All outfalls are permitted under an active NPDES permit. Routine monitoring activities are in place. Based on NPDES monitoring report data reviewed, it appears that the facility is in compliance with qualitative and quantitative conditions of the permit.

9.8.4.2.1 Sanitary Wastewater

The building has sanitary service. According to a diagram of underground utility lines, presented as Attachment 5 (Section 9.8.6.5), the building is serviced by a sanitary line.

9.8.4.2.2 Storm Wastewater

The building is serviced by storm drains according to the diagram of underground utility lines in Attachment 5 (Section 9.8.6.5). Exterior grates and drains were not tested to confirm they connect to the storm drainage system. Inspection showed no sign of odors, colored discharges, or scarring which would indicate that any materials other than storm water has entered the storm drainage system.

9.8.4.3 Potable and Service Water

Potable and service water are supplied to the building. Backflow preventors are in place as appropriate. The fountains which supply drinking water have not been tested for lead. According to Environmental Protection Agency (EPA) protocol, annual sampling criteria do not require testing of each fountain.

9.8.4.4 Chemical Storage and Hazardous Materials

There were no chemicals or hazardous materials stored in or around Building GH, with the exception of routine janitorial supplies. There were no Material Safety Data Sheets (MSDS's) available in the building for the janitorial supplies used and stored in the building. According to janitors, MSDS sheets are maintained at a central location, but not in the building.

The building is equipped with fire extinguishers. Inspection tags were present and current. There is an emergency evacuation plan, and signs were posted in work areas.

There were no aboveground tanks in or around the building. A covered sump is located on the south side of the building. It was not opened during the walk-through. According to information provided by the building manager in the BMQ, at various times the sump may contain a liquid, presumably water, and it has overflowed in the past. There are no records to indicate there has been maintenance or inspection of the sump. The sump is not included in the EG&G MAT Active Underground Storage Tank (UST) Plan. A second sump, indicated by the building manager as located in the mechanical room, was not observed by the appraisal team.

The building has been tested and does contain asbestos building material (MD-10391, *Asbestos Program Manual*, 9-14-95). There is no visual evidence of friable asbestos. Pipe-lagging was well maintained, and piping was well-marked.

There is no record of current or past presence of polychlorinated biphenyls (PCB's) in the PCB Annual Document Log. However, there is a transformer on the roof which does not bear a tag indicating PCB content.

9.8.4.5 Solid, Hazardous, and Radioactive Wastes

There are no hazardous or radioactive wastes generated in Building GH by process. Solid waste consists of typical office waste streams. Solid wastes are removed by janitorial personnel to a site collection point, then are shipped offsite to a local landfill by a contractor. Aluminum cans, glass, and cardboard are removed by janitorial personnel to specific collection points, then sent offsite to be recycled by a contractor. White paper is collected and sent offsite to be recycled by a service contractor. Waste management contains all contracts for these services.

9.8.4.6 Waste Minimization and Pollution Prevention

At Mound there is an active program to minimize waste streams in accordance with state and federal requirements and Executive Order 12856. Recycling is conducted as described in the previous section of the report.

9.8.5 Findings and Recommendations

Photographs were taken to document the environmental appraisal. They are included as Attachment 6 (Section 9.8.6.6). Findings related to the environmental appraisal of Building GH indicate that the following action items, in priority order, should be planned and scheduled for accomplishment thus assuring that best management nd operating practices are in place.

GH-1 Procedures should be developed for routine inspection and maintenance related to the sump. Action should be taken to determine its content and test the sump integrity. The sump should be added to those listed in the EG&G MAT Active UST Plan.

GH-2 The transformer on the roof should be tagged to show PCB content, in accordance with 40 CFR 761. If the transformer is the dry type, no tag is required. However the building manager should be apprised.

GH-3 MSDS's should be readily available to employees, in accordance with 29 CFR 1910.1200(g). In addition to storage by the janitorial staff in a central location, they should be available in the buildings where the supplies are used and stored.

9.8.6.1 Environmental Appraisal Checklist

ENVIRONMENTAL APPRAISAL CHECKLIST

Building Name GH

Appraisers:

John Hauskeal
Name Discipline

Mike Minker
Name Discipline

Randy Vogel
Name Discipline

Name Discipline

Building Manager: Kathy Kiehler

Process Manager: Bob Rae

Date: 3-7-96 am

ENVIRONMENTAL APPRAISAL CHECKLIST

Table of Contents

Checklist	Page
Clean Water Act	1
Clean Air Act	2
Hazardous Materials	4
Safe Drinking Water Act	7
RCRA Hazardous Waste	8
TSCA and NESHAP Requirements for Asbestos	13
TSCA—PCB	14
Low-level and Transuranic Waste	17
Waste Minimization/Pollution Prevention Activities	22

Environmental Appraisal Checklist

Building Name: GH Appraisers: Vyas/Hausfeld/Merker Date: 2-7-96 am

Clean Water Act (CWA) Screening Checklist

Question	Response	Comments
Does the outside drain spouting of the building discharge directly to a storm sewer/sanitary system?	Y / N	If the answer to any of these questions is yes, proceed with the following checklist.
Are there sinks, toilets and floor drains in the building?	Y / N	
Are chemicals being used in the building?	Y / N	
Is there a process which discharges to the storm or sanitary system?	Y / N	

Well maintained indoors & outdoors

CWA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 122 Appendix D Table V	If chemicals are used/stored in the building, are they on the attached list? Are they properly contained?	Y / N Y / N	Janitorial chemicals not included in checklist.
	Is the building in operation? What are the processes and where do they discharge to?	Y / N _____ _____	Office
	Do the floor drains, sinks & toilets appear to be draining properly?	Y / N	
OAC 3745-33	Do the floor drains and sinks drain to a sanitary or storm sewer?	Sanitary Storm	Sanitary & Storm service per site drawings
	Is there a sump/pit in the building? If so, what does it contain? How often is it pumped out? Does water collect in sump? Does sump have secondary containment?	Y / N _____ _____ Y / N Y / N not known	Sump in mechanical room Per BMQ may contain H_2O May overflow
	Are there any manholes, catch basins, drains, or fill pipes in or around the building? If so, are there any unusual appearances, colors, and/or odors? Describe in comment section. Can chemicals flow into the drain?	Y / N / N/A Y / N Y / N	

6-8-9

Office bldg – transformer cntr. housing
[illegible] contaminant residuals. formerly

• Check BUSTR report to confirm if sump is registered, leak tested, construction details.

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas / Hausfeld / Merker

Date: 2-7-96

Clean Air Act (CAA) Screening Checklist

Regulatory Guideline	Question	Response	Comments
	Are there any rooms that have air emissions sources that vent to the outside of the building, e.g., fumehoods, equipment? If so, note the rooms.	Y / N	
OAC 3745-35	Using the air emissions inventory reference for this building, are there any sources in the building that are not documented?	Y / N	
	Is there evidence of fugitive dust emissions inside or outside of the building	Y / N	

CAA Checklist

Regulatory Guideline	Question	Response	Comments
	Are there existing air permits or applications applicable to the building?	Y / N	
OAC 3745-31,35	If yes, are the terms and conditions of the permit or the information included on the application (see air emissions database) being followed? Note any differences and update the air emissions database.	Y / N	
OAC 3745-31	Are there any sources that are not included in the air emissions database? If so, note the room, hood number, active or not, POC, and applicable air emission database information on Table B.	Y / N	
OAC 3745-31-03	Are there sources which are lab equipment of lab fumeheads used exclusively for chemical or physical analyses and bench scale lab equipment? These sources do not require a permit. However, the air emissions database should be updated.	Y / N	
	Has there been any release of air contaminants from this building?	Y / N	

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Uyas/Hamafeed/Merker Date: 2-7-96

CAA Checklist

NOT COMPLETED

Comments: Note the number of sources/hoods per room, the number that are active, and the POC on the reference document.

TABLE A									
Process Source	Room Number	Hood Number	In Database	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Hours/Yr. Operation	Air Emissions
			Y / N	Y / N					
			Y / N	Y / N					
			Y / N	Y / N					
			Y / N	Y / N					
			Y / N	Y / N					

Source:_____

9.8-11

9.8-12

Environmental Appraisal Checklist

Building Name: 614 Appraisers: Uyes/Hawfield/Mercer Date: 2-7-96am

Hazardous Materials (HM) Screening Checklist

Question	Response	Comments
Are any chemicals used or stored in this building, now or in the past?	Y / N	If the answer is yes, proceed with the following checklist.

Janitorial equipment

HM Checklist

Regulatory Guideline	Question	Response	Comments
29 CFR 1910.1200(b,f)	All containers of hazardous chemicals shall be labeled as to the identity of the chemical and the appropriate hazard warnings.	Y / N	
29 CFR 1910.1200(g)	MSDS shall be available to the employees in close proximity to the work area.	Y / N	need to move janitorial MSDS to Bldg 614
29 CFR 1910.22, 1910.106, 1910.176	All places of employment, passageways, storerooms and service areas shall be kept clean and orderly and in a sanitary manner. Aisles shall be unobstructed. Drums and containers are not leaking and are tightly sealed.	Y / N	
29 CFR 1910.106	Storage cabinets for flammable materials are constantly kept closed, are fire resistant and are labeled "FLAMMABLE - Keep Fire Away". Containers inside should be labeled and closed. No spills inside cabinet.	Y / N N/A	
29 CFR 1910.106(d)(7)	Incompatible chemicals are not stored together.	Y / N N/A	
29 CFR 1910.106(d)(4)	Inside Flammable/combustible storage rooms must meet the following: 4 in. raised sill or trench that drains to a safe area, liquid tight wall/floor joints, self-closing doors, gravity or mechanical exhaust providing 6 room changes/hr., exhaust switch located outside room, at least one 3 ft. aisle; no cracks in secondary containment.	Y / N N/A	

• Recommend that MSDS for janitorial supplies be distributed to buildings

Environmental Appraisal Checklist

Building Name: G21 Appraisers: Ugo/Hallsfield/Merker Date: 2-7-96 am

HM Checklist

Pipes well marked.

Regulatory Guideline	Question	Response	Comments
29 CFR 1910.106(d)(7)	All flammable/combustible storage locations have at least one 12-B portable fire extinguisher located outside and within 10 ft. of a door opening into any room for storage. No smoking signs are posted.	Y / N NA	
29 CFR 1910.151	Eyewashes/showers shall be provided within the work area. Ensure unit is operational.	Y / N none	
CGA P-1 3.3 & 3.3.10	All gas cylinders (full or empty) shall carry a legible label or marking identifying the contents.	Y / N non	
CGA P-1 3.5.3	Full and empty containers should be stored separately with the storage layout planned so that containers comprising of old stock can be removed first with a minimum handling of other containers.	Y / N none	
CGA P-1 3.5.8	All compressed gas containers in service or in storage shall be stored standing upright and the container shall be secured.	Y / N none	
CGA P-1 4.2.2	Oxygen cylinders shall be separated from flammable gas containers or combustible materials a minimum of 20 ft. or a noncombustible barrier 5 ft. high.	Y / N NA	
29 CFR 1910.104(2)(10)	Oxygen stored as a liquid shall be on a noncombustible surface. Asphalt is considered combustible. Wood and long dry grass shall be cut back 15 ft. from the container.	Y / N NA	
29 CFR 1910.104	Bulk oxygen storage shall be permanently placarded "OXYGEN - NO SMOKING - NO OPEN FLAMES".	Y / N NA	
	Is there a sign posted in each work area regarding emergency egress and emergency response action?	(Y) / N	
	Is there an emergency response plan available?	(Y) / N	

9.8-13

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vgs/Hausfeld/Merker

Date: 2-7-96

HM Checklist

Regulatory Guideline	Question	Response	Comments
	Is there a process area?	Y / N	
	Does it have proper containment?	Y / N	
	Is there a liquid bulk transfer area?	Y / N	
	Is there proper containment?	Y / N	
	Is there an above ground storage tank? If so, complete Table B.	Y / N	

Above Ground Storage Tanks Inventory

TABLE B—Above Ground Storage Tanks Inventory

Building	Capacity (Gal.)	Contents	Estimated Volume	In Service	Containment	Visual Stains/ Contamination	If Empty, Flushed
	None			Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N
				Y / N	Y / N	Y / N	Y / N

Source: _____

Environmental Appraisal Checklist

Building Name: GH Appraisers: Vogo/Hauenfeld/Merker Date: 2-7-96 am

Safe Drinking Water Act (SDWA) Screening Checklist

Does this facility have potable water?	(Y) / N	If yes, conduct the following survey.

SDWA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745 95-02 (A)	Do actual or potential cross-connections exist between potable (light green) and service water (dark green)?	(Y) / N	
OAC 3745 95-04 (B)(C)	Are backflow prevention devices installed where cross connections (hoses connected to faucets, hot water tank vented directly to a drain) exist?	(Y) / N	
	Are sources of service water (janitorial and laboratory faucets, or outdoor spigots) posted as non-potable water sources?	(Y) / N	
	Does the facility contain any water coolers or fountains that are not lead free? Complete Table C.	(Y) / N	see below

TABLE C—Water Fountain Survey

Building	Location	Model #	Comments / Date of Analysis for Lead
GH	14	Oasis	8644285239
GH	corridor 9	~~[illegible]~~ Elkay	no number
		not	

Source: _____

check prints for service water

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas/Hansfield/Merker Date: 2-7-96 am

RCRA Screening Checklist

Does this facility generate waste or use chemicals?	Y / N	If yes, conduct the following survey.

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745 52-11	Has any material generated been characterized RCRA hazardous? Was charactarization by analysis or by process knowledge? Are lab results or documentation of process knowledge readily available? Note any uncharacterized material in comment section. Is it waste? If yes, proceed with next section.	Y / N analysis / process Y / N Y / N	
OAC 3745 52-11	Are any of the materials noted RCRA hazardous waste? If no, note and stop here. If yes, note the location of the management unit, and the method of management, and proceed with the appropriate section below.	Y / N	

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Uyo/Hansfield/Merker

Date: 2-7-96am

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
I. HAZARDOUS WASTE STORED IN CONTAINERS			
	Is there an area in the building that could qualify as a Satellite Accumulation Area? Is it treated as such?	Y / N Y / N	
OAC 3475-52-34 (C)	Has any of the RCRA hazardous waste in this building been managed in Satellite Accumulation Areas? If no, proceed to the next section. If yes, answer the following.	Y / N	
	Are the containers marked with the words hazardous waste, or other words denoting the hazard?	Y / N	
	Are the containers in good condition?	Y / N	
	Are the waste compatible with the containers?	Y / N	
	Are containers managing ignitable hazardous waste stored at least 50 feet from the plant site boundary?	Y / N	
	Are containers kept closed and locked except during filling?	Y / N	
	Are containers moved within 3 days of being filled?	Y / N	

9.8-17

9.8-18

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas/Hausfeld/Merker

Date: 2-7-96 am

NOT completed

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
OAC 3745-52-11 (A)	If a Satellite accumulation area has been abandoned and/or if waste left in place, and the containers may be subject to the 90-day-storage exclusion. If this exclusion does not apply, go to the next section. If the containers have been in storage under this exclusion, answer the following:		
	Are the containers in good condition?	Y / N	
	Are the waste compatible with the containers?	Y / N	
	Are the containers kept closed except during filling?	Y / N	
	Are the containers managed in such a way, that they are not ruptured, or leaks caused?	Y / N	
	Is the area inspected at least once weekly?	Y / N	
	Is the inspection recorded? Where is the log? Is it properly completed, dated, and signed?	Y / N Y / N	
	Are containers managing ignitable hazardous waste stored at least 50 feet from the facility boundary?	Y / N	
	Are incompatible wastes managed in such a way that they will not react with another incompatible waste?	Y / N	
OAC 3745-52-34(B)	Has any of the waste (except in Building 23, Building 72 and the Burn Area) been managed in excess of 90-days?	Y / N	
	If no go to next section.		
	If yes, note.		
	For Building 23, Building 72 & Burn Area use special checklist.		

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vigus/Hausfeld/Merkel

Date: ~~2-26-9~~ 2-7-96 am

RCRA Checklist

Regulatory Guideline	Question	Response	Comments
II. HAZARDOUS WASTE STORED IN TANKS			
OAC 3745-52-32 (B)	Has any chemical waste stored in a tank, piece of process equipment or ancillary equipment been in storage in excess of 90-days? yes	Y / N	No tanks no chem waste
	If the answer was no, then proceed with the following:	Y / N	
	Has the tank or piece of equipment had an integrity assessment?	Y / N	
	Is there a sump?	Y / N	
	Is it dry?	Y / N	
	Does the tank or equipment have secondary containment?	Y / N	
	Does the tank or equipment have leak detection device(s)?	Y / N	
	Has spill control prevention been enacted?	Y / N	
	Has any hazardous waste stored in a tank, piece of process equipment or ancillary equipment been in storage in excess of 90-days?	Y / N	
	If the answer was no, then proceed with the following:		
	Has the tank or piece of equipment had an integrity assessment?	Y / N	
	Does the tank or equipment have secondary containment?	Y / N	
	Does the tank or equipment have leak detection device(s)?	Y / N	
	Has spill control prevention been enacted?	Y / N	
	Is there a closure plan?	Y / N	
	If yes, then note.		
OAC 3745-67	Has any of the waste been managed in a surface impoundment? If yes, then note. Go to the next section.	Y / N	

9.8-19

9.8-20

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas/Hauxfeld/Merker

Date: 2-7-96 am

RCRA Checklist

Not Completed

Regulatory Guideline	Question	Response	Comments
OAC 3745-68	Has any of the waste been managed in a Landfill? If yes, then note. Go to the next section.	Y / N	
OAC 3745-68	Has any of the waste been managed in an Incinerator (other than Burn area units)? If yes, then note. Go to the next section.	Y / N	
OAC 3745-68	Has any of the waste been managed in a Thermal treatment Unit (other than Burn area units)? If yes, then note. Go to the next section	Y / N	
OAC 3745-69	Has any of the waste been managed in a Miscellaneous Treatment Unit (other than Burn area units)? If yes, then not. Go to the next section.	Y / N	
OAC 3745-56	Has any of the waste been managed in a Waste Pile? If yes, then note. Go to the next section.	Y / N	

General Comments:

Environmental Appraisal Checklist

Building Name: 64 Appraisers: Vyas/Hausfeld/Merker Date: 2-7-96 am

Asbestos Screening Checklist

Does this facility contain ACBM?	Y / N	If yes, conduct the following survey.

Asbestos Checklist

pipe lagging in good condition

Note: Routinely, the asbestos standard for ACBM in schools has been applied to facilities for purpose of cleanup. In addition to AEHERA, there are additional standards in the NESHAPS that may be of importance.

Regulatory Guideline	Question	Response	Comments
ADAPTED FROM TSCA ACBM IN SCHOOLS:			
	Has this building been characterized either through process knowledge, by analyses, or by inspection to determine if it contains asbestos? If no for this building or area note this conclusion in the comment section.	Y / N	
	Is there any evidence of friable asbestos?	Y / N	
	Is the asbestos removal properly managed? (See questions listed below)	Y / N	If there is no asbestos removal, do not complete the following section.
NESHAPS FOR ASBESTOS FOR ANY ONGOING ASBESTOS REMOVAL:			
40 CFR 61.156	There are no discharges of visible emissions to the outside air from collection, processing, packaging, transporting, or deposition of ACBM during the removal.	Y / N	
40 CFR 61.152(b) (1)	ACBM is treated with water in accordance with 40 CFR 152(b)?	Y / N	
40 CFR 61.154	Is friable asbestos adequately wetted during stripping? Or, has an adequate ventilation and collection system been installed?	Y / N	
40 CFR 61.152	Is wetting continued until the waste friable asbestos is collected for disposal?	Y / N	

9.8-21

Environmental Appraisal Checklist

Building Name: GH Appraisers: Vyas/Hausfeld/Merker Date: 2-7-96 am

Toxic Substances and Control Act (TSCA) PCB's Screening Checklist

Does this facility potentially contain any PCB's or PCB contaminated equipment?	Y / N	If yes, are transformers labeled (Blue or Yellow stickers)? If yes, conduct the following survey.

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761	Has any waste generated in, or from, this building been characterized either through process knowledge or by analyses to determine if it contains PCB's ? If the answer is no, note . If the answer is yes, proceed with next section.	Y / N	transformers in roof not marked with blue sticker
	Based on an inspection, are any of the materials or equipment potentially PCB contaminated? If no, note and stop here. If yes, note the location of the management unit, and the method of management, and proceed.	Y / N NOT KNOWN	No information on PCB. annual ~~Report Sheet~~ Document Log re: contamination in OH
40 CFR 761.65 (c) (5)	Are PCB articles or containers stored in this building checked for leaks at least once every 30 days?	Y / N	
	If yes, are auditable records maintained.	Y / N	
40 CFR.30 (a) (1) (ix)	Are any PCB transformers in use, or stored for possible reuse, that contain PCB's at concentrations of 500 ppm or greater?	Y / N	
	Are they visually inspected quarterly? If yes, are auditable records maintained?	Y / N	

- Sample transformer to determine PCB content, Affix stick - for content.

Environmental Appraisal Checklist

Building Name: 6H

Appraisers: Vyas/Hirsfeld/Merker

Date: 2-7-96am

NOT completed.

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761.30 (a) 1,viii	Are all combustible materials (i.e., paints, solvents, plastics, paper, sawn wood, etc.) cleared from areas containing PCB transformers to a distance of five meters?	Y / N	
40 CFR 761.65 (b) (8)	Are all PCB articles and containers labeled with the date they were placed in storage?	Y / N	
	Are labeled PCB articles and containers stored so that the labels can be referenced?	Y / N	
40 CFR 761.65 (a)	Are all PCB's and PCB contaminated items at concentrations above 50 PPM, that are stored for disposal, stored no longer than one year from the date they were placed in storage?	Y / N	
40 CFR 761.62 (b) (1) (i)	Do all PCB storage areas have an adequate roof and walls to prevent rainwater from reaching the stored items?	Y / N	
40 CFR 761.62 (b) (1) (iv)	Are storage are floors curbed and constructed of continuous smooth and impervious materials?	Y / N	
40 CFR 761.62 (b) (1) (i)	Are the curbs at least 6 inches high?	Y / N	
40 CFR 761.62 (b) (1) (iii)	No drains are allowed in storage areas. Are there drains in the storage areas?	Y / N	

9.8-23

Environmental Appraisal Checklist

Building Name: 6H

Appraisers: Vyas/Haugfeld/Merker

Date: 2-7-96 am

NOT Completed

TSCA Checklist

Regulatory Guideline	Question	Response	Comments
40 CFR 761.65 (c) (2)	Only non-leaking and undamaged large high voltage PCB's capacitators and PCB-containing electrical equipment are allowed to be stored outside of PCB storage areas, on pallets if stored outside, with containment for 10 percent of the volume of the equipment. Do all PCB's stored in this configuration conform with this requirement?	Y / N	
40 CFR 761.45 and .65	Are all PCB storage areas marked with a large PCB mark as described in 40 CFR 761.45 (a)?	Y / N	
40 CFR 761.65 (c) (5)	Have all leaking PCB articles and containers been transferred to non-leaking containers?	Y / N	
40 CFR 761.65 (c) (6)	Do all PCB storage containers for the storage of liquid and non-liquid PCB's comply with DOT shipping container specifications?	Y / N	

GENERAL COMMENTS:

Environmental Appraisal Checklist

Building Name: 6H Appraisers: Vyas / Hallsfeld / Merker Date: 2-7-96am

Low-Level Waste and Transuranic Waste Screening Checklist

Does this facility contain radioactive waste ?	Y / N	If yes, conduct the following survey.

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
Low-Level Waste			
DOE Order 5820.2A Chapter III	Can any waste generated in, or from, this building be characterized either through process knowledge or by analyses to determine if it is LLW ? If the answer is no, note. If the answer is yes, proceed with next section.	Y / N	
DOE Order 5820.2A Chapter III.	Are any of the materials noted by inspection LLW? If no, The audit would stop here, because there are no LLW. If yes, note the location of the management unit, and the method of management, and proceed with the section below.	Y / N	
DOE Order 5820.2A Chapter III, 3.a.	Have the storage configurations in use in this area been taken into account for keeping external exposures to the general public below 25 mrem/yr?	Y / N	
	Is the waste stored in a configuration that protects ground-water resources?	Y / N	
DOE Order 5820.2A Chapter III, 3.b.	Has monitoring been conducted in this area in accordance with DOE Order 5820.2A in order to evaluate the area against the performance standard?	Y / N	
	Based on field data, does the monitoring conducted in this area conform to the performance standard?	Y / N	

9.8-25

9-8-26

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas / Hausfeld / Merker

Date: 2-7-96 am

NOT COMPLETED

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A Chapter III, 3.d.	Based on field data, is the characterization of the materials in this area sufficient to assure proper segregation to assure proper segregation, treatment, storage, and disposal?	Y / N	
	Based on field data does the characterization as documented at the time of generation of the waste ensure that the actual physical and chemical characteristics, and major radionuclide content of this material are recorded and known at all stages of the waste management process?	Y / N	
	Do characterization data include the following:		
	Physical and chemical characteristics of the waste?	Y / N	
	Volume of the waste (including solidification and absorbent material)?	Y / N	
	Weight of the waste (including solidification and absorbent material)?	Y / N	
	Major radionuclides and their concentrations?	Y / N	
	Packaging date, package weight, external volume?	Y / N	
	How were the concentration of radionuclides determined? Direct methods?	_____ _____	
	How were the concentrations of radionuclides determined? Indirect methods?	_____ _____	
DOE Order 5820.2A Chapter III, 3.h	Is the storage configuration in long term storage sufficient to meet the performance standard?	Y / N	
	Are records maintained at the facility enabling this waste to be traced from its origin?	Y / N	

Environmental Appraisal Checklist

Building Name: 6H

Appraisers: Vyas/Haufield/Merker

Date: 2-7-96 am

Low-Level Waste and Transuranic Waste Checklist

~~Not completed~~

Regulatory Guideline	Question	Response	Comments
TRU WASTE			
	Can any waste generated in, or from this building be characterized either through process knowledge or by analyses to determine if it is TRU waste? If no, note and stop. If yes, proceed with the next section.	Y / N	
	Are any of the materials noted as being TRU waste during an inspection? If no, note and stop. If the answer is yes, note the location of the management unit, and the method of management and proceed with the appropriate section below.	Y / N	
DOE Order 5820.2A, Chapter II, 3.a	Was this material evaluated as soon as possible in the generating process, to determine if it is TRU (>100nCi/g), if it is recoverable, or if it is waste? (Note if the activity level is less than 100nCi/g, the waste is not TRU, and can be managed as LLW.)	Y / N	
	Did the determination of TRU radionuclide concentration include the mass of the container, including shielding? These should be included in calculating the specific activity of the waste.	Y / N	

9.8-27

9.8-28

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas / Hansfield / Merker Date: 2-7-96 am

NOT COMPLETED

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A, Chapter II, 3.b	Has the TRU waste been assayed or otherwise evaluated to determine its radioactive content prior to storage?	Y / N	
	Has the TRU waste been characterized or otherwise evaluated to determine if hazardous waste is present?	Y / N	
	Has classified TRU waste been treated to destroy the classified characteristics?	Y / N	
DOE Order 5820.2A, Chapter II 3.d	Has all newly generated TRU waste been packaged in non-combustible packaging that meets DOT requirements?	Y / N	
	Have all Type A TRU waste packages been equipped with a method to prevent pressure buildup?	Y / N	
	Have all TRU packages been marked, labeled and sealed in accordance with 40 CFR 261 Subpart C and 49 CFR 172 Subparts D, E and 49 CFR 173 Subpart I?	Y / N	

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas / Hausfeld / Merker Date: 2-7-96 am

NOT completed

Low-Level Waste and Transuranic Waste Checklist

Regulatory Guideline	Question	Response	Comments
DOE Order 5820.2A, Chapter II 3.e	Has the TRU waste been segregated in manner that will not permit commingling of TRU waste with LLW or high-level waste?	Y / N	
	Has the TRU waste been protected from unauthorized access?	Y / N	
	Has the TRU waste been monitored periodically to ensure that it is not releasing its radioactive and/or hazardous constituents?	Y / N	
	Has this TRU waste storage area been designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or accidental release of its radioactive and/or hazardous constituents?	Y / N	
	Does the facility have a contingency plan designed to minimize the adverse impacts of fire, explosion, or accidental release of its radioactive and/or hazardous constituents?	Y / N	

GENERAL COMMENTS:

9.8-29

9.8-30

Environmental Appraisal Checklist

Building Name: GH Appraisers: Vyas / Hausfeld / Merker Date: 2-7-96 am

Waste Minimization/Pollution Prevention Activities Screening Checklist

Does this facility generate waste or use chemicals?	Y / N	If yes, conduct the following survey.

Waste Minimiaztion/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Based on available information and a walk through, are there any apparent opportunities to curtail the consumption of raw materials (including but not limited to paper, chemicals, electricity, and etc.). If yes, list candidate areas in the comment section.	Y / N	office wastes.
	Are there solvent wastes?	Y / N	
	Is vehicle maintenance performed?	Y / N	
	Are oils used ?	Y / N	
	Are these corrosive wastes?	Y / N	
	Are there sludges?	Y / N	
	Are there halogenated organic (nonsolvent) wastes?	Y / N	
	Are metals recovered from wastewater?	Y / N	
	Is waste sludge generated?	Y / N	
	Are any waste minimization practices used that reduce the generation of sludge?	Y / N	
	Ion exchange process?	Y / N	
	Lead in gasoline lowered to reduce tank sludge toxicity?	Y / N	
	Storage tank agitators installed?	Y / N	
	Corrosive resistant materials used?	Y / N	
	Prevention of crude oil oxidation ?	Y / N	
	Drying?	Y / N	

[illegible] energy audit to [illegible] can & paper recycli[illegible]

Environmental Appraisal Checklist

Building Name: GH Appraisers: Vogs/Hanefeld/Merker Date: 2-7-96 am

NOT completed

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
HALOGENATED ORGANIC (NONSOLVENT) WASTES		N/A	
	Are halogenated organic wastes used as fuel in cement kilns?	Y / N	
	Are baghouse filters used to collect pesticides and pesticide intermediates?	Y / N	
	Are solid wastes generated from the collection of baghouse dust?	Y / N	
	Wet instead of dry grinding used?	Y / N	
	The output spray dried?	Y / N	
	Has baghouse emptying and recycling of baghouse fines been scheduled?	Y / N	
	Have operations been evaluated to improve procedures such as handling, storage and spill prevention for increased efficiency?	Y / N	
METAL WASTES		N/A	
	Are any technologies for the recovering of metals from waste rinsewater used?	Y / N	
	Evaporation of waste rinsewater?	Y / N	
	Reverse osmosis?	Y / N	
	Ion exchange?	Y / N	
	Electrolysis?	Y / N	
	Agglomeration?	Y / N	
CORROSIVE WASTES		N/A	
	Are acidic or basic cleaning solutions used as treatment for pH adjustment chemicals?	Y / N	

9.8-31

9.8-32

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vigao/Hallofeld/Merker Date: 2-7-96 am

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are ion exchange resins used to remove heavy metals and cyanides from acid and base solutions?	Y / N	
	Is crystallization used to remove corrosives from solution by cooling?	Y / N	
	Is the process of evaporation of liquid wastes by heating used to leave behind a more concentrated solution?	Y / N	
CYANIDE AND REACTIVE WASTES			NA
	Has non-cyanide or low concentration of cyanide process replaced zinc cyanide bath ?	Y / N	
	Are any of these processes used to recycle cyanide wastes?	Y / N	
	Refrigeration/crystallization?	Y / N	
	Evaporation?	Y / N	
	Ion exchange?	Y / N	
	Membrane separation which includes reverse osmosis or electrodialysis?	Y / N	
VEHICLE MAINTENANCE			NA
	How are auto parts cleaned?	Y / N	
	Solvent sink?	Y / N	
	Solvent dunk bucket?	Y / N	
	Solvent dip tank?	Y / N	
	Are parts cleaning solvents used for anything else besides cleaning parts?	Y / N	
	Are spills reduced by locating sinks or dunk buckets near auto service bays?	Y / N	

Environmental Appraisal Checklist

Building Name: GH

Appraisers: Vyas/Hausfeld/Merker Date: 2-7-96am

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are cleaned parts drained on the sink to minimize solvent spills?	Y / N	
	Are drip tanks used to capture losses?	Y / N	
	Is a solvent sink used for mineral solvents rather than a dunk bucket or dip tank?	Y / N	
	Does a waste hauler collect solvent waste for recycling or treatment?	Y / N	
OILS		NA	
	What kind of oils are used?		
	Hydraulic oil?	Y / N	
	Transformer oil?	Y / N	
	Metal working fluids?	Y / N	
	Spent lubricating oils?	Y / N	
	Can the process be modified or changed to use water-based fluids?	Y / N	
	Are these good housekeeping and operation practices used to minimize oil waste production?		
	Use oils not contaminated with other liquids?	Y / N	
	Oil spills prevented?	Y / N	
	Drip pans installed?	Y / N	
	Oil soaked rags laundered?	Y / N	
	Rags and absorbants used to their limit?	Y / N	

Environmental Appraisal Checklist

Building Name: G.H Appraisers: Vyas/Hauxfeld/Merker Date: 2-7-96am

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are these treatment techniques used to promote separation of oil/water wastes?		
	Reclaiming process to remove water and solvents by heat?	Y / N	
	Gravity setting?	Y / N	
	Screening?	Y / N	
	Centrifugation?	Y / N	
	Filtration?	Y / N	
SOLVENT WASTES	NA		
	Has there been an attempt to reduce volume or toxicity by:		
	Eliminating solvents?	Y / N	
	Reducing the use of solvents?	Y / N	
	Reducing the loss of solvents?	Y / N	
	Increasing recyclability?	Y / N	
	Are solvents segregated?	Y / N	
	Are waste solvents free from water and garbage?	Y / N	
	Are recycled solvent containers labeled as such?	Y / N	
	Are containers kept closed?	Y / N	
	Free and sheltered from the elements?	Y / N	
	Are solvent tanks kept as free from contaminations as possible so that the waste can be recycled?	Y / N	
	Is a method used to minimize the use of new materials such as a countercurrent process?	Y / N	

Environmental Appraisal Checklist

Building Name: GH Appraisers: Nyas/Hausfeld/Merker Date: 2-7-96 am

Not completed

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	If there is a recycling program, what technique is used?	Y / N	
	Distillation?	Y / N	
	Solids removal?	Y / N	
	• Dispersion breaking?	Y / N	
	Dissolved and emulsified organics recovery?	Y / N	
	Are any of these housekeeping procedures used to minimize the production of solvent wastes?		
	Separators cleaned and checked?	Y / N	
	Parts not allowed to enter the degreaser while wet?	Y / N	
	Sludge from the bottom of the tank not allowed to accumulate?	Y / N	
	Lids kept on tanks?	Y / N	
	Freeboard space on tanks increased?	Y / N	
	Are better operating practices used to reduce waste?	Y / N	
	How long is solvent waste stored and where?	_____ _____	

9.8-35

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M o u n d Electronic Message/AOS

From :John Hausfeld

HAUSJR

Dept. :ES&H

Tel. No :4216

Date :14-Feb-1996 07:23am EST

Subject :Env. Appraisal

TO :Katherine Koehler (KOEHKG)

CC :Eunice Warmoth(NANCY VYAS) (WARMEM)

CC :Michael Merker (MERKMJ)

CC :Susan Cloud (CLOUSA)

CC :Alton Brown (BROWAW)

Kathy,

Mike Merker, Nancy Vyas and I visited several buildings last Wednesday, February 7, completing the areas that you serve as building manager. They were: GH, GP-1, GIS, GP-8, Modular 4, and Building 100. Our recommendations are as follows:

GH building

Bob Race answered whatever questions we had. The building was very orderly and extremely clean. Heat and lights are turned off every night. Asbestos insulation on pipes was well labeled. The only action item discovered during

the tour is that the transformers on the roof needed to be labeled that they do not contain PCB's.

GP-1

Alton Brown accompanied us during the tour of GP-1. Overall, the building was in great condition. The items in the flammable cabinet were neatly stored and labeled. All areas were well labeled with their appropriate signs, including all trash receptacles. The janitors closet was very orderly, but did not contain any MSDS sheets for their supplies. Alton's MSDS's were readily available and he appears to be very conscious on Waste Minimization.

A couple of questions did arise. 1) In the utility room, room 119, is there a back-flow preventer on the system? 2) Is the sump in the firing range, rooms 23 & 24, active; and if so, when and where is it pumped? 3) Also, the lead dust that is vacuumed from the firing range is combined with the solvent rags. Our recommendation is that the two be separated so that the rags could possibly be sent out for recycling.

GIS

No problems.

GP-8

Could use some general housekeeping. Fire extinguisher needs up-dated tag -

9.8.6.2 Building Manager's Questionnaire

THE FOLLOWING QUESTIONNAIRE HAS BEEN [illegible] TO THE BEST OF MY KNOWLEDGE. PLEASE VERIFY ANY [illegible] THAT ARE PERTINENT. KG Koehler

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

1. What are the access requirements (training, clearance, etc.)?

NONE DURING NORMAL WORKING HOURS
CARD READER ACCESS AFTER NORMAL HOURS

2. What protective equipment is required to enter the building?

NONE

3. Are there any restricted areas? Yes (No)
Where are they?

4. Provide a physical description of the building.

Building is a 5,347-ft^2 concrete block building with a brick face. The building has a penthouse. It has a BUM roof (coal tar). It has central steam and package HVAC units. The building is not contaminated with radioactive or energetic materials.

Source: Mound Facility Physical Characterization, 12-1-93

5. Provide a drawing of the building.

Attached.

6. What is the current building use?

~~Offices and computer lab.~~ TRANSITION CENTER - EMPLOYMENT CENTER FOR LAID OFF OR RETIRED EX-MOUND EMPLOYEES

Source: Mound Buildings, 5-9-95

7. What is the history of building use other than that described in #6?

Previously used as office space for uncleared employees, part-time employees, and new employees. Planned for conversion to its present use in January of 1994.

Source: Mound Buildings, 5-9-95

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

8. What are ongoing operations or processes? What are the raw materials and waste streams from each process? Who is the best contact for each process?

Process(es) Housed: Offices

How Wastes Are Generated:

No hazardous wastes are generated in this building. OTHER THAN NORMAL OFFICE WASTES (WHITE OUT ETC,)

Contact:
Phone #:

Source: Characterization of Mound's Hazardous, Radioactive, and Mixed Waste, (8-15-90).

9.8-42

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

9. In the last six months, have any modifications been made to the building or to processes in the building? Yes No

10. Does the building have air emission sources? No

Process Source	Room Number	Hood Number	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Lbs./Yr. Operation	Air Emissions
			Y / N					
			Y / N					
			Y / N					
			Y / N					
			Y / N					

Source: Mound Air Emissions Database 11/30/95

9.8-43

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

11. Describe air pollution control equipment used to reduce emissions for each source. None Listed

Process Source	Emissions	Control Equipment	Functioning
			Y / N
			Y / N
			Y / N
			Y / N
			Y / N

Source: Air Permits 2/4/95

12. For existing permits are emissions monitored? At what frequency? Where are the records maintained? None Listed

Process Source	Permit	Log	Permit Conditions & Frequency of Monitoring
		Y / N	
		Y / N	
		Y / N	
		Y / N	
		Y / N	

Source: Air Permits 2/4/95

13. Does the building have domestic water service? (Yes) No
Is there bottled water? Yes No

14. Does the building discharge to the storm sewer? (Yes) No LIKELY
Where? ALL LOCATIONS NOT KNOWN

15. Does the building discharge to the sanitary sewer? (Yes) No
Where? TOILETS / RESTROOMS

16. Has an asbestos survey been conducted? (Yes)
What are the results? Yes

Source: Technical Manual MD-10391, Issue 3 Asbestos Program Manual 9/6/95

PLEASE VERIFY UTILITY DRAWINGS BUT REALIZE THEY ARE NOT IN AS-BUILT CONDITION.

9.8-44

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

17. Does the building contain transformers or capacitors? ~~No~~ YES BUT NOT PCB TRANSFORMERS

Source: PCB ANNUAL DOCUMENT LOG

18. Has the building been identified as containing PCBs? No

Source: PCB ANNUAL DOCUMENT LOG

19. What chemicals are used or stored inside or outside of the building? Include compressed gasses not in large tanks.

Chemical Name	State	Amount (MAX)
NONE		
OFFICE SUPPLIES		
JANITORIAL SUPPLIES		

Source: Chemical Inventory 1994

9.8-45

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

20. Has there been a reported spill, leak, or other release of any chemical? Yes No
What, how much, and what clean-up measures were followed? UNKNOWN

Chemical	Amount	Clean-up Measures

Source: _____

21. Where do waste chemicals go? —

UNKNOWN

22. What janitorial supplies are stored inside or outside of the building?

UNKNOWN - CONTACT JEANIE BLEVINS

23. Where do excess janitorial supplies go?

UNKNOWN - CONTACT JEANIE BLEVINS

Source: _____

24. Are pesticides or herbicides stored or used in or around the building? Yes (No)

Chemical	Amount	Chemical	Amount

Source: _____

9.8-46

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

25. Does the building contain active or inactive above ground storage tanks? Yes No
For each tank, list the content, quantity, last inspection, registration number.

NONE SUMP IN MECHANICAL ROOM → UST

26. Is there a sump or pit or underground tank in or around the building?
Yes No Unknown
Is it double-walled? ? What does it contain? WATER How many days per year is it filled? MANY
Is there an emergency overflow tank? Have there been previous overflows?
HISTORIC OVERFLOWS LIKELY

Double-Walled	Contents	Days/Year in Use	Overflow Tank	Previous Overflow
Y / N			Y / N	Y / N

Source: TALK WITH

27. Does the building generate, store, or dispose of hazardous waste? Yes No

KNOWN

Materials	Amount
LEAD WATER	179.2
LEAD WATER	282.0
LEAD WATER	271.8

Source: Characterization of Mounds Hazardous, Radioactive, and Mixed Wastes 08/15/90

9.8-47

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

28. Does the building have abandoned process equipment such as tanks, piping, containers, etc.? Yes No

29. Is waste material stored in or around the building for more than 90 days?
Yes No

30. Has the building been identified as a 90-day waste accumulation area?
Yes No

31. Has any area in the building been identified as a satellite accumulation area?
Yes No

32. Is mixed waste generated, stored, or disposed of from the building? Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

9.8-48

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

33. Is TRU radioactive waste generated, stored, or disposed of from the building?
Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

9.8-49

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

34. Is low-level radioactive waste generated, stored, or disposed of from the building? Yes No
Where are logs found?

Process	Waste	Stored	Disposed	Logs
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N
		Y / N	Y / N	Y / N

Source: _____

35. Identify all administrative orders, temporary or permanent injunctions, civil administrative penalties, or criminal activities issued against the building.

N.A.

9.8-50

Building Manager's Questionnaire

Building Name: GH Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

36. Is there a waste minimization program in the building? Yes (No)
Discuss your ideas about how to minimize waste.

JOB POSTINGS COULD BE PLACED ONLINE

37. Has a pollution prevention program been developed for the building? Yes (No)

9.8-51

Appendix G

Radiological Summary/Information

RADIOLOGICAL SURVEY PLAN

FOR THE

TRANSITION OF GH BUILDING

AND

SURROUNDING SOILS

January 19, 1999 (Rev.1)

1.0 Introduction

This document defines the radiological sampling and analysis requirements for the survey plan for the release of GH Building and its surrounding soils. The final disposition of the building is transition to the Department of Energy (DOE), and then turnover to the MMCIC. The intent is to release the building, indicating that the building is free of radiological contamination.

This plan will describe the methodology for obtaining radiological data and the criteria from which to evaluate the radiological data. All structural components will be radiologically evaluated and surveyed as appropriate. Survey methods will include direct and removable contamination surveys and sampling of soil. The results of the data obtained will be used to determine if the building can be released from a radiological standpoint. This survey is considered to be the final radiological survey prior to the building transition process.

2.0 Scope

The physical boundary of the building consists of the building and a fifteen-foot perimeter surrounding the exterior of the building. Based on existing information, the building is expected to be radiologically "clean" meaning that process history information indicates that no industrial process activities are known to have occurred in the building and no existing data suggests that a spill (or other mode of contamination) occurred in the building. Therefore, a confirmatory survey would demonstrate if unexpected radiological contamination were present.

The survey focused on evaluating only those areas, which have a high potential for unexpected contamination. Confirmatory surveys were performed on the interior of the building's floors, air vents and floor drains. Sampling and analysis of the first foot of the soil around the building was also conducted to determine if radiological materials were present. Surveys exterior to the building were performed on the roof, asphalt area and building foundation. Radiation dose rate measurements were performed as well.

3.0 Building Description

GH Building was constructed in 1948 and is a one-story, 5347 square-foot concrete block structure with a brick face. It has a utility penthouse and a built-up-membrane coal tar roof. It is physically located on the northern main hill of the Mound site and is surrounded by parking lots. It is northeast of Building W. The building was used as an outplacement office for the Transition Center beginning in 1994 as well as general office space. Prior to this, it was used as visitor control and as office space.

4.0 Confirmation Survey Requirements

The purpose of the confirmatory survey is to verify that the building is radiologically clean to the surface contamination criteria and dose requirements in DOE Order 5400.5 "Radiation Protection of the Public and the Environment" as specified in the "Generic Process for the Disposition of Buildings that have Potential or Actual Radiological Contamination." The surveys are non-destructive surveys. The confirmatory survey:

1) Provides a final check that a building does not have unexpected radiological contamination;
2) Identifies anomalies (e.g. elevated readings or readings above background which indicate potential existence of unexpected contamination) which indicate that the building may not be radiologically clean;
3) Fills existing data gaps and focuses on building survey characterization
4) Provides the level of data preferred by state regulators to support that the building is clean prior to release.

A confirmation survey was planned for those areas with the highest potential for contamination. The areas interior to GH Building which were surveyed for direct and removable radiological contamination included the floors, air vents and floor drains. The swipes taken were analyzed for gross alpha, beta and tritium radioactivity. In addition, the area by the front door was surveyed, as it was suspect due to the large volume of individuals entering the building in the past. The roof, asphalt pavement surrounding the building and the steam condensate sump pit were also surveyed. Radiation dose measurements were taken in the interior and exterior of the building to demonstrate that the levels of gamma radiation did not exceed background radiation by more than 20 uR/hour (0.02 mrem/hr).

If no anomalies (e.g. elevated readings) are detected, then this survey should be adequate to verify that the building is radiologically clean. If anomalies are detected, then the Project Manager would assess the significance and determine appropriate action based on input from project members.

5.0 Sampling

The main objectives of this radiological survey plan are to:

1. Verify that the surface contamination release criteria for building disposition agreed upon by the Radiological Decision Tools Team is met.

2. Verify that any surface contamination values are below the guidelines of Figure IV-1 of DOE 5400.5.

3. Verify that any residual radionuclide concentrations found in the soil samples taken meet the established cleanup criteria specified in "Mound's Risk-Based Guideline Values."

4. Verify that no radiation dose measurements exceed the dose limits specified in DOE 5400.5.

5. Verify that water sample results are below any environmental levels of concern as defined through Mound's Environmental Monitoring Program.

The need for a rigorous sampling assessment in the case of GH Building and the surrounding soils should not be necessary, since the building was an office building and there is no process knowledge of any contamination events. Historical reviews of the annual routine surveys performed in the building have detected no contamination. There is no knowledge of radiological activities or accidental spills that occurred in this building or the surrounding soils. Therefore, a more cost effective radiological survey plan is proposed. This information will be used as the final confirmatory survey, prior to its release.

The sampling and analysis performed will validate the historical process knowledge and provide data to demonstrate that criteria has been met. If contamination is detected above the established criteria, then the given process knowledge must be reassessed and the level of sampling increased to provide confidence on the level and extent of contamination.

5.1 Interior Sample Gridding and Sample Selection

The floor of GH Building was gridded off into 10 x 10-foot areas. Since the building is 5347 square feet, the plan identified that approximately 53.5 grid cells would be produced. Because the floor area varies in size and shape throughout the building, and separated into various rooms, more grids would be required to cover the entire area. This increased the number of grid cells to approximately 68 grids.

Six swipes were taken per gridded, carpeted area and analyzed for alpha, beta and tritium removable contamination. This number of swipes taken per gridded area equates to approximately 6.5 swipes per 10 m^2, which is similar to the standard guidelines of 10 swipes per 10 m^2. In addition, direct measurements were performed on 100 % of the floor area, using portable NE Electra instrumentation. Biased sampling was performed at all air vent and floor drain locations within the building. The swipes taken of the floor drains in the building were included as one of the swipes taken within the gridded area of interest. There were four floor drains within the building. Nineteen air intake vents were identified within the building. One swipe was taken on each air intake vent and counted for alpha, beta and tritium removable contamination.

5.2 Exterior Sample Gridding and Sample Location

The roof and penthouse of the building was gridded off into 10 x 10-foot gridded areas. The number of swipes taken per grid was reduced to 4, since there was a remote chance that contamination would exist here. Biased swipe sampling was performed on the drains, vents and ventilation units on the roof and penthouse area. The swipes taken on the drains, vents and ventilation units were included as part of the number of swipes taken per gridded area. This included biased sampling on 5 drains, 3 vents and 3 ventilation units. Direct measurements were taken over 100% of the roof and penthouse area, using portable NE Electra instrumentation.

Three soil samples were taken on the west side of GH Building in the gravel pit area. The remainder of the 15-foot exterior perimeter of the building is asphalt, which was divided into grids of 10 x 10 feet each. Four swipes were taken per gridded area and a 100% direct contamination survey was performed. The threshold of the building foundation near the front door was surveyed for direct and removable contamination, since this was a heavy traffic area. In addition, a manway cover and the steam condensate sump pit was surveyed for both removable and direct contamination. A water sample was taken from the sump pit area and analyzed for gross alpha and tritium contamination.

6.0 Discussion of Results

The results of the radiological survey efforts support the "radiological release" of GH Building. The surface contamination release criteria agreed upon by the Radiological Decision Tools Team has been met. The radiation dose rates are well below the 0.02 mrem/hour criteria specified in DOE 5400.5. The soil sample results are within the acceptable risk levels according to Mound's Risk-Based Guideline Values. The water sample taken in the pit area was below any environmental level of concern. All of the direct and removable contamination surveys were below DOE 5400.5 criteria and Mound's Radiological Control Program criteria, except for two locations. These locations will be explained further below.

Fixed alpha contamination of approximately 378 dpm/100 cm^2 was detected on the cover of a manway to the steam condensate sump pit, exterior to GH Building. (See Radiological Survey Data Sheet 98-GH-06) The manway cover was lifted for survey purposes and no contamination was detected on the underneath of the cover, nor in the sump pit area. The manway cover is believed to contain naturally occurring radioactivity; however this belief has not been substantiated. The manway cover was relocated to a radioactive material area in M Building and replaced with a newly-purchased manway cover.

Fixed alpha contamination of approximately 227 dpm/100 cm^2 was also detected on the threshold area of the foundation to the right and left of the front door. (See Radiological Survey Data Sheet 98-GH-06) A bulk concrete sample was collected for analysis. Alpha spectroscopy results showed levels of plutonium, uranium and thorium radionuclides above the laboratory's Minimum Detectable Activity (MDA). Scabbling of the threshold surface was performed on the threshold until no direct contamination could be detected using a NE Electra. A second bulk concrete sample was collected for analysis. Alpha spectroscopy results showed plutonium, uranium and thorium radioisotopes above the laboratory MDA. Scabbling was again performed on the threshold area and a concrete sample taken. Alpha spectroscopy results are pending. No direct contamination could be detected with the NE Electra.

7.0 References

1) DOE Order 5400.5 Radiation Protection of the Public and the Environment, 1/7/93.

2) Generic Process for the Disposition of Buildings that have Potential or Actual Radiological Contamination, March 1997.

3) Mound Plant Risk-Based Guideline Values, March 1997.

4) Sampling and Analysis Plan for the Characterization of E Building and Surrounding Soils, September 22, 1998.

5) Work Plan for Environmental Restoration of the DOE Mound Site, Public Review Draft, Rev. 0

GH Door Stoop Rad Survey Results

	Before 1st Scabbling		After 1st Scabbling		After 2nd Scabbling		10^{-6} Risk Based		OU9		Other	
	12/02/98		01/12/99		01/19/99		Guide Value		Background		Criteria	
PU-238	0.342	pCi/g	0.06	pCi/g	0.041	pCi/g	5.5	pCi/g	0.13	pCi/g	25	pCi/g
PU-239	<LDL	pCi/g	0.01	pCi/g	0.031	pCi/g	5.5	pCi/g	-	pCi/g	-	pCi/g
U-233/234	0.251	pCi/g	0.377	pCi/g	0.352	pCi/g	37	pCi/g	1.1	pCi/g	-	pCi/g
U-235	<LDL	pCi/g	0.025	pCi/g	0.021	pCi/g	3.35	pCi/g	0.11	pCi/g	-	pCi/g
U-238	0.327	pCi/g	0.289	pCi/g	0.382	pCi/g	11	pCi/g	1.2	pCi/g	-	pCi/g
Th-227	0.207	pCi/g	-	pCi/g	-	pCi/g	-	pCi/g	-	pCi/g	-	pCi/g
Th-228	0.461	pCi/g	0.328	pCi/g	0.239	pCi/g	0.85	pCi/g	1.5	pCi/g	-	pCi/g
Th-230	0.367	pCi/g	0.443	pCi/g	0.463	pCi/g	44	pCi/g	1.9	pCi/g	-	pCi/g
Th-232	0.235	pCi/g	0.307	pCi/g	0.248	pCi/g	50	pCi/g	1.4	pCi/g	5	pCi/g
Notes:	Activity detected with NE Electra		No activity detected with NE Electra		No activity detected with NE Electra							

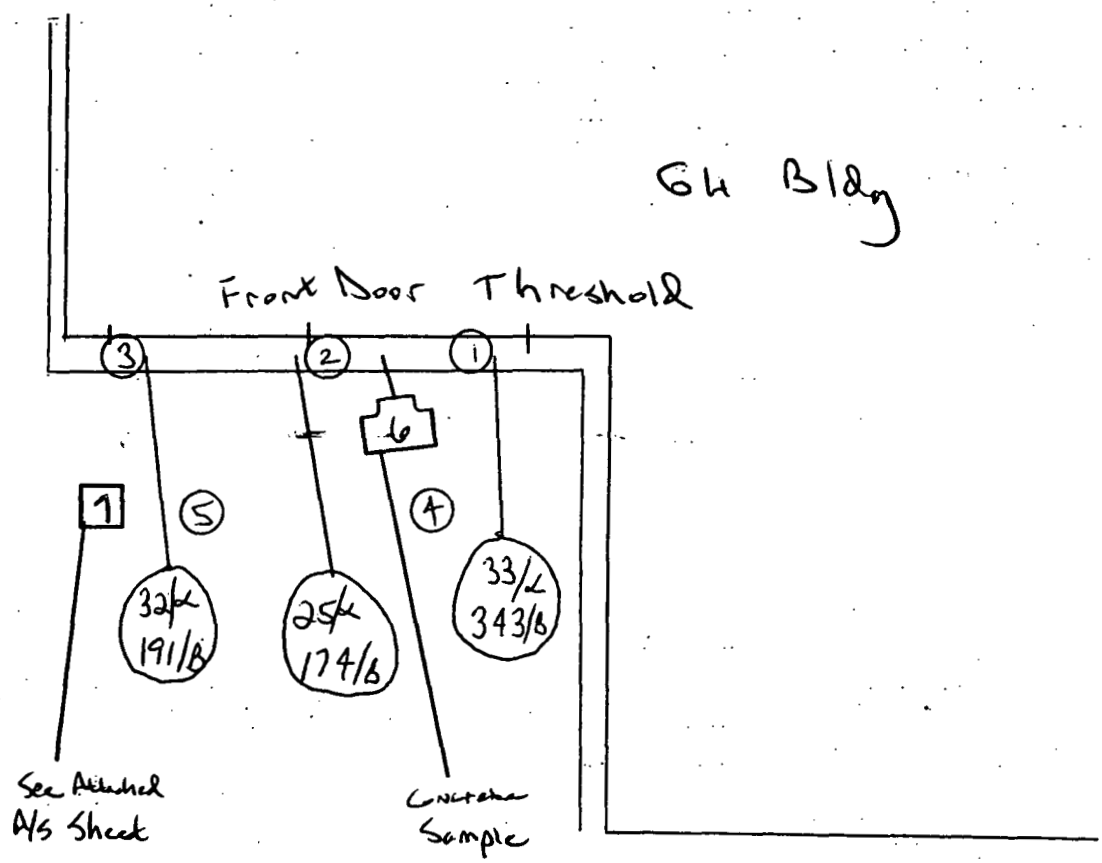
Detectable radiological activities were found using an NE Electra, which detects to a 20 dpm/100 cm^2 level. Concrete samples were then taken and submitted to the environmental analysis lab to determine specific isotopes. In the lab, a gross alpha analysis was done. Then samples were broken down by acid leaching and acid dissolution before being analyzed to determine specific isotopic concentrations of Pu, U and Th. This parallels the methods used for environmental surveillance of soil or other solid matrix sampling. The count times and the associated MDA are at the environmental surveillance level.

B-1/B-5 R-214 p.4

OLOGICAL SURVEY DATA SHEET

(BLDG./AREA/ROOM) 64 Bldg Front Door threshold	SURVEY NO. 99-64-001
SE: Post Decon of α FCA/Release Survey	RWP NO. 64-002-99
	DATE: 1/12/99
	TIME: 1304

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5303/5315	6-9-99
	N	
	A	

[redacted]

	HP# 7887	Date: 1/12/99
	HP# 5379	Date: 1-13-99
Reviewed/Approved by: (Signature)	HP#	Date:
Reviewed/Approved by: (Print Name)		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				[redacted]
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTACHMENTS		
2	↓	↓	↓	
3				
4				
5				
		N		
			A	

Removable Contamination				
Swipes (dpm/100cm²)				[redacted]
Sample #	β/γ	Alpha	Tritium	Comments
		N		
		A		

COMMENTS: N/A

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR021
Batch Ended: 1/13/99 10:42

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Certainty level for MDA and flags: 95%

Crosstalk correction performed.

Batch ID: T 99-GH-001 CHILDERS [5] 01-13-99 TAS

Recalibration Date: 2/2/99
Serial Number: 26966-1

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	1.88	2.22	<AL	0.83	2.26	<MDA
A2	2	1.93	2.15	<AL	0.30	2.39	<MDA
A3	3	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	4	0.00	1.98	<MDA	2.56	2.78	<MDA
B1	5	0.00	2.05	<MDA	0.00	1.77	<MDA

Time: 2.00
Data Mode: DPM Nuclide: SM_GLASS Quench Set: SM_GLASS
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	8.30
Region B:	2.0 -	18.6	0	0.0	8.00
Region C:	40.0 -	2000	0	0.0	11.40

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
T 99-GH-001 CHILDERS [B1-B5] 01-05-99 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT4.DAT
Count Data Filename: c:\data\SDATA4.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	8.30	21	B	572.55		0.00	11.40
0	2.00	1203.20	0		596.24	2426.95	176.29	0.00
1	2.00	0.00	0		634.90	0.00	0.00	0.00
2	2.00	0.00	0		655.28	0.00	0.00	0.00
3	2.00	0.00	0		642.74	0.00	0.00	0.00
4	2.00	0.20	0		575.04	0.41	9.43	0.00
5	2.00	0.00	0		545.03	0.00	0.00	0.00

Project: **Radiological Concentrations; GH Concrete**
Submitted: Jan. 12, 1998

Plutonium Concentrations

Sample ID	Pu-238, pCi/g	+/- pCi/g	MDA, pCi	Pu-239, pCi/g	+/- pCi/g	MDA, pCi
GH Concrete	0.060	0.024	0.055	0.010	0.012	0.045

Uranium Concentrations

Sample ID	U-233/234, pCi/g	+/- pCi/g	MDA, pCi	U-235, pCi/g	+/- pCi/g	MDA, pCi	U-238, pCi/g	+/- pCi/g	MDA, pCi
GH Concrete	0.377	0.065	0.040	0.025	0.014	0.022	0.289	0.055	0.022

Thorium Concentrations

Sample ID	Th-228, pCi/g	+/- pCi/g	MDA, pCi	Th-230, pCi/g	+/- pCi/g	MDA, pCi	Th-232, pCi/g	+/- pCi/g	MDA, pCi
GH Concrete	0.328	0.055	0.046	0.443	0.066	0.041	0.307	0.052	0.019

Data Verification: D. D. Hess Date: 1/18/99
D. D. Hess

Environmental Monitoring

fg. 5 of 5

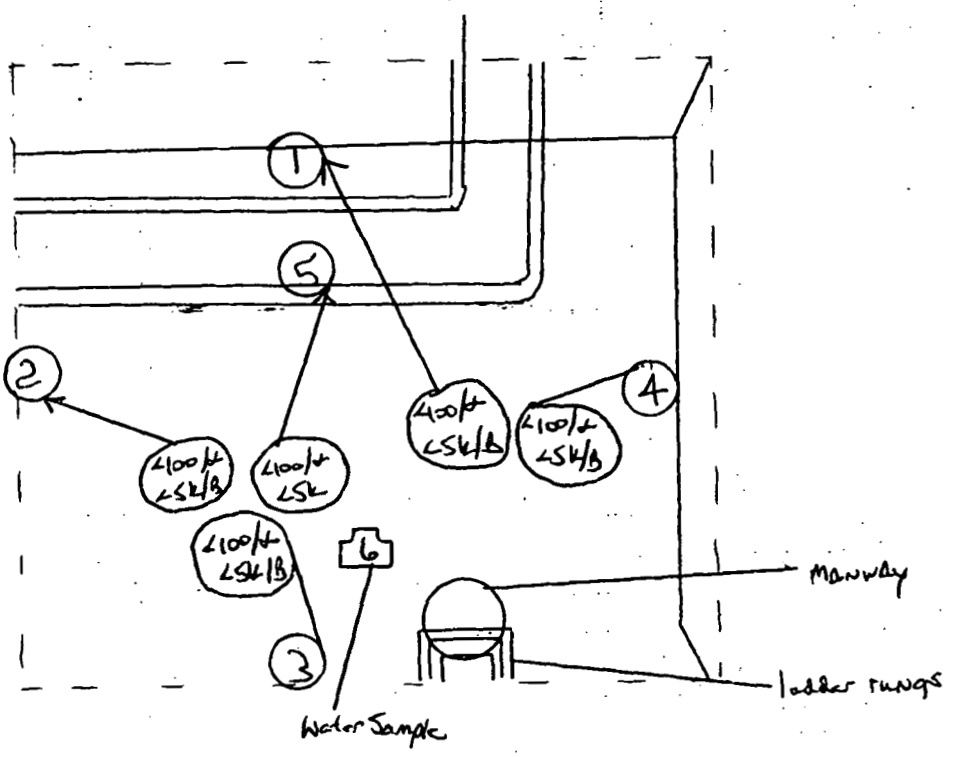
K-214

RADIOLOGICAL SURVEY DATA SHEET

P3

LOCATION: (BLDG./AREA/ROOM) Manhole South of 6H Bldg.	SURVEY NO. 99-6H-002
PURPOSE: Release Survey for Pit (manhole) South of 6H Bldg.	RWP NO. N/A
	DATE: ~~1/14/99~~ 1/14/99
	TIME: 1030

MAP/DRAWING



≈ 4" of water on bottom of Pit,
≈ 9' Height in Pit,

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5305/5316	02/17/99
	NFE	

[redacted]

HPI#	Date:
7889	1/
2324	1-15-99
5996	1-19-99

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See Attached Sheets			
2				
3				
4				
5				
6				
N/A				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
N/A				

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 (2-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR050
Batch Ended: 1/15/99 8:25

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Certainty level for MDA and flags: 95%

Crosstalk correction performed.

Recalibration Date: 2/2/99
Serial Number: 26966-1

Batch ID: T 99-GH-002 CHILDERS 1-15-99 [5] JC

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.19	<MDA	0.00	1.41	<MDA
A2	2	0.00	2.16	<MDA	1.76	2.72	<MDA
A3	3	0.00	1.97	<MDA	1.44	2.35	<MDA
A4	4	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	5	0.00	2.04	<MDA	0.00	1.37	<MDA

Protocol #: 3 Name:Pw H3 #401393 15-Jan-99 15:47
Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
T 99-GH-002 [E1-E5] CHILDERS 1-15-99 RLH
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On

S#	TIME	LUM	FLAG	CPMA	CPMB	CPMC	tSIE	DPM1	2Sigma
-1	10.00	26	B	8.50	8.00	9.90	664.		0.00
0	2.00	1		1237.00	1175.00	3.10	598.	3010.49	256.86
1	2.00	14		2.00	1.50	2.10	607.	4.81	13.28
2	2.00	20		0.00	0.00	0.00	523.	0.00	0.00
3	2.00	25		0.00	0.00	0.00	445.	0.00	0.00
4	2.00	17		18.00	13.50	2.10	604.	43.48	21.37
5	2.00	24		0.00	0.00	0.60	630.	0.00	0.00

EG&G MOUND APPLIED TECHNOLOGIES

ENVIRONMENTAL MONITORING LABORATORY
REQUEST FOR ANALYSIS

DATE:	SAMPLE MATRIX:	COST CENTER:
[illegible]		789

NUMBER OF SAMPLES:	CHARGE NUMBER:	SAMPLE LOCATION:
1	F 00842	GH S. MANIFOLD

RELINQUISHED BY:	VOLUME:
[illegible]	

SEND DATA TO:	EXT.:	MAIL STOP:
[illegible] RYAN	3185	88

ANALYSES REQUESTED (check):

❑ ^3H ❑ Gross α ❑ Pu ❑ U ❑ Th

Other Analysis: _____

LAB I.D. NUMBER	SAMPLE IDENTIFICATION	3H = RESULT	α =
9900498	99-SM-002-6	0.70 nCi/l	0 dpm/cc

HTO 20 nCi/l

2 dpm/cc

COMMENTS: _____

ANALYZED BY:	DATE:
R Schubel	1-14-99

ML-5222 (2-96)

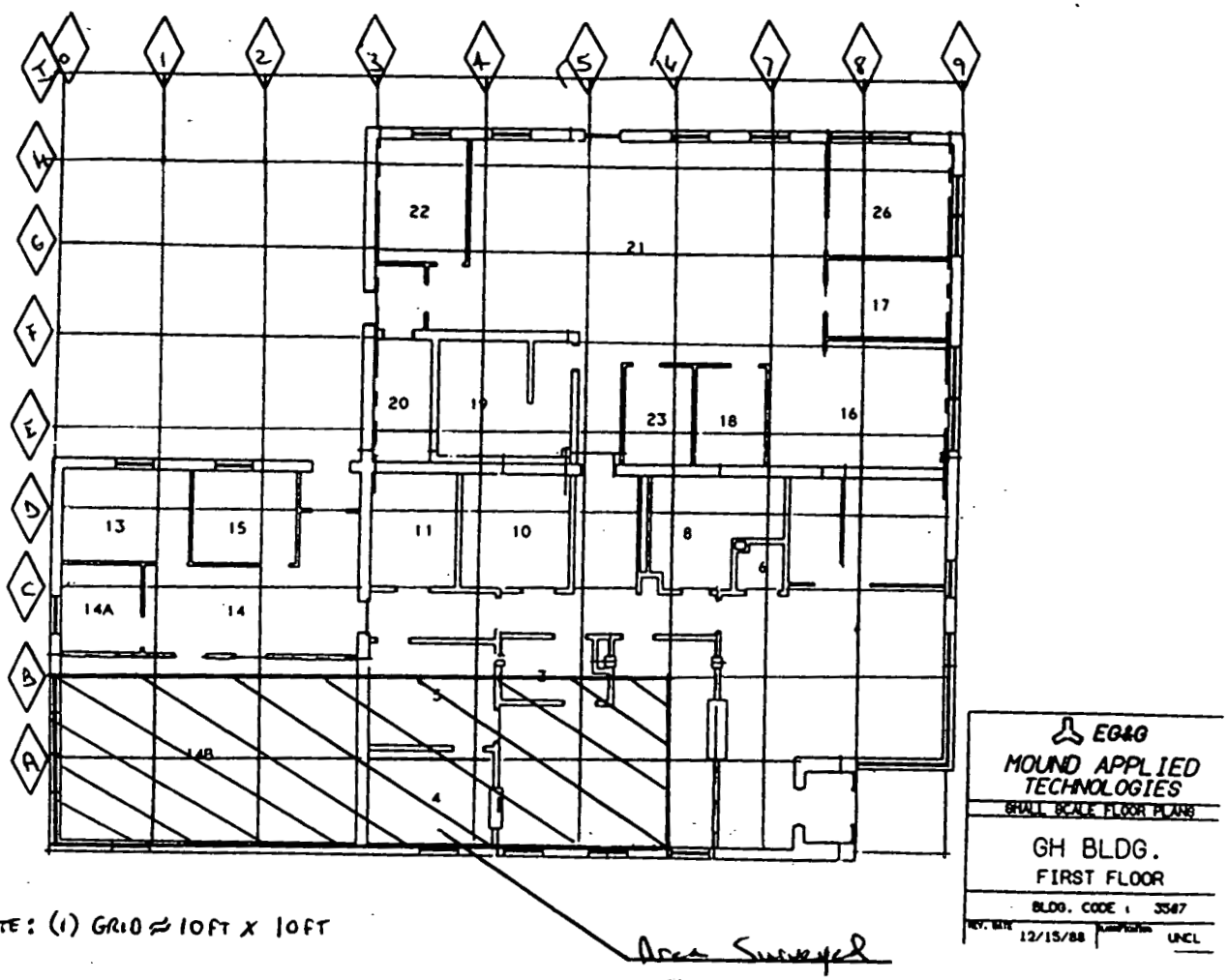
RADIOLOGICAL SURVEY DATA SHEET

Pt 1

30-12 1-10

LOCATION: (BLDG./AREA/ROOM) GH Bldg First Floor	SURVEY NO. 98-GH-02
PURPOSE: Free Release of Bldg.	RWP NO. N/A
	DATE: 11/18/98
	TIME: 1000

MAP/DRAWING



*NOTE: (1) GRID ≈ 10FT X 10FT

Area Surveyed

Floor is carpeted

No survey under carpets. Bur 12/14/98

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Eberline	536A/5285	4/15/99
Micro-R	3927	3/9/99

[redacted]

HP# 7859	Date: 11/18/98
HP# 5268	Date: 11/19/98
HP# 5996	Date: 12-9-98

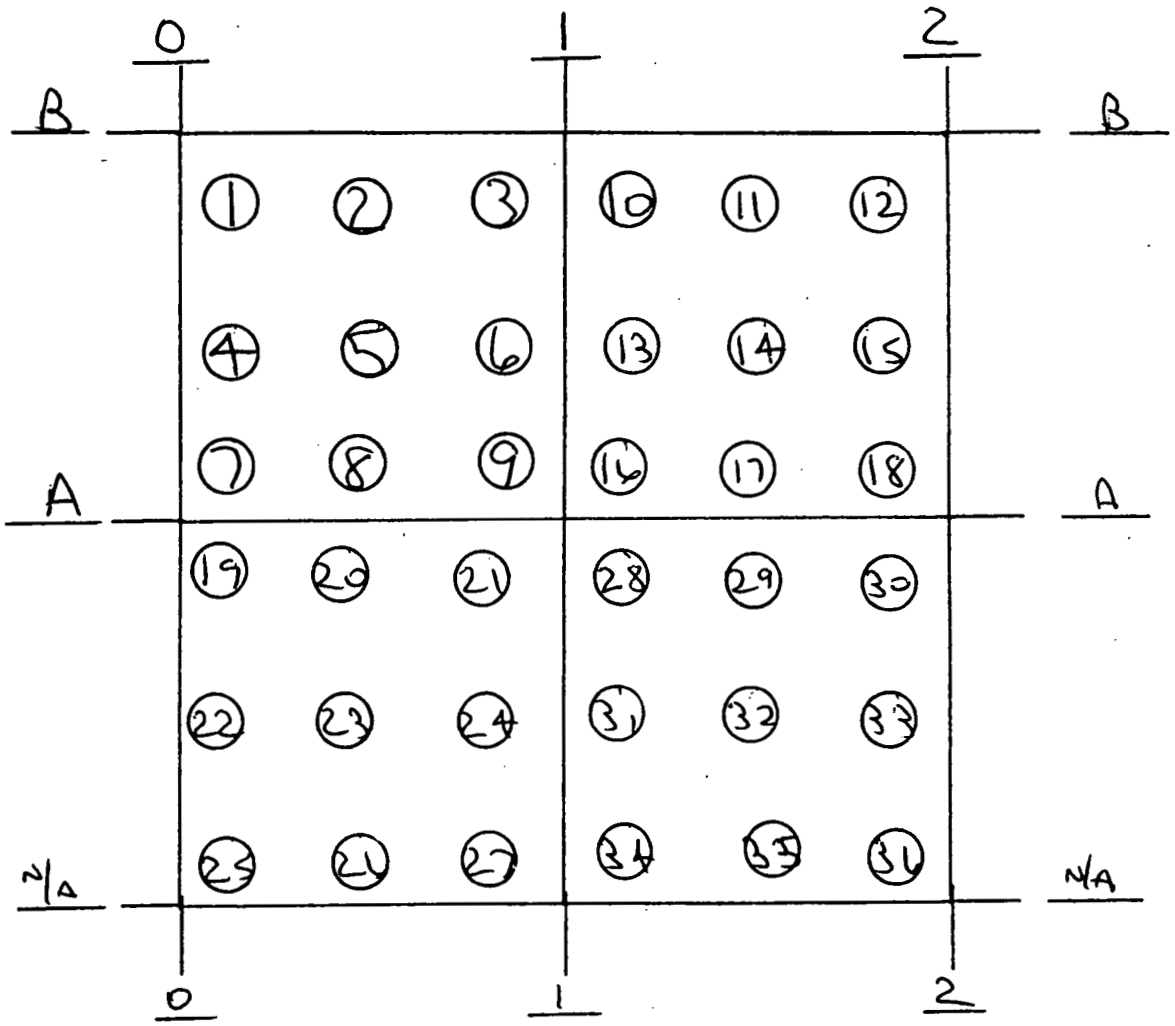
ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98-GH-02

MAP/DRAWING



All Dose rates <0.02 mr/hr.

<100/α
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GH-02

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	See Attached sheet			

COMMENTS:

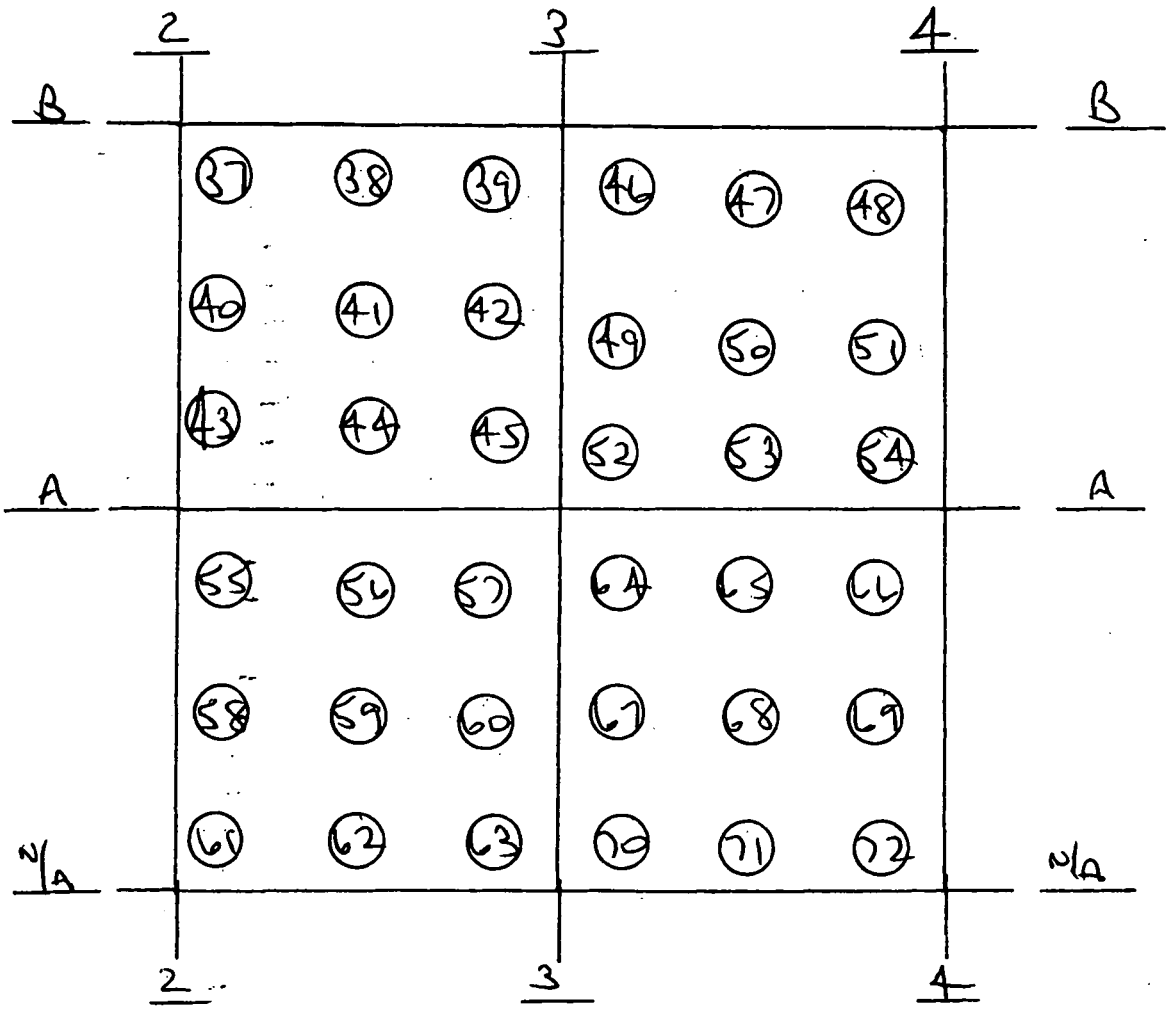
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-GU-02

MAP/DRAWING



All Dose rates < 0.02 mr/hr

< 100/α
< 5k/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-645-02

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
37-22	See Attached Sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

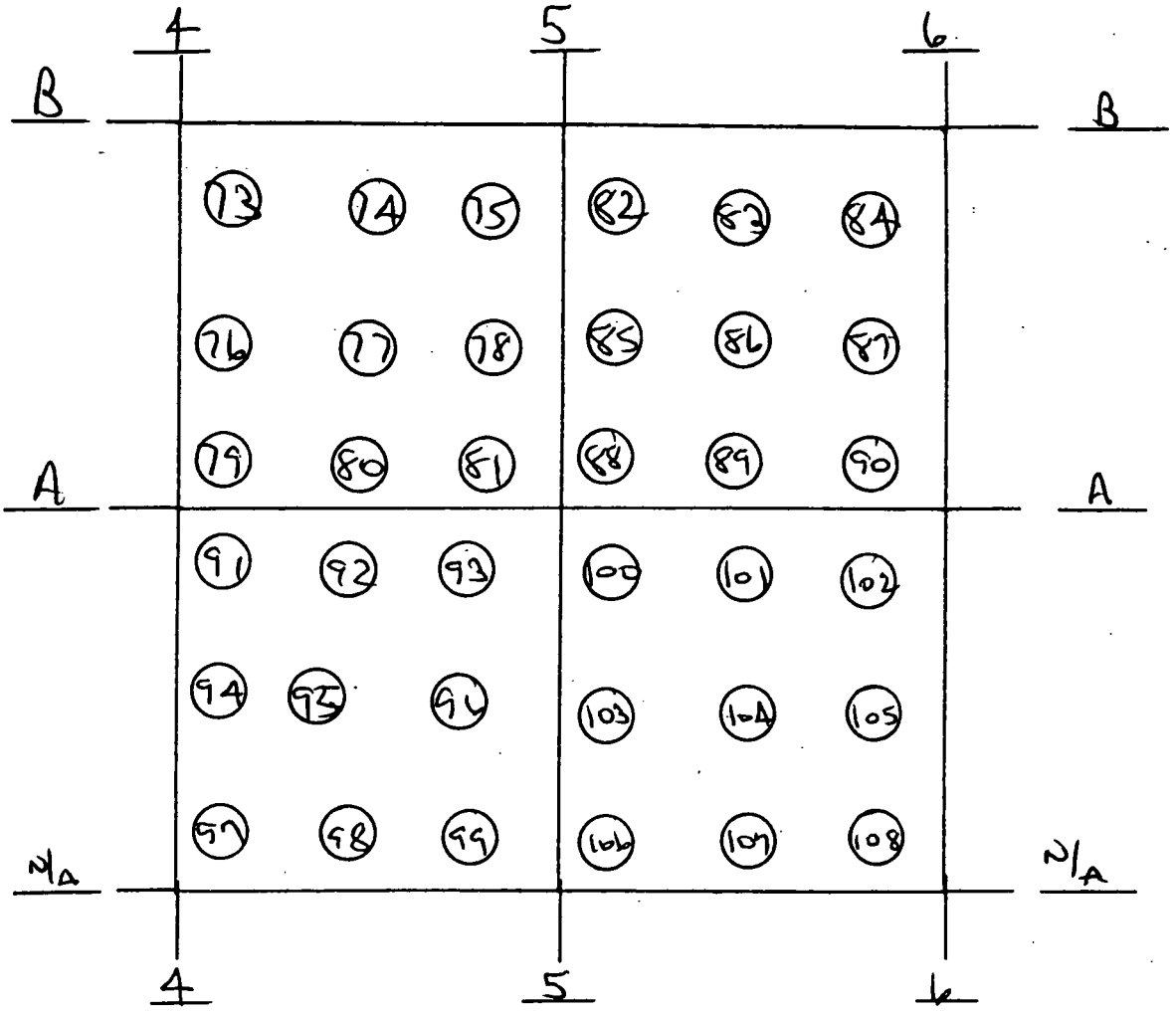
NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-02

MAP/DRAWING



All Dosimeters <0.02 mr/hr

<100/α
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-Cu-02

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
73-108	See	Attached	Sheets	
		N		
			T	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N		
			A	

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR044
Batch Ended: 11/19/98 8:52
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GU-02 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	2.22	2.78	<MDA	4.04	3.89	<MDA
A2	2	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	3	0.00	2.03	<MDA	0.00	1.41	<MDA
B1	4	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	5	1.49	2.05	<MDA	0.13	1.99	<MDA
B3	6	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	7	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	8	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	9	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	10	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	11	1.16	2.05	<MDA	0.00	1.40	<MDA
D1	12	0.00	2.00	<MDA	4.60	3.08	<AL
D2	13	0.00	2.04	<MDA	1.73	2.42	<MDA
D3	14	0.87	2.32	<MDA	0.10	2.12	<MDA
D4	15	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	16	0.40	2.09	<MDA	4.25	3.89	<MDA
A2	17	0.00	2.05	<MDA	0.12	1.94	<MDA
A3	18	0.00	2.03	<MDA	0.00	1.41	<MDA
B1	19	1.56	2.19	<MDA	0.18	2.13	<MDA
B2	20	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	21	1.16	2.08	<MDA	0.47	1.99	<MDA
B4	22	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	23	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	24	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	25	1.67	2.14	<MDA	0.51	1.81	<MDA
C4	26	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	27	1.56	1.98	<AL	0.40	2.00	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR044
Batch Ended: 11/19/98 8:52
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GU-02 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D2	28	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	29	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	30	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	31	0.39	2.13	<MDA	6.88	4.31	<AL
A2	32	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	33	1.58	2.03	<MDA	0.00	1.41	<MDA
B1	34	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	35	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	36	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	37	1.75	2.04	<AL	0.53	2.11	<MDA
C1	38	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	39	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	40	0.00	2.16	<MDA	3.15	2.54	<AL
C4	41	0.00	2.14	<MDA	6.03	3.59	<AL
D1	42	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	43	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	44	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	45	0.00	2.24	<MDA	1.80	2.41	<MDA
A1	46	0.39	2.13	<MDA	6.88	4.31	<AL
A2	47	0.00	2.07	<MDA	2.75	2.68	<MDA
A3	48	0.00	2.03	<MDA	0.00	1.41	<MDA
B1	49	0.00	2.19	<MDA	1.72	2.55	<MDA
B2	50	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	51	1.17	2.07	<MDA	0.00	1.47	<MDA
B4	52	0.00	2.04	<MDA	0.67	2.11	<MDA
C1	53	1.59	1.99	<AL	0.13	1.89	<MDA
C2	54	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	55	1.67	2.14	<MDA	0.51	1.81	<MDA
C4	56	0.00	2.07	<MDA	0.00	2.25	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR044
Batch Ended: 11/19/98 8:52
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GU-02 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	57	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	58	3.39	2.83	<AL	2.82	2.77	<MDA
D3	59	0.89	2.32	<MDA	0.00	1.63	<MDA
D4	60	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	61	0.00	2.11	<MDA	5.78	4.11	<AL
A2	62	0.00	2.03	<MDA	0.00	1.42	<MDA
A3	63	0.00	2.04	<MDA	1.02	2.33	<MDA
B1	64	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	65	3.50	2.87	<AL	0.00	1.99	<MDA
B3	66	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	67	0.00	2.04	<MDA	0.67	2.11	<MDA
C1	68	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	70	1.57	1.98	<AL	0.00	1.40	<MDA
C3	71	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	72	1.16	2.06	<MDA	0.00	1.88	<MDA
D1	73	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	74	0.00	2.03	<MDA	0.38	2.01	<MDA
~~D3~~	~~75~~	0.00	2.34	<MDA	5.60	3.43	<AL
D4	75	1.72	2.24	<MDA	0.29	1.98	<MDA
A1	76	0.00	2.11	<MDA	5.78	4.11	<AL
A2	77	0.00	2.05	<MDA	0.12	1.94	<MDA
A3	78	1.58	2.03	<MDA	0.00	1.41	<MDA
B1	79	1.58	2.18	<MDA	0.00	1.60	<MDA
B2	80	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	81	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	82	0.00	2.08	<MDA	6.03	3.41	<AL
C1	83	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	84	0.00	2.01	<MDA	2.48	2.54	<MDA
C3	85	0.00	2.14	<MDA	0.00	1.30	<MDA

*64 no results 11/19/98 [illegible]
Delete Dup. 11/19/98 [illegible]

Pg 11 of 14

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR044
Batch Ended: 11/19/98 8:52
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GU-02 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	86	1.16	2.05	<MDA	0.00	1.40	<MDA
D1	87	1.56	1.98	<AL	0.40	2.00	<MDA
D2	88	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	89	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	90	0.00	2.23	<MDA	0.00	1.42	<MDA
A1	91	0.40	2.03	<MDA	0.00	2.87	<MDA
A2	92	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	93	0.00	2.03	<MDA	0.00	1.92	<MDA
B1	94	1.56	2.19	<MDA	0.18	2.13	<MDA
B2	95	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	96	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	97	0.00	2.05	<MDA	2.01	2.50	<MDA
C1	98	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	99	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	100	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	101	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	102	1.55	1.99	<MDA	1.75	2.42	<MDA
D2	103	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	104	0.87	2.32	<MDA	0.10	2.12	<MDA
D4	105	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	106	0.00	2.17	<MDA	11.03	4.88	<AL
A2	107	0.00	2.09	<MDA	5.38	3.27	<AL
A3	108	0.00	2.03	<MDA	0.00	1.92	<MDA

Pg 12 of 14

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	18.6	0	0.0	7.44
Region B:	2.0	18.6	0	0.0	6.72
Region C:	40.0	2000	0	0.0	12.70

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
89-GU-02 GH BD, -CHILERS(30-12 1-108)
Quinescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT1.DAT
Count Data Filename: c:\data\SDATA1.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.44	6.72	5	B	612.87		0.00	12.70
0	2.00	1307.72	1224.09	0		588.55	2976.31	254.73	0.00
1	2.00	0.00	0.00	0		615.53	0.00	0.00	0.00
2	2.00	0.00	0.00	0		606.61	0.00	0.00	0.00
3	2.00	0.00	0.00	0		615.26	0.00	0.00	0.00
4	2.00	0.56	0.46	0		623.29	1.25	9.63	0.00
5	2.00	0.00	0.00	0		626.45	0.00	0.00	0.00
6	2.00	0.00	0.00	0		578.76	0.00	0.00	0.00
7	2.00	0.06	0.00	0		625.88	0.14	9.35	0.00
8	2.00	0.00	0.00	0		618.96	0.00	0.00	0.00
9	2.00	0.00	0.00	0		609.63	0.00	0.00	0.00
10	2.00	0.00	0.00	0		622.77	0.00	0.00	0.00
11	2.00	0.06	0.78	0		614.82	0.14	9.45	0.00
12	2.00	2.06	2.47	0		618.64	4.58	10.41	0.00
13	2.00	1.56	1.78	0		606.30	3.51	10.28	0.00
14	2.00	0.00	0.28	0		602.50	0.00	0.00	0.00
15	2.00	0.00	0.00	0		615.62	0.00	0.00	0.00
16	2.00	3.56	3.98	0		614.55	7.93	11.15	0.00
17	2.00	5.56	5.96	0		624.69	12.26	11.92	0.00
18	2.00	0.00	0.00	0		608.60	0.00	0.00	0.00
19	2.00	3.24	3.46	0		619.50	7.18	10.95	0.00
20	2.00	0.24	0.64	0		619.13	0.52	9.50	0.00
21	2.00	0.00	0.00	0		621.19	0.00	0.00	0.00
22	2.00	3.06	3.78	0		620.47	6.78	10.86	0.00
23	2.00	1.06	0.97	0		618.51	2.36	9.92	0.00
24	2.00	0.00	0.28	0		620.65	0.00	0.00	0.00
25	2.00	2.98	3.02	0		633.23	6.51	10.70	0.00
26	2.00	0.56	1.28	0		610.33	1.26	9.74	0.00
27	2.00	0.06	0.46	0		627.09	0.14	9.35	0.00
28	2.00	0.06	0.00	0		618.25	0.14	9.42	0.00
29	2.00	0.06	0.46	0		621.71	0.14	9.39	0.00
30	2.00	0.00	0.00	0		619.73	0.00	0.00	0.00
31	2.00	2.34	3.06	0		617.15	5.20	10.56	0.00
32	2.00	0.00	0.00	0		614.53	0.00	0.00	0.30
33	2.00	1.64	2.36	0		626.08	3.62	10.14	0.00
34	2.00	2.56	2.33	0		622.77	5.66	10.61	0.00

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.00	0.00	0	627.74	0.00	0.00	0.00
36	2.00	4.56	4.97	0	617.99	10.12	11.56	0.00
37	2.00	0.00	0.00	0	618.00	0.00	0.00	0.00
38	2.00	0.00	0.00	0	624.51	0.00	0.00	0.00
39	2.00	0.00	0.00	0	620.97	0.00	0.00	0.00
40	2.00	1.50	2.21	0	605.03	3.36	10.26	0.00
41	2.00	0.56	0.99	0	609.80	1.26	9.75	0.00
42	2.00	1.06	1.22	0	601.81	2.39	10.07	0.00
43	2.00	2.38	1.27	0	627.31	5.22	10.48	0.00
44	2.00	0.00	0.00	0	611.33	0.00	0.00	0.00
45	2.00	4.06	4.51	0	597.93	9.17	11.54	0.00
46	2.00	0.56	0.00	0	625.56	1.24	9.61	2.30
47	2.00	0.00	0.00	0	600.56	0.00	0.00	0.00
48	2.00	1.06	1.78	0	624.85	2.35	9.87	0.00
49	2.00	2.56	3.01	0	596.04	5.80	10.86	0.00
50	2.00	2.12	2.33	0	610.60	4.73	10.51	0.00
51	2.00	4.06	4.78	0	626.12	8.95	11.26	0.00
52	2.00	0.56	1.28	0	627.94	1.24	9.59	0.00
53	2.00	0.00	0.00	0	634.14	0.00	0.00	0.00
54	2.00	0.00	0.00	0	591.52	0.00	0.00	1.30
55	2.00	0.00	0.00	0	626.84	0.00	0.00	0.00
56	2.00	0.00	0.00	0	614.74	0.00	0.00	0.00
57	2.00	1.06	1.48	0	611.37	2.37	9.99	0.00
58	2.00	0.00	0.00	0	621.02	0.00	0.00	0.00
59	2.00	0.00	0.00	0	625.53	0.00	0.00	0.00
60	2.00	0.00	0.00	0	614.32	0.00	0.00	0.00
61	2.00	0.00	0.00	0	631.02	0.00	0.00	0.00
62	2.00	0.00	0.05	0	576.36	0.00	0.00	0.00
63	2.00	4.06	4.78	0	619.70	9.00	11.32	0.00
64	2.00	0.00	0.00	0	619.55	0.00	0.00	0.00
65	2.00	1.56	1.97	0	621.12	3.46	10.15	0.00
66	2.00	0.00	0.00	0	602.44	0.00	0.00	0.00
67	2.00	4.06	4.78	0	611.56	9.06	11.40	0.00
68	2.00	0.06	0.49	0	609.46	0.14	9.49	0.00
69	2.00	0.56	0.71	0	604.75	1.27	9.79	0.00
70	2.00	0.00	0.00	0	624.26	0.00	0.00	0.00
71	2.00	1.18	1.29	0	615.75	2.62	10.01	0.00
72	2.00	0.00	0.00	0	621.75	0.00	0.00	0.00
73	2.00	0.70	0.61	0	616.84	1.55	9.76	0.00
74	2.00	0.00	0.23	0	624.71	0.00	0.00	0.00
75	2.00	0.06	0.00	0	607.12	0.15	9.51	0.30
76	2.00	0.00	0.00	0	614.27	0.00	0.00	2.80
77	2.00	0.00	0.00	0	613.67	0.00	0.00	0.00
78	2.00	0.00	0.00	0	557.52	0.00	0.00	0.00
79	2.00	13.19	9.73	0	546.82	31.32	15.98	0.00
80	2.00	0.00	0.00	0	618.29	0.00	0.00	0.00
81	2.00	0.00	0.00	0	621.71	0.00	0.00	0.00
82	2.00	0.00	0.00	0	618.78	0.00	0.00	0.00
83	2.00	0.00	0.00	0	607.43	0.00	0.00	0.00
84	2.00	0.00	0.00	0	593.71	0.00	0.00	0.00
85	2.00	0.00	0.00	0	585.94	0.00	0.00	0.00
86	2.00	0.06	0.78	0	596.75	0.15	9.60	0.00
87	2.00	0.56	1.28	0	627.55	1.24	9.60	1.80
88	2.00	0.06	0.51	0	596.75	0.15	9.60	0.00
89	2.00	0.06	0.50	0	601.09	0.15	9.56	0.00
90	2.00	0.00	0.00	0	622.30	0.00	0.00	0.00

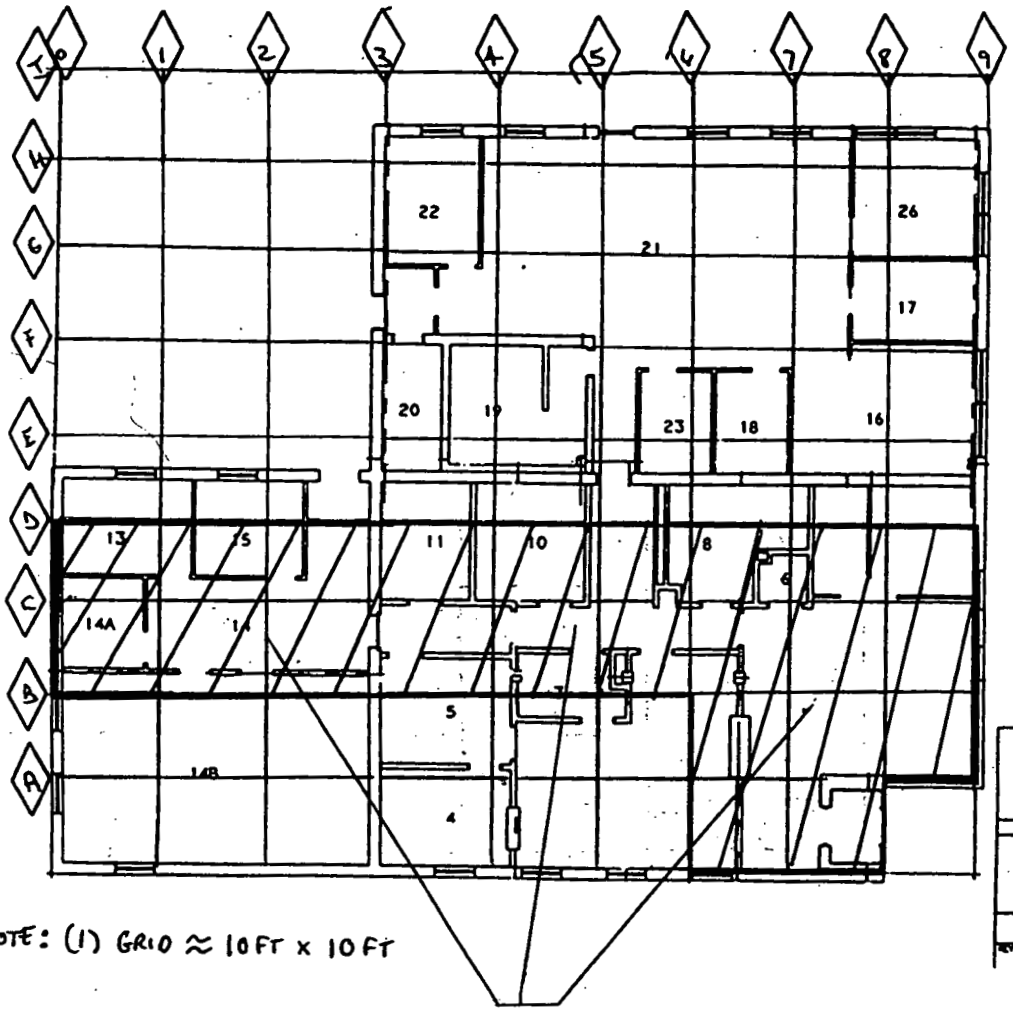
S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
91	2.00	1.56	1.99	0	610.33	3.49	10.24	0.00
92	2.00	0.00	0.00	0	621.63	0.00	0.00	0.00
93	2.00	0.00	0.00	0	610.90	0.00	0.00	0.00
94	2.00	0.06	0.78	0	613.21	0.14	9.46	0.00
95	2.00	0.00	0.00	0	605.96	0.00	0.00	0.00
96	2.00	0.00	0.00	0	630.36	0.00	0.00	0.00
97	2.00	0.00	0.00	0	590.56	0.00	0.00	0.00
98	2.00	0.00	0.00	0	622.02	0.00	0.00	0.52
99	2.00	1.82	1.72	0	624.28	4.02	10.24	0.00
100	2.00	0.00	0.14	0	600.76	0.00	0.00	0.00
101	2.00	0.00	0.00	0	598.99	0.00	0.00	0.00
102	2.00	1.06	0.37	6	616.56	2.36	9.94	0.00
103	2.00	2.56	2.67	0	617.27	5.69	10.66	0.00
104	2.00	0.00	0.00	0	577.34	0.00	0.00	0.00
105	2.00	0.15	0.57	0	614.07	0.34	9.50	0.00
106	2.00	0.00	0.00	0	616.52	0.00	0.00	0.00
107	2.00	0.00	0.00	0	610.63	0.00	0.00	0.00
108	2.00	0.00	0.00	0	628.75	0.00	0.00	0.30

#1807 Pt 1 ~~1-8~~ 3012

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GH Bldg First Floor	SURVEY NO. 98-GH-63
PURPOSE: Free Release of Building	RWP NO. N/A
	DATE: 11/19/98
	TIME: 0800

MAP/DRAWING



EG&G MOUND APPLIED TECHNOLOGIES
SMALL SCALE FLOOR PLANS
GH BLDG.
FIRST FLOOR
BLDG. CODE : 3587
REV. DATE 12/15/88 CLASSIFICATION UNCL

* NOTE: (1) GRID ≈ 10 FT x 10 FT

Area of Survey

Floor is Carpeted
No Survey on Floor Under Carpet Due 12/14/98

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	536A/5285	4/15/99
MICRO R	3929	4/8/99

[redacted]

HP#	Date:
7889	
5268	11/23/98
5996	12-9-98

ML-9620 (2-98)

Survey No. 98-641-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

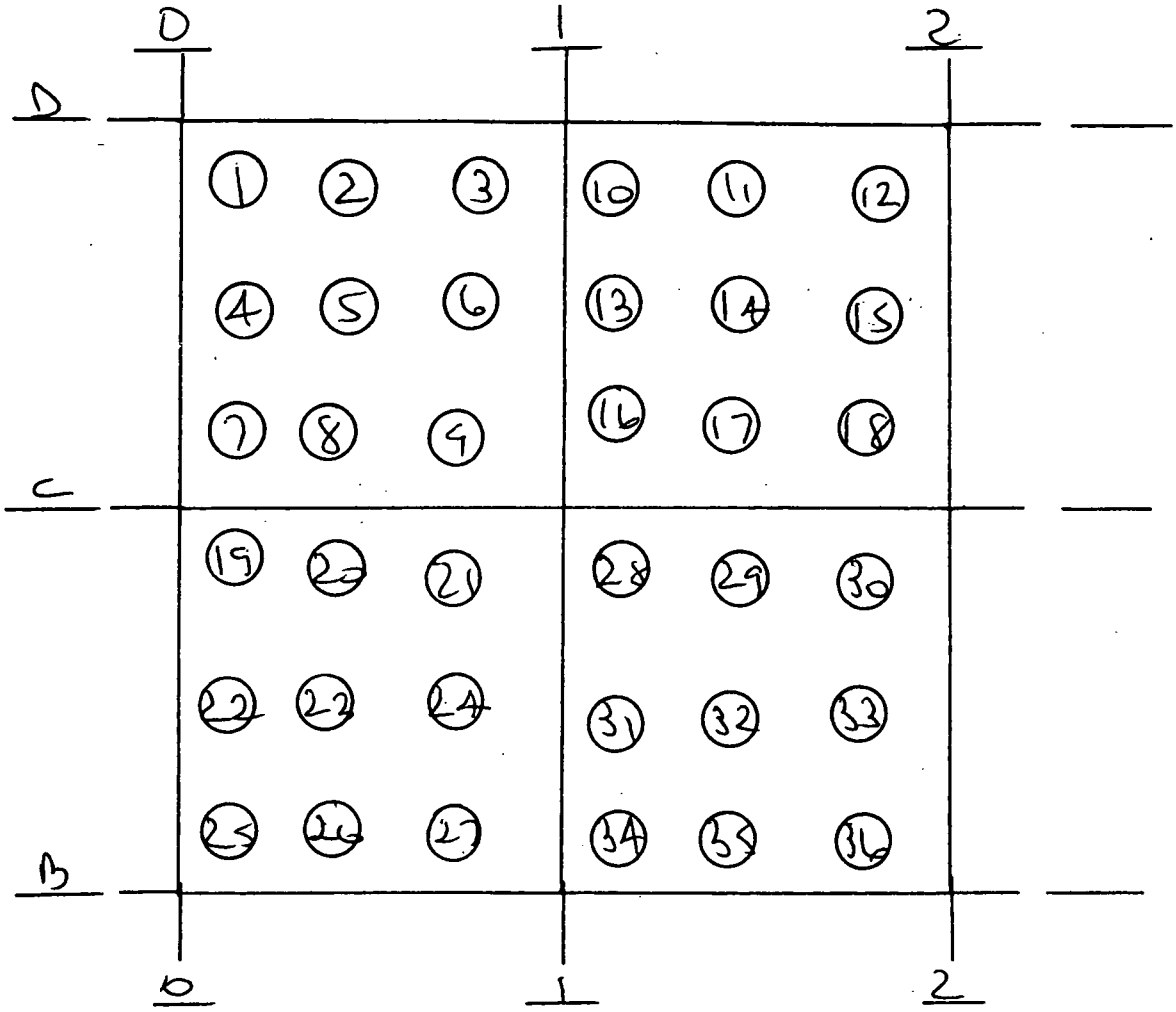
COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-CH-03

MAP/DRAWING



<100/α
<5K/β

All Dosimeters
<0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No. 98-64-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
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28				
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31				
32				
33				
34				
35				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36				

See attached

COMMENTS:

NOTES:

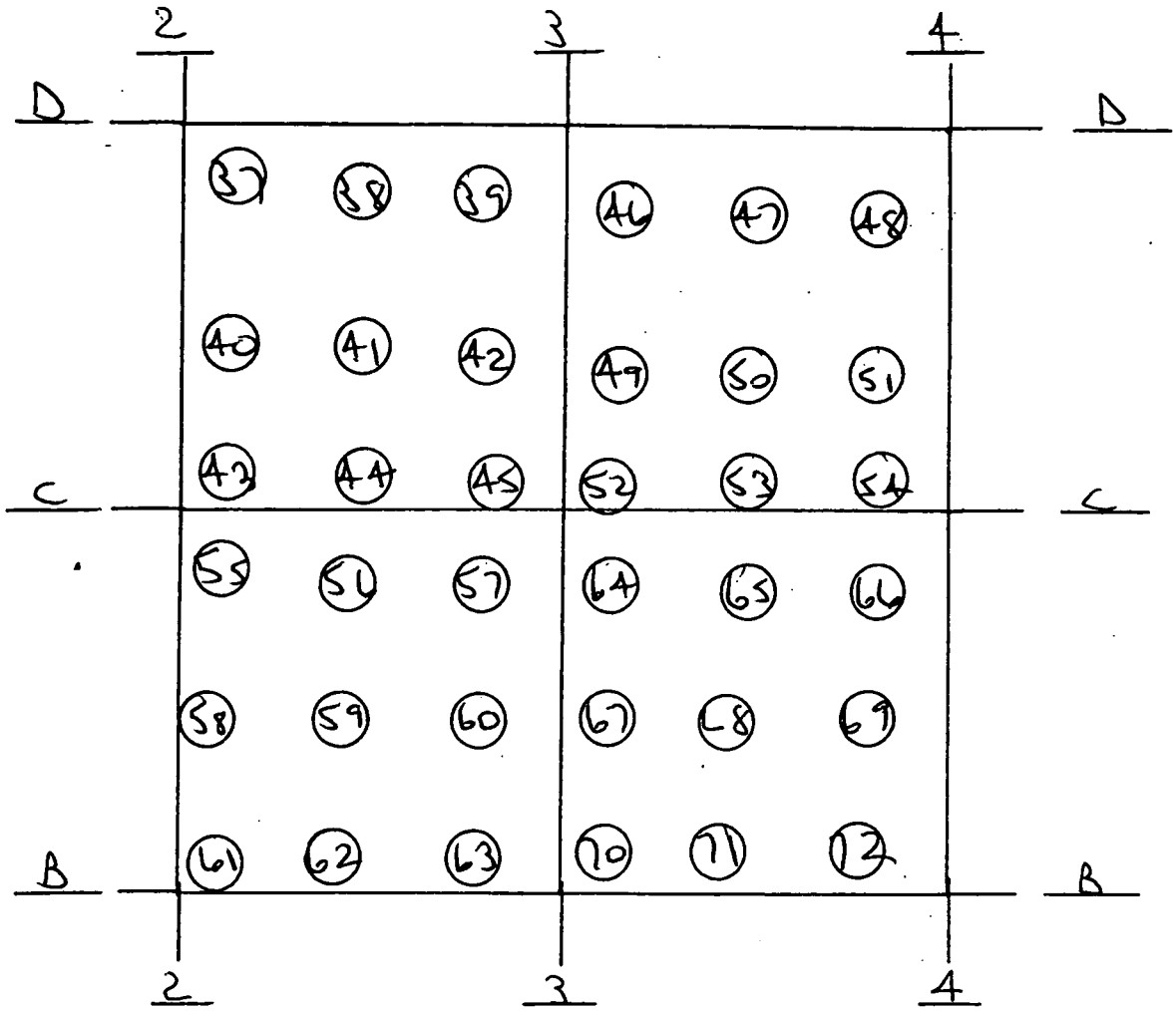
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-03

MAP/DRAWING



<100/α
<5k/β

All Dose rates
<0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GU-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
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62				
63				
64				
65				
66				
67				
68				
69				
70				
71				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
72				

COMMENTS:

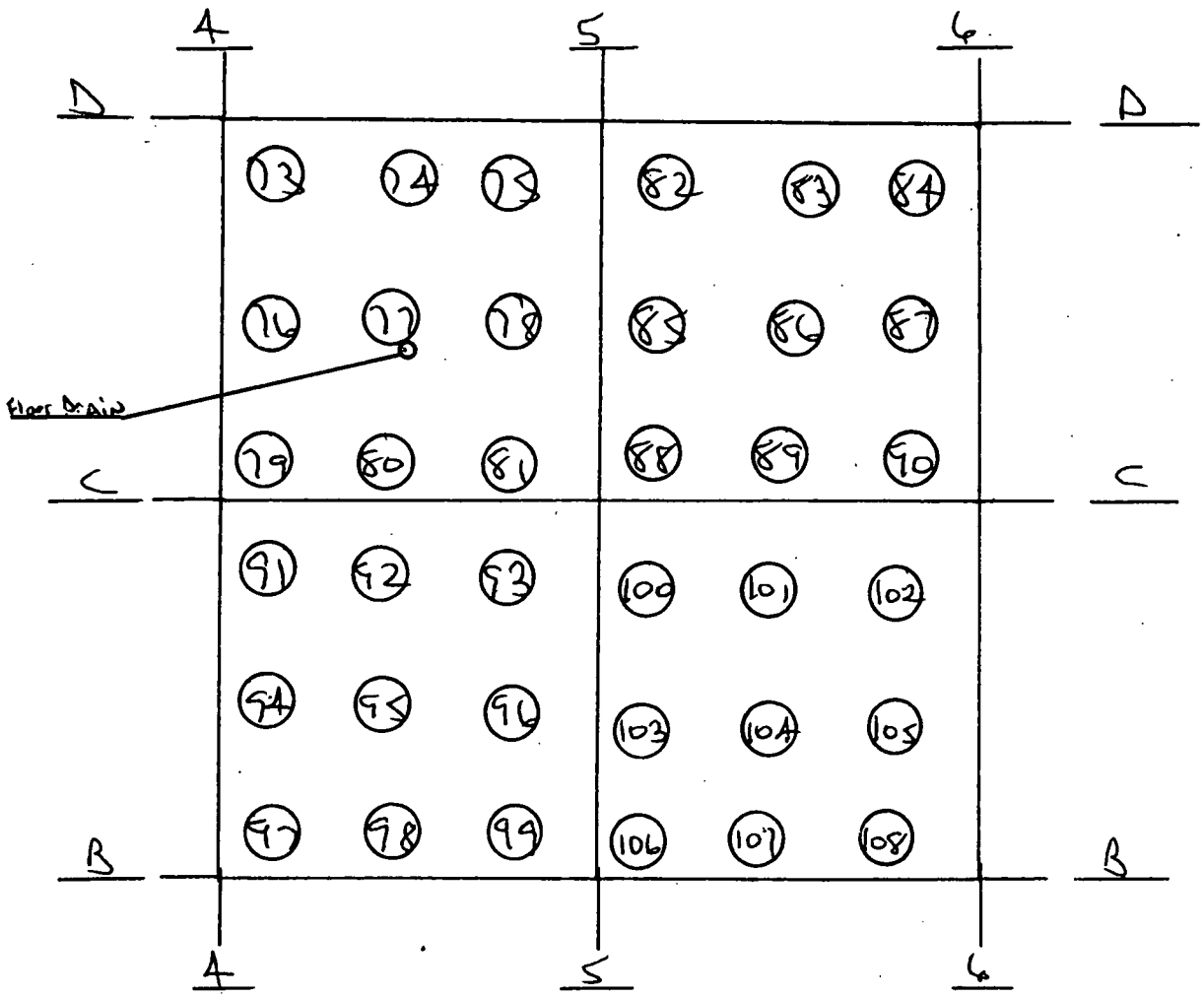
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-66-03

MAP/DRAWING



<100/α
<5k/β

All Dose rates
< 0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
□# = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GH-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
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100				
101				
102				
103				
104				
105				
106				
107				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
108				

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

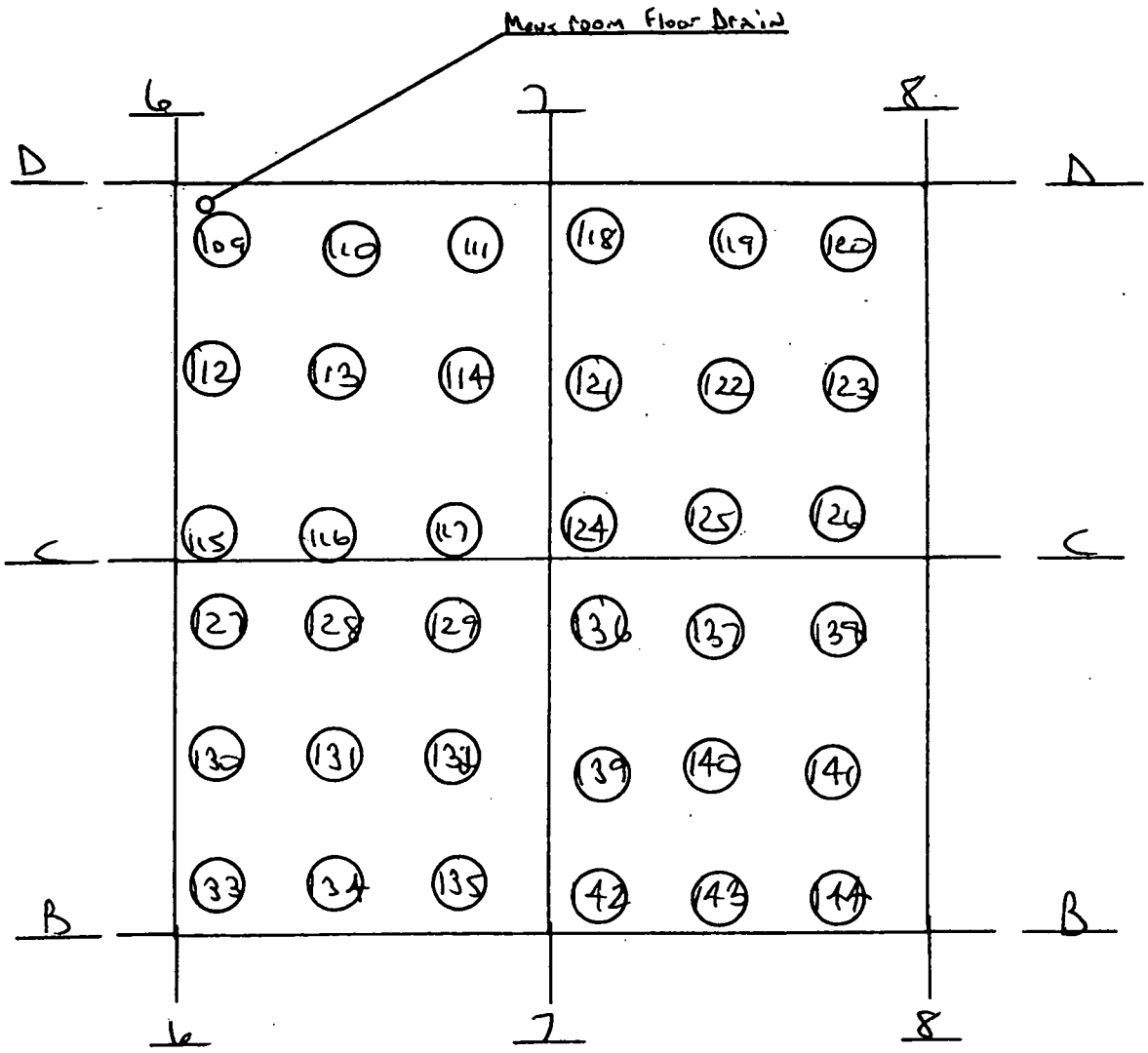
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98-64-03

MAP/DRAWING



<100/α
<5k/β

All Dose rates
<0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-64-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
109				
110				
111				
112				
113				
114				
115				
116				
117				
118				
119				
120				
121				
122				
123				
124				
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141				
142				
143				

See Attached Sheets

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
144				

NFE

COMMENTS:

NOTES:

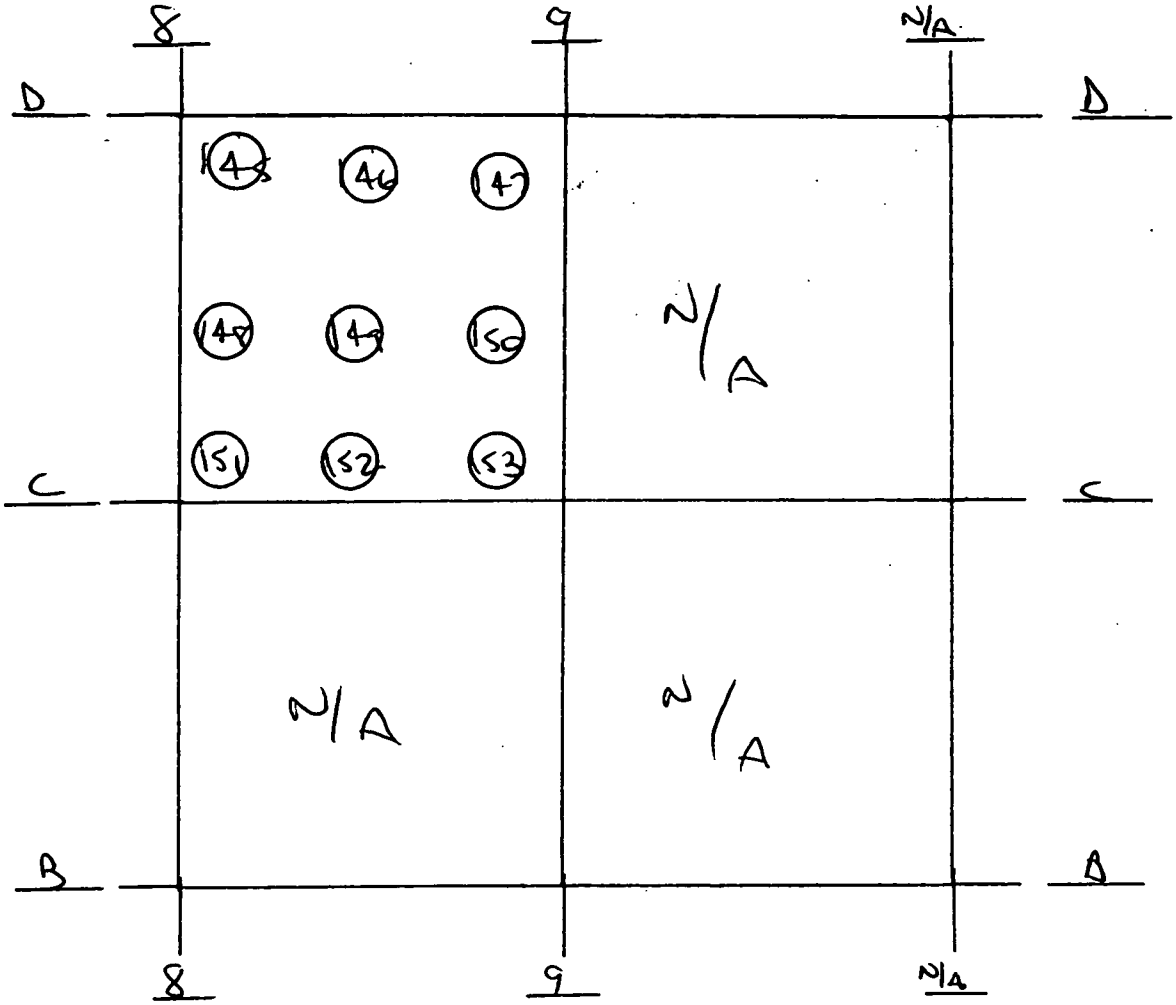
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-03

MAP/DRAWING



400/α
<5k/β

All Doserates
<0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GK-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
145		See		
146				
147				
148		Sheets		Attached
149				
150				
151				
152				
153				
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
				N/A

COMMENTS:

NOTES:

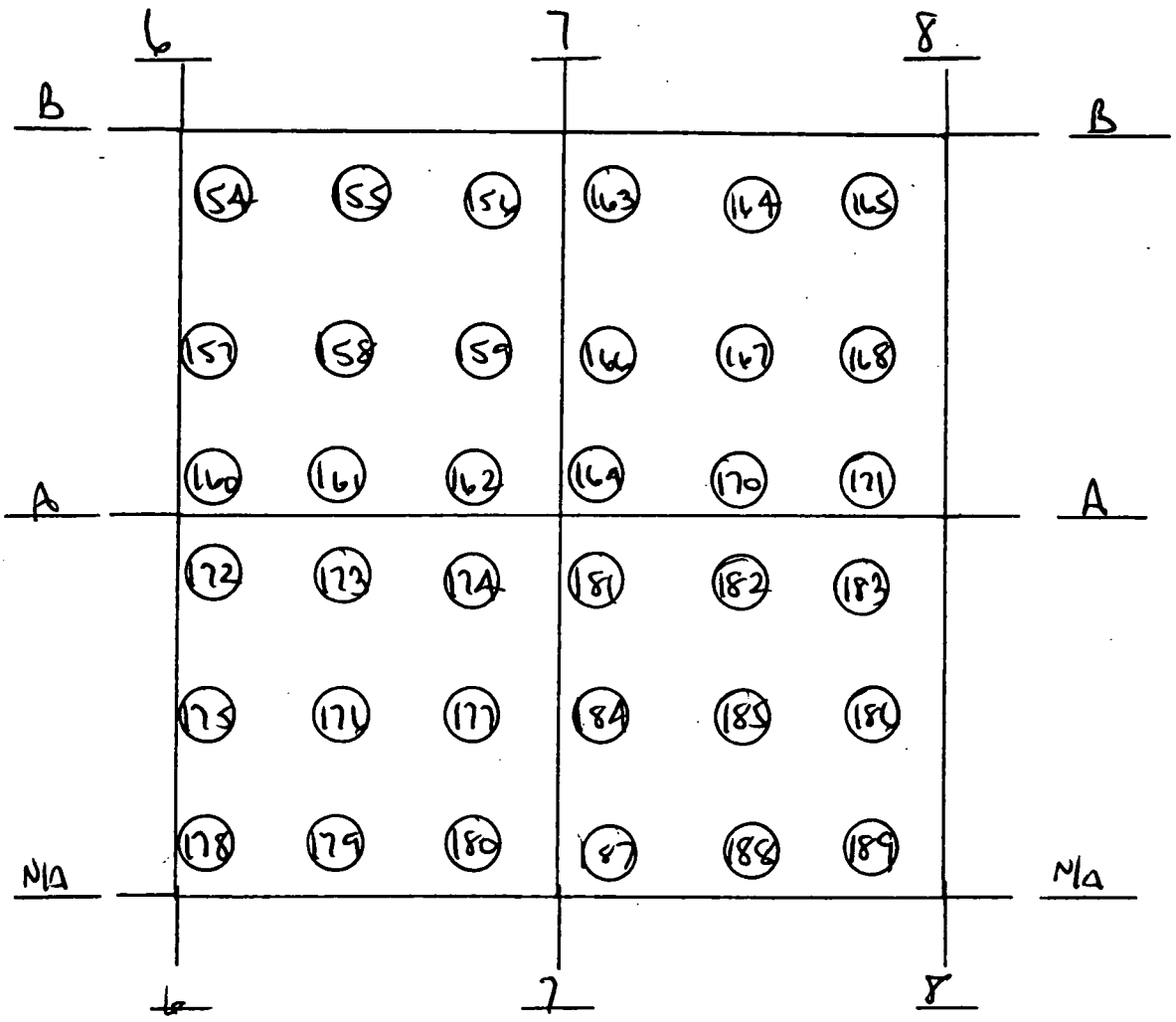
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-03

MAP/DRAWING



<100/α
<5K/β

ALL DOSE RATES
< .02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-OH-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
154		See		
155	ATTACHMENTS			
156				
157				
158				
159				
160				
161				
162				
163				
164				
165				
166				
167				
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187				
188				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
189				
		NFE		

COMMENTS:

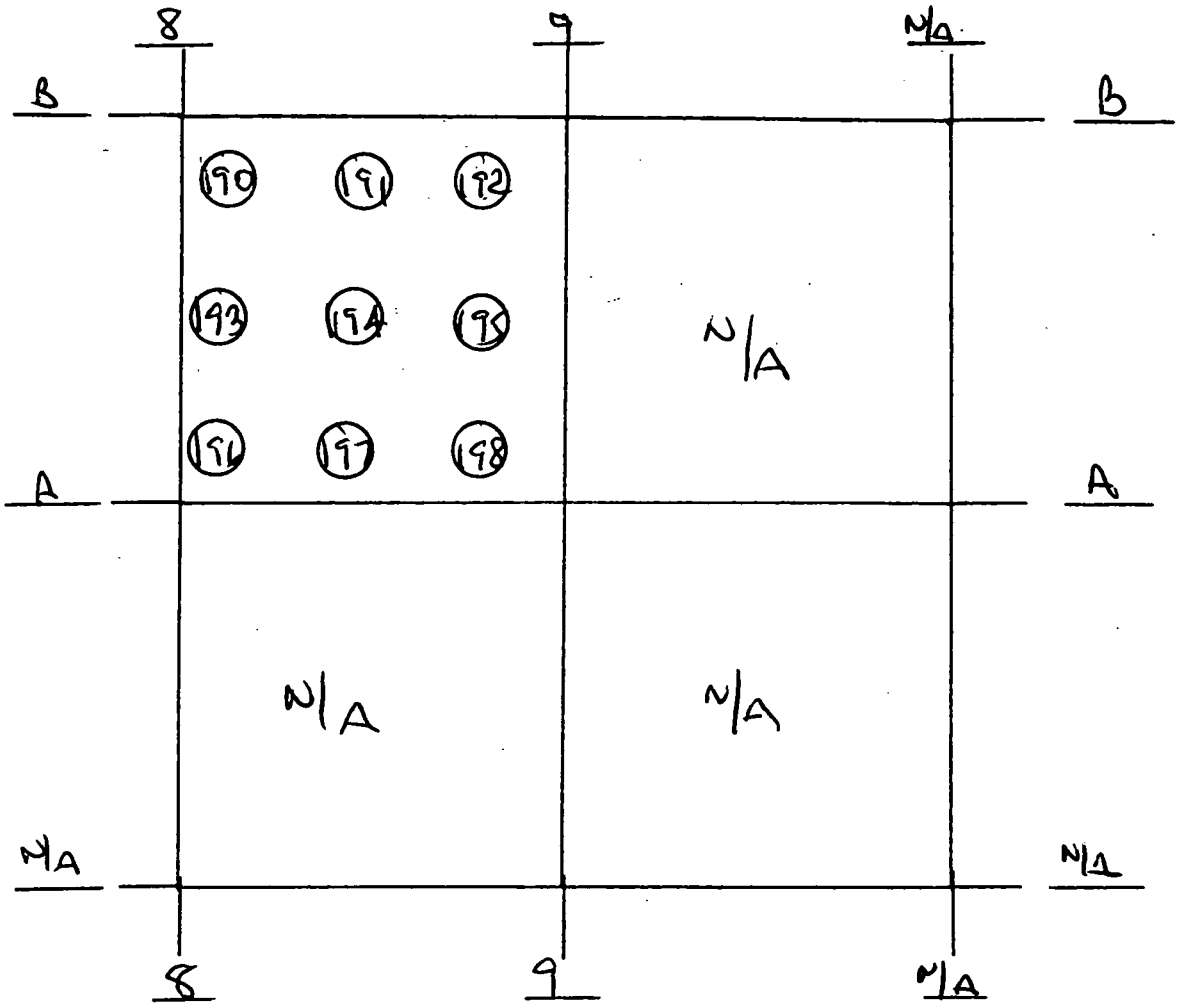
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-03

MAP/DRAWING



<100/α
<5K/β

ALL DOSE RATES
<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No. 98-GH-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
190		See		
191		Attachments		
192				
193				
194				
195				
196				
197				
198				
		N/A		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

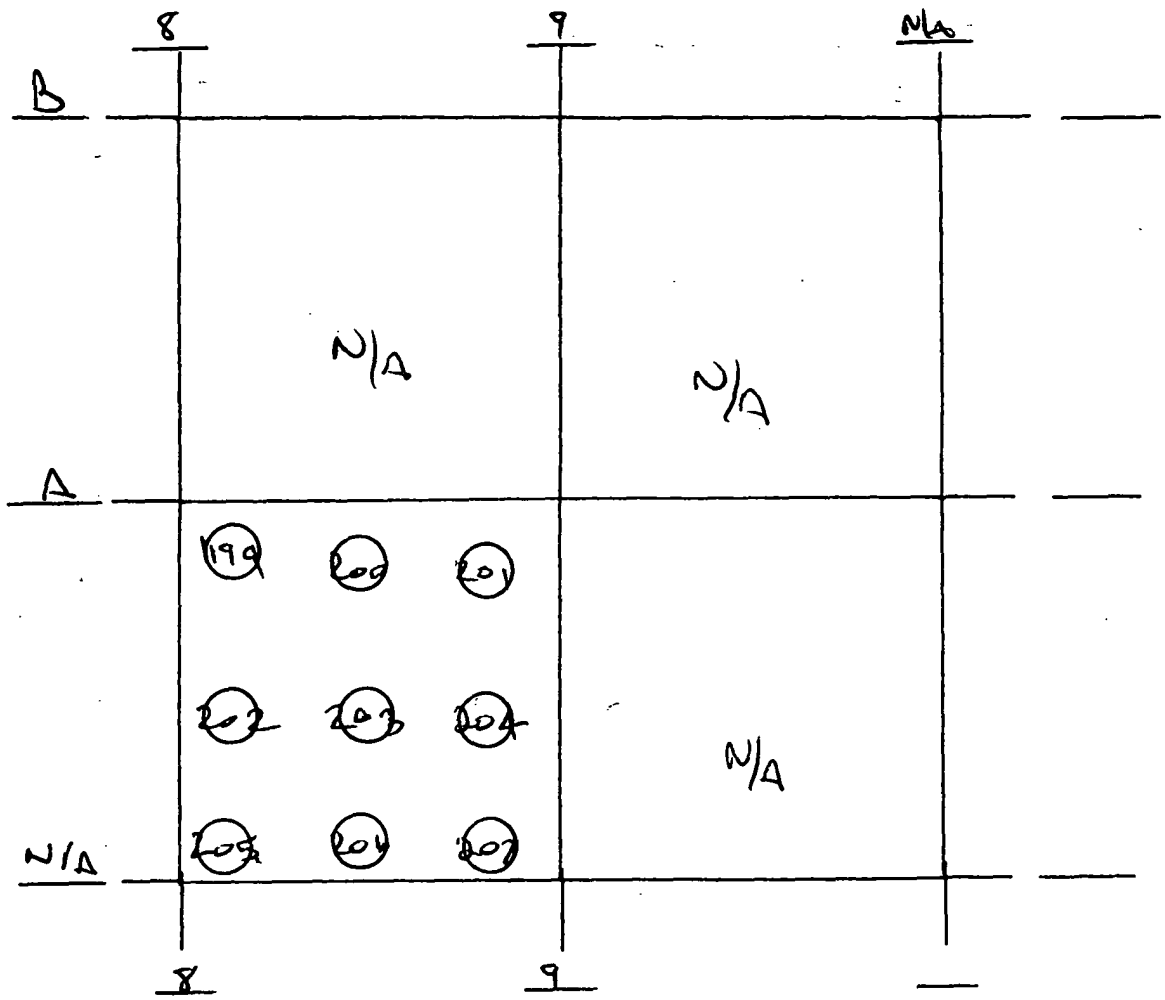
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98-64-63

MAP/DRAWING



<100/α
<5K/β

ALL DOSE RATES
<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No. 98-6H-03

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
199	SEE			
200	ATTACHMENTS			
201				
202				
203				
204				
205				
206				
207				
		NIL		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		NA		

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR046
Batch Ended: 11/23/98 9:40
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	1	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	2	1.49	2.05	<MDA	0.13	1.99	<MDA
B3	3	1.16	2.07	<MDA	0.00	1.47	<MDA
B4	4	1.75	2.04	<AL	0.53	2.11	<MDA
C1	5	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	6	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	7	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	8	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	9	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	10	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	11	0.87	2.32	<MDA	0.10	2.12	<MDA
D4	12	6.05	3.83	<AL	4.13	3.10	<AL
B1	13	1.58	2.18	<MDA	0.00	1.60	<MDA
B2	14	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	15	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	16	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	17	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	18	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	19	0.00	2.16	<MDA	3.15	2.54	<AL
C4	20	1.16	2.07	<MDA	0.00	2.25	<MDA
D1	21	1.54	1.99	<MDA	3.10	2.77	<AL
D2	22	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	23	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	24	1.73	2.23	<MDA	0.00	1.42	<MDA
B1	25	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	26	0.00	2.05	<MDA	0.26	1.99	<MDA
B3	27	0.00	2.08	<MDA	1.91	2.40	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR046
Batch Ended: 11/23/98 9:40
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B4	28	0.00	2.06	<MDA	3.35	2.84	<AL
C1	29	1.59	2.00	<AL	1.44	2.29	<MDA
C2	30	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	31	0.00	2.17	<MDA	4.41	2.83	<AL
C4	32	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	33	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	34	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	35	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	36	0.00	2.24	<MDA	1.80	2.41	<MDA
B1	37	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	38	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	39	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	40	0.00	2.05	<MDA	2.01	2.50	<MDA
C1	41	0.00	2.00	<MDA	1.59	2.29	<MDA
C2	42	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	43	1.67	2.14	<MDA	0.00	1.30	<MDA
C4	44	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	45	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	46	3.40	2.82	<AL	1.47	2.42	<MDA
D3	47	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	48	0.00	2.23	<MDA	0.43	1.98	<MDA
B1	49	1.56	2.19	<MDA	0.18	2.13	<MDA
B2	50	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	51	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	52	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	53	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	54	0.00	2.00	<MDA	1.26	2.23	<MDA
C3	55	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	56	0.00	2.05	<MDA	0.00	1.40	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR046
Batch Ended: 11/23/98 9:40
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	57	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	58	0.00	2.05	<MDA	4.43	3.08	<AL
D3	59	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	60	0.00	2.30	<MDA	10.04	4.14	<AL
B1	61	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	62	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	63	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	64	1.74	2.05	<AL	1.87	2.50	<MDA
C1	65	0.00	2.01	<MDA	2.89	2.64	<MDA
C2	66	0.00	2.01	<MDA	2.48	2.54	<MDA
C3	67	0.00	2.17	<MDA	4.41	2.83	<AL
C4	68	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	69	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	70	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	71	0.87	2.32	<MDA	0.10	2.12	<MDA
D4	72	1.69	2.26	<MDA	4.41	3.10	<AL
B1	73	0.00	2.19	<MDA	1.72	2.55	<MDA
B2	74	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	75	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	76	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	77	1.60	1.98	<AL	0.00	1.37	<MDA
C2	78	0.00	2.01	<MDA	2.48	2.54	<MDA
C3	79	0.00	2.15	<MDA	1.89	2.20	<MDA
C4	80	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	81	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	82	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	83	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	84	0.00	2.24	<MDA	1.80	2.41	<MDA
B1	85	1.54	2.19	<MDA	1.58	2.55	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR046
Batch Ended: 11/23/98 9:40
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B2	86	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	87	1.14	2.09	<MDA	3.14	2.74	<AL
B4	88	1.73	2.06	<AL	3.21	2.84	<AL
C1	89	0.00	2.00	<MDA	1.59	2.29	<MDA
C2	90	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	91	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	92	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	93	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	94	1.46	2.02	<MDA	0.00	1.49	<MDA
D3	95	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	96	0.00	2.25	<MDA	3.17	2.77	<AL
B1	97	1.54	2.19	<MDA	1.58	2.55	<MDA
B2	98	0.00	2.05	<MDA	0.26	1.99	<MDA
B3	99	0.00	2.08	<MDA	1.91	2.40	<MDA
B4	100	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	101	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	102	1.56	1.99	<MDA	0.00	1.86	<MDA
C3	103	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	104	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	105	1.56	1.98	<AL	0.40	2.00	<MDA
D2	106	1.45	2.03	<MDA	0.25	2.01	<MDA
D3	107	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	108	0.00	2.26	<MDA	4.55	3.10	<AL

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR049
Batch Ended: 11/23/98 14:31
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	109	1.58	2.18	<MDA	0.00	1.60	<MDA
B2	110	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	111	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	112	1.76	2.04	<AL	0.00	1.63	<MDA
C1	113	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	114	0.00	2.00	<MDA	1.26	2.23	<MDA
C3	115	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	116	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	117	1.57	1.97	<AL	0.00	1.47	<MDA
D2	118	0.00	2.04	<MDA	1.73	2.42	<MDA
D3	119	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	120	0.00	2.23	<MDA	0.00	1.42	<MDA
B1	121	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	122	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	123	0.00	2.08	<MDA	1.91	2.40	<MDA
B4	124	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	125	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	126	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	127	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	128	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	129	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	130	1.47	2.02	<MDA	0.00	1.49	<MDA
D3	131	3.06	3.19	<MDA	0.00	2.12	<MDA
D4	132	1.72	2.24	<MDA	0.29	1.98	<MDA
B1	133	1.52	2.20	<MDA	2.98	2.91	<MDA
B2	134	0.00	2.04	<MDA	0.00	1.48	<MDA
B3	135	0.00	2.07	<MDA	0.00	1.47	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR049
Batch Ended: 11/23/98 14:31
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B4	136	0.00	2.04	<MDA	0.67	2.11	<MDA
C1	137	0.00	2.00	<MDA	1.59	2.29	<MDA
C2	138	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	139	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	140	1.16	2.10	<MDA	2.12	2.86	<MDA
D1	141	1.58	1.97	<AL	0.00	1.47	<MDA
D2	142	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	143	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	144	0.00	2.23	<MDA	0.00	1.43	<MDA
B1	145	0.00	2.20	<MDA	3.12	2.91	<MDA
B2	146	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	147	0.00	2.08	<MDA	0.57	1.99	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR047
Batch Ended: 11/23/98 10:24
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B4	148	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	149	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	150	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	151	3.74	2.98	<AL	0.38	1.81	<MDA
C4	152	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	153	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	154	0.00	2.04	<MDA	1.73	2.42	<MDA
D3	155	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	156	1.73	2.23	<MDA	0.00	1.42	<MDA
B1	157	0.00	2.20	<MDA	3.12	2.91	<MDA
B2	158	0.00	2.07	<MDA	2.92	2.74	<MDA
B3	159	0.00	2.08	<MDA	1.91	2.40	<MDA
B4	160	0.00	2.04	<MDA	0.67	2.11	<MDA
C1	161	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	162	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	163	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	164	1.16	2.07	<MDA	0.00	2.25	<MDA
D1	165	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	166	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	167	3.07	3.18	<AL	0.00	1.63	<MDA
D4	168	1.73	2.23	<MDA	0.00	1.42	<MDA
B1	169	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	170	1.48	2.06	<MDA	1.46	2.39	<MDA
B3	171	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	172	1.74	2.05	<AL	1.87	2.50	<MDA
C1	173	0.00	2.01	<MDA	2.89	2.64	<MDA
C2	174	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	175	0.00	2.15	<MDA	1.89	2.20	<MDA
C4	176	1.16	2.07	<MDA	0.00	2.25	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR047
Batch Ended: 11/23/98 10:24
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILERS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	177	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	178	1.47	2.02	<MDA	0.00	1.49	<MDA
D3	179	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	180	0.00	2.23	<MDA	0.00	1.42	<MDA
B1	181	5.77	3.68	<AL	0.00	1.60	<MDA
B2	182	1.50	2.04	<MDA	0.00	1.48	<MDA
B3	183	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	184	1.76	2.04	<AL	0.00	1.63	<MDA
B1	185	0.00	2.18	<MDA	0.00	1.60	<MDA
~~C1~~	~~185~~	0.00	1.98	<MDA	0.00	1.37	<MDA
B2	186	0.00	2.06	<MDA	1.59	2.39	<MDA
~~C2~~	~~186~~	1.57	1.98	<AL	0.00	1.40	<MDA
B3	187	0.00	2.07	<MDA	0.00	1.47	<MDA
~~C3~~	~~187~~	0.00	2.14	<MDA	0.63	1.81	<MDA
B4	188	0.00	2.04	<MDA	0.67	2.11	<MDA
~~C4~~	~~188~~	0.00	2.05	<MDA	0.00	1.40	<MDA
C1	189	0.00	1.98	<MDA	0.00	1.37	<MDA
~~D1~~	~~189~~	0.00	1.97	<MDA	0.00	1.47	<MDA
C2	190	0.00	2.01	<MDA	2.48	2.54	<MDA
~~D2~~	~~190~~	0.00	2.04	<MDA	1.73	2.42	<MDA
C3	191	0.00	2.15	<MDA	1.89	2.20	<MDA
~~D3~~	~~191~~	0.00	2.34	<MDA	4.25	3.15	<AL
C4	192	1.16	2.06	<MDA	0.00	1.88	<MDA
~~D4~~	~~192~~	0.00	2.23	<MDA	0.00	1.43	<MDA
D1	193	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	194	0.00	2.05	<MDA	4.43	3.08	<AL
D3	195	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	196	0.00	2.23	<MDA	0.00	1.42	<MDA
~~B1~~	~~205~~	1.54	2.19	<MDA	1.58	2.55	<MDA

Delete Duplicate 11/23/98 [illegible]

Delete 11/23/98 [illegible]

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR050
Batch Ended: 11/23/98 14:44
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-03 CHILDER

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	197	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	198	0.00	2.05	<MDA	0.26	1.99	<MDA
B3	199	0.00	2.09	<MDA	3.25	2.74	<AL
B4	200	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	201	0.00	2.02	<MDA	4.20	2.94	<AL
C2	202	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	203	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	204	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	205	0.00	1.99	<MDA	3.25	2.77	<AL
D2	206	1.44	2.04	<MDA	1.60	2.42	<MDA
D3	207	0.00	2.32	<MDA	0.21	2.12	<MDA

Time: 2.00
Data Mode: DPM Nuclide: SM VIAL Quench Set: SM VIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	18.6	0	0.0	6.51
Region B:	2.0	18.6	0	0.0	6.36
Region C:	40.0	2000	0	0.0	11.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-03 CHILDERS(30-12 1-207)
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	6.51	6.36	7	B	551.61		0.000	11.50
0	2.00	1155.31	1051.57	0		551.05	2469.67	164.857	0.00
1	2.00	0.99	0.45	7		575.00	2.08	8.824	0.00
2	2.00	1.36	1.01	0		571.47	2.86	9.032	0.00
3	2.00	3.12	1.77	0		587.08	6.49	9.741	0.00
4	2.00	6.49	5.16	0		582.70	13.52	11.187	0.50
5	2.00	1.99	0.92	0		582.23	4.15	9.257	0.00
6	2.00	0.00	0.00	0		577.03	0.00	0.000	0.00
7	2.00	0.99	0.40	0		579.82	2.07	8.790	0.00
8	2.00	1.01	0.20	0		599.23	2.08	8.667	0.00
9	2.00	3.99	3.14	0		535.21	8.71	10.631	0.00
10	2.00	0.00	0.00	0		570.25	0.00	0.000	0.00
11	2.00	1.99	1.63	0		588.80	4.13	9.210	0.00
12	2.00	0.00	0.00	8		582.29	0.00	0.000	0.00
13	2.00	3.68	3.41	0		575.35	7.72	10.080	0.50
14	2.00	0.99	0.91	0		576.00	2.08	8.817	0.00
15	2.00	1.68	1.64	0		590.52	3.47	9.049	0.00
16	2.00	4.48	4.16	5		578.59	9.37	10.399	0.00
17	2.00	3.18	2.67	0		579.24	6.65	9.827	0.00
18	2.00	0.44	0.00	0		564.50	0.94	8.617	0.00
19	2.00	3.94	3.55	0		547.81	8.46	10.441	1.00
20	2.00	3.39	2.31	0		572.85	7.11	9.967	0.00
21	2.00	0.00	0.00	0		593.93	0.00	0.000	0.00
22	2.00	0.00	0.00	0		565.64	0.00	0.000	0.00
23	2.00	0.73	0.61	0		593.13	1.50	8.567	0.00
24	2.00	0.78	0.16	0		596.57	1.61	8.573	0.00
25	2.00	3.99	3.88	0		595.81	8.23	10.053	0.00
26	2.00	0.49	0.00	0		553.83	1.05	8.716	0.00
27	2.00	2.48	2.42	0		563.86	5.24	9.623	0.00
28	2.00	1.62	0.27	0		591.71	3.35	9.014	0.00
29	2.00	4.99	4.20	0		570.50	10.50	10.681	0.00
30	2.00	1.49	1.14	0		564.02	3.15	9.149	0.00
31	2.00	1.49	0.61	0		596.37	3.08	8.920	0.00
32	2.00	0.00	0.14	8		565.44	0.00	0.000	0.00
33	2.00	0.00	0.00	29		585.73	0.00	0.000	0.00
34	2.00	0.49	0.11	0		596.33	1.01	8.429	0.00

Pg 29.c

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2SIGMA	CPMC
35	2.00	0.00	0.00	8	583.71	0.00	0.000	0.00
36	2.00	1.49	0.64	0	593.20	3.08	8.942	1.50
37	2.00	1.86	1.77	0	576.50	3.89	9.235	0.00
38	2.00	4.17	0.93	0	578.67	8.72	10.266	0.00
39	2.00	0.00	0.00	0	523.19	0.00	0.000	0.00
40	2.00	0.69	0.00	0	570.28	1.45	8.702	0.00
41	2.00	2.69	1.42	0	573.63	5.63	9.644	0.00
42	2.00	0.00	0.00	0	578.29	0.00	0.000	0.00
43	2.00	0.49	0.00	0	576.98	1.03	8.557	0.00
44	2.00	0.00	0.00	8	571.80	0.00	0.000	0.00
45	2.00	4.44	3.59	0	568.16	9.35	10.465	0.00
46	2.00	4.99	4.14	0	530.59	10.95	11.134	0.00
47	2.00	4.65	3.40	0	558.96	9.88	10.635	0.00
48	2.00	1.79	0.94	6	537.34	3.90	9.562	0.00
49	2.00	0.00	0.00	0	529.19	0.00	0.000	0.00
50	2.00	2.49	1.89	6	585.47	5.18	9.467	0.00
51	2.00	3.99	3.45	0	553.29	8.51	10.395	0.00
52	2.00	1.70	1.14	6	544.03	3.66	9.436	0.00
53	2.00	0.00	0.00	9	561.94	0.00	0.000	0.00
54	2.00	2.21	1.85	0	502.32	4.99	10.160	0.00
55	2.00	5.87	4.89	0	587.84	12.17	10.893	0.00
56	2.00	2.68	2.64	0	586.50	5.57	9.545	1.50
57	2.00	0.00	0.00	0	587.24	0.00	0.000	0.00
58	2.00	7.03	5.18	0	581.24	14.65	11.409	0.00
59	2.00	1.49	1.64	0	574.34	3.13	9.075	0.00
60	2.00	0.99	1.00	7	528.27	2.18	9.254	0.00
61	2.00	0.00	0.00	13	569.47	0.00	0.000	0.00
62	2.00	0.49	0.00	7	593.65	1.02	8.447	1.00
63	2.00	0.00	0.00	0	556.39	0.00	0.000	0.00
64	2.00	0.00	0.14	8	547.45	0.00	0.000	0.50
65	2.00	0.99	1.14	0	574.91	2.08	8.824	0.00
66	2.00	0.00	0.00	0	577.81	0.00	0.000	0.00
67	2.00	1.99	2.14	6	581.36	4.15	9.264	1.00
68	2.00	0.49	0.00	0	581.01	1.03	8.530	0.00
69	2.00	1.99	1.17	6	579.11	4.16	9.280	0.00
70	2.00	2.49	1.86	0	602.74	5.11	9.341	0.00
71	2.00	1.99	0.64	6	587.74	4.13	9.218	0.00
72	2.00	6.49	4.61	0	595.26	13.39	11.078	0.00
73	2.00	5.49	5.01	4	523.69	12.13	11.438	0.00
74	2.00	1.99	2.14	0	558.13	4.23	9.435	1.50
75	2.00	1.49	1.14	6	537.52	3.24	9.410	0.00
76	2.00	0.18	0.00	0	575.70	0.39	8.407	0.00
77	2.00	2.66	2.31	0	554.23	5.66	9.780	0.00
78	2.00	0.00	0.00	8	545.85	0.00	0.000	0.00
79	2.00	1.90	1.60	0	573.87	3.99	9.276	0.00
80	2.00	0.99	1.14	7	566.69	2.09	8.882	0.00
81	2.00	2.49	0.91	0	578.45	5.21	9.519	0.00
82	2.00	3.21	2.86	0	562.23	6.79	9.971	0.00
83	2.00	2.99	2.15	0	583.78	6.23	9.706	0.00
84	2.00	2.57	0.00	5	528.58	5.65	10.045	0.00
85	2.00	0.00	0.00	0	577.18	0.00	0.000	0.50
86	2.00	0.00	0.00	8	557.46	0.00	0.000	0.00
87	2.00	2.49	2.64	6	568.29	5.25	9.595	0.50
88	2.00	0.80	0.74	0	567.88	1.69	8.778	0.00
89	2.00	0.00	0.00	0	545.56	0.00	0.000	0.00
90	2.00	4.99	4.16	0	581.65	10.41	10.588	0.00

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2SIGMA	CPMC
91	2.00	4.99	4.94	0	559.52	10.59	10.775	0.00
92	2.00	4.99	3.39	0	587.83	10.36	10.537	0.00
93	2.00	0.68	0.00	7	581.02	1.42	8.627	0.00
94	2.00	1.99	1.64	0	587.30	4.14	9.221	0.00
95	2.00	2.49	0.64	0	586.56	5.18	9.458	0.00
96	2.00	2.99	2.88	5	593.74	6.18	9.631	0.00
97	2.00	4.49	0.92	0	569.42	9.46	10.478	1.00
98	2.00	0.00	0.00	8	570.68	0.00	0.000	0.00
99	2.00	0.00	0.00	0	588.50	0.00	0.000	0.00
100	2.00	2.68	1.89	0	586.90	5.56	9.542	0.00
101	2.00	0.00	0.00	9	587.38	0.00	0.000	0.00
102	2.00	0.00	0.00	0	584.90	0.00	0.000	1.00
103	2.00	1.77	0.65	0	595.51	3.64	9.056	0.00
104	2.00	5.49	4.14	0	585.93	11.41	10.758	1.50
105	2.00	0.00	0.00	0	590.22	0.00	0.000	0.00
106	2.00	2.49	0.88	0	591.54	5.16	9.422	0.00
107	2.00	6.99	5.15	0	585.73	14.53	11.356	0.00
108	2.00	2.49	2.13	0	591.18	5.16	9.424	0.00
109	2.00	1.99	1.92	0	570.95	4.19	9.340	3.00
110	2.00	5.88	5.68	0	512.71	13.15	11.747	0.50
111	2.00	1.49	0.83	6	597.70	3.07	8.911	0.00
112	2.00	1.99	1.18	0	576.22	4.17	9.301	0.00
113	2.00	1.41	0.04	0	544.36	3.04	9.287	0.00
114	2.00	1.49	0.77	0	551.37	3.19	9.248	0.00
115	2.00	1.99	1.41	0	577.67	4.17	9.291	3.00
116	2.00	3.88	2.86	0	572.58	8.15	10.188	1.00
117	2.00	2.37	1.64	0	587.70	4.91	9.392	0.00
118	2.00	1.06	0.01	0	571.40	2.22	8.881	0.00
119	2.00	5.70	3.28	4	547.45	12.23	11.203	0.00
120	2.00	7.56	3.66	0	582.17	15.76	11.606	0.00
121	2.00	0.99	1.14	7	585.65	2.06	8.750	0.00
122	2.00	1.49	0.88	0	588.84	3.09	8.972	0.00
123	2.00	3.99	3.14	0	595.03	8.24	10.059	0.00
124	2.00	0.99	1.14	0	534.37	2.17	9.191	0.00
125	2.00	0.49	0.37	0	522.26	1.09	9.049	0.00
126	2.00	1.56	1.07	6	571.35	3.27	9.127	0.00
127	2.00	2.69	1.67	0	579.67	5.62	9.601	0.00
128	2.00	5.99	5.64	0	557.65	12.73	11.207	0.50
129	2.00	6.18	3.91	0	578.71	12.92	11.099	0.00
130	2.00	1.49	0.63	6	589.53	3.09	8.967	0.00
131	2.00	8.70	6.81	0	591.60	18.00	11.946	0.00
132	2.00	0.00	0.00	0	571.49	0.00	0.000	0.00
133	2.00	0.00	0.14	8	583.65	0.00	0.000	0.00
134	2.00	0.00	0.00	0	581.62	0.00	0.000	1.50
135	2.00	8.99	6.35	0	591.57	18.60	12.053	0.00
136	2.00	2.49	2.14	6	589.52	5.16	9.437	0.00
137	2.00	3.71	3.36	5	592.35	7.68	9.959	0.00
138	2.00	3.99	2.16	5	582.54	8.32	10.157	0.00
139	2.00	7.49	7.41	0	577.52	15.67	11.622	0.00
140	2.00	0.00	0.00	0	582.55	0.00	0.000	0.00
141	2.00	1.99	0.88	0	592.43	4.12	9.184	0.00
142	2.00	1.18	0.00	0	590.54	2.45	8.810	0.00
143	2.00	5.00	4.65	4	579.90	10.45	10.607	0.00
144	2.00	0.00	0.00	8	588.02	0.00	0.000	0.00
145	2.00	0.00	0.00	0	590.80	0.00	0.000	0.00
146	2.00	0.00	0.14	0	587.29	0.00	0.000	0.00

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2SIGMA	CPMC
147	2.00	3.56	3.14	0	553.10	7.58	10.201	2.50
148	2.00	1.99	1.39	6	589.40	4.13	9.206	0.50
149	2.00	0.00	0.00	8	566.90	0.00	0.000	0.00
150	2.00	0.12	0.00	7	557.12	0.26	8.498	0.00
151	2.00	3.49	3.42	5	569.58	7.35	10.040	0.00
152	2.00	0.99	1.14	0	587.43	2.06	8.738	0.00
153	2.00	0.99	0.78	0	548.30	2.13	9.031	0.00
154	2.00	1.99	0.69	0	572.19	4.18	9.331	0.00
155	2.00	7.27	5.92	0	587.49	15.09	11.447	2.50
156	2.00	2.98	2.63	0	578.20	6.22	9.741	0.00
157	2.00	14.18	8.65	0	585.85	29.47	13.884	0.00
158	2.00	0.56	0.71	7	583.36	1.17	8.550	0.00
159	2.00	0.99	0.00	0	589.22	2.06	8.726	0.50
160	2.00	1.99	0.92	6	572.81	4.18	9.326	4.00
161	2.00	0.49	0.45	7	552.13	1.05	8.730	0.00
162	2.00	0.99	0.64	0	571.65	2.09	8.847	0.00
163	2.00	0.00	0.00	0	550.25	0.00	0.000	0.00
164	2.00	4.21	3.60	5	592.26	8.71	10.174	0.00
165	2.00	1.91	0.88	0	593.15	3.95	9.141	0.00
166	2.00	2.99	2.39	0	586.99	6.21	9.682	0.00
167	2.00	0.18	0.00	0	588.98	0.37	8.317	0.00
168	2.00	0.00	0.00	0	589.72	0.00	0.000	0.00
169	2.00	2.68	1.90	5	583.93	5.58	9.564	0.00
170	2.00	0.49	0.64	7	578.73	1.03	8.546	0.00
171	2.00	3.49	3.42	5	571.40	7.34	10.026	1.00
172	2.00	4.19	4.34	0	591.30	8.68	10.174	0.00
173	2.00	3.99	3.43	5	579.64	8.34	10.180	0.00
174	2.00	0.00	0.00	0	535.83	0.00	0.000	0.00
175	2.00	9.49	8.66	0	580.97	19.80	12.335	0.00
176	2.00	0.99	0.90	7	583.90	2.07	8.762	0.00
177	2.00	0.68	0.64	0	581.38	1.42	8.624	0.00
178	2.00	3.99	3.89	0	590.36	8.27	10.095	0.00
179	2.00	0.99	0.90	7	583.73	2.07	8.763	0.00
180	2.00	0.56	0.71	7	583.39	1.17	8.550	1.00
181	2.00	1.49	1.14	6	579.85	3.12	9.036	0.00
182	2.00	1.99	0.49	0	531.79	4.36	9.726	0.00
183	2.00	3.53	2.91	0	595.17	7.28	9.857	0.00
184	2.00	1.69	0.70	0	569.44	3.55	9.205	0.00
185	2.00	0.99	0.43	0	564.71	2.10	8.896	0.00
186	2.00	1.18	0.64	0	594.99	2.43	8.777	0.00
187	2.00	0.00	0.00	0	577.92	0.00	0.000	0.00
188	2.00	2.99	1.64	0	586.21	6.22	9.688	0.00
189	2.00	1.49	0.72	0	566.03	3.15	9.134	0.00
190	2.00	4.10	4.00	5	585.78	8.53	10.179	0.00
191	2.00	0.00	0.00	0	570.44	0.00	0.000	0.00
192	2.00	0.99	1.14	0	585.59	2.06	8.751	0.00
193	2.00	2.99	2.64	0	582.62	6.23	9.715	0.00
194	2.00	4.49	3.90	0	581.68	9.37	10.378	0.00
195	2.00	0.68	0.00	0	589.11	1.41	8.571	0.00
196	2.00	3.49	2.97	5	542.47	7.55	10.308	0.00
197	2.00	0.00	0.00	0	583.01	0.00	0.000	0.00
198	2.00	1.18	0.90	0	582.22	2.46	8.867	1.50
199	2.00	1.77	0.48	0	584.27	3.67	9.135	0.00
200	2.00	2.50	0.91	0	579.37	5.21	9.513	0.00
201	2.00	1.30	0.09	0	567.61	2.74	9.028	0.00
202	2.00	0.00	0.00	0	591.87	0.00	0.000	1.50

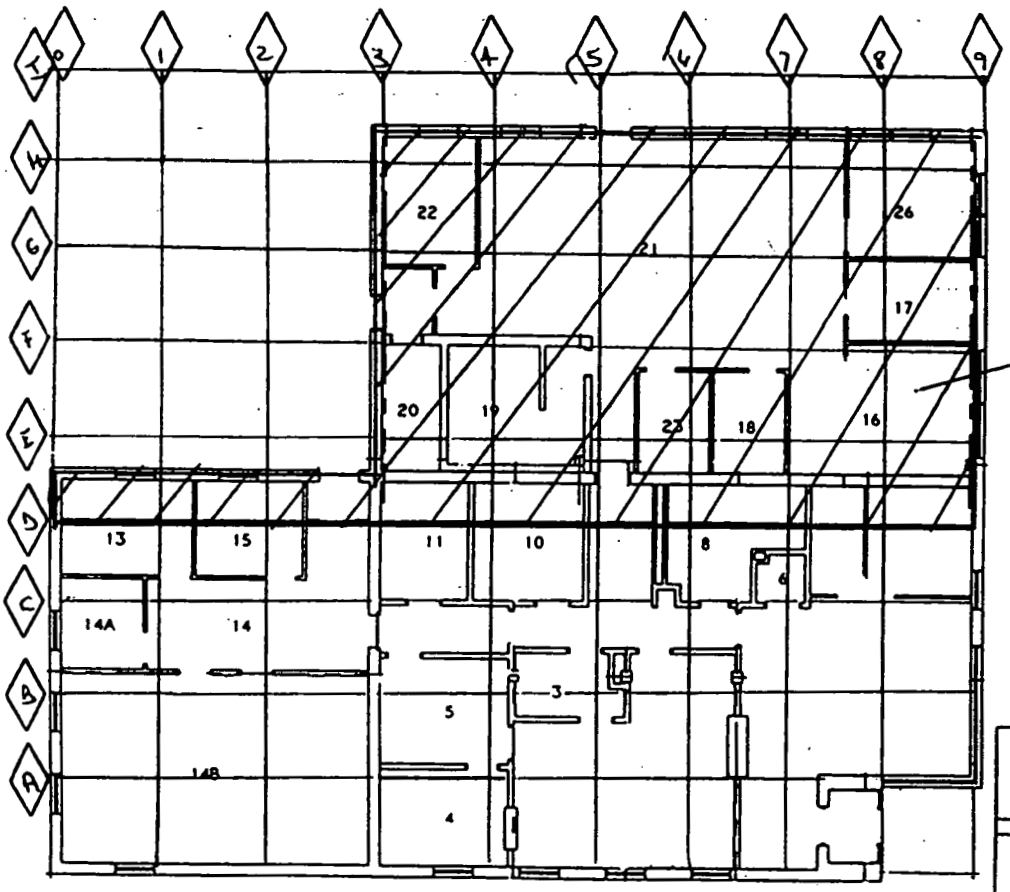
S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2SIGMA	CPMC
203	2.00	5.49	5.40	0	584.42	11.43	10.771	0.50
204	2.00	1.18	0.64	0	594.83	2.43	8.778	0.00
205	2.00	0.00	0.00	0	588.43	0.00	0.000	0.00
206	2.00	1.74	1.70	0	582.65	3.62	9.134	1.50
207	2.00	4.49	2.90	0	584.46	9.35	10.355	0.00

RADIOLOGICAL SURVEY DATA SHEET

B1-B252
30-12 P5

LOCATION: (BLDG./AREA/ROOM) GH Bldg / First Floor	SURVEY NO. 98-GH-04
PURPOSE: Release Survey of GH Bldg First Floor	RWP NO. N/A
	DATE: 11/24/98
	TIME: 0900

MAP/DRAWING



Area Surveyed
Floor is Carpeted
No Survey on Floor under Carpet.
Bun 12/14/98

EG&G
MOUND APPLIED TECHNOLOGIES
SMALL SCALE FLOOR PLANS
GH BLDG.
FIRST FLOOR
BLDG. CODE : 3567
REV. DATE 12/15/88
UNCL

*NOTE: (1) GRID ≈ 10FT x 10FT

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
(#) = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5340/5343	2/6/98
Micro R	3933	4/7/99
NE Electra	5308/5325	5/1/99

[redacted]

HP# 7889/4992	Date: 11/24/98
HP# 5268	Date: 11/25/98
HP# 5996	Date: 12-9-98

ML-9620 (2-98)

Survey No. 98-GH-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

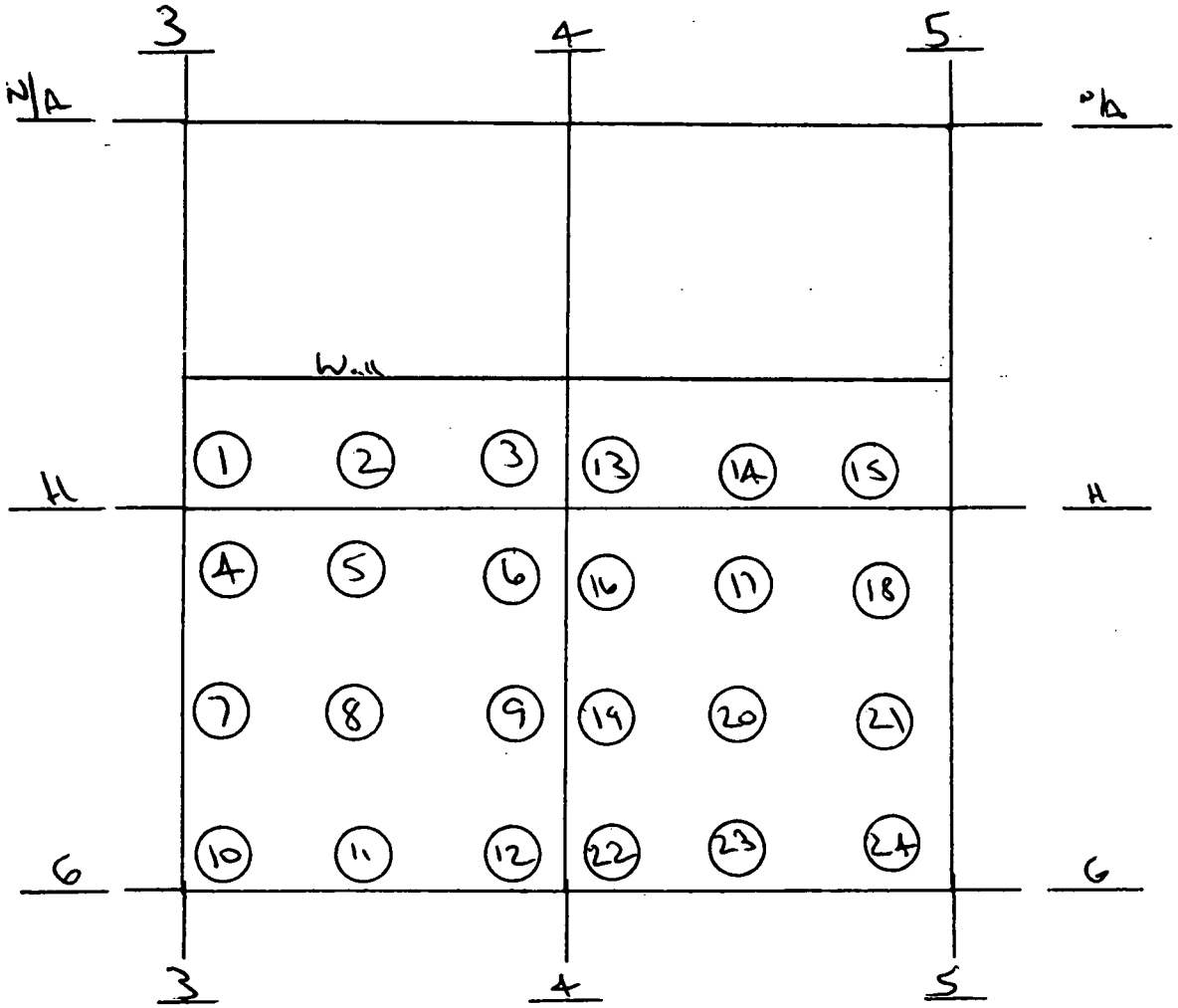
COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98- GH-04

MAP/DRAWING



ALL DIRECT MEASUREMENTS

<100/α
<5K/β

<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No. 98-64-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-24	SEE	ATTACHMENTS		
	NEC			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		NA		

COMMENTS:

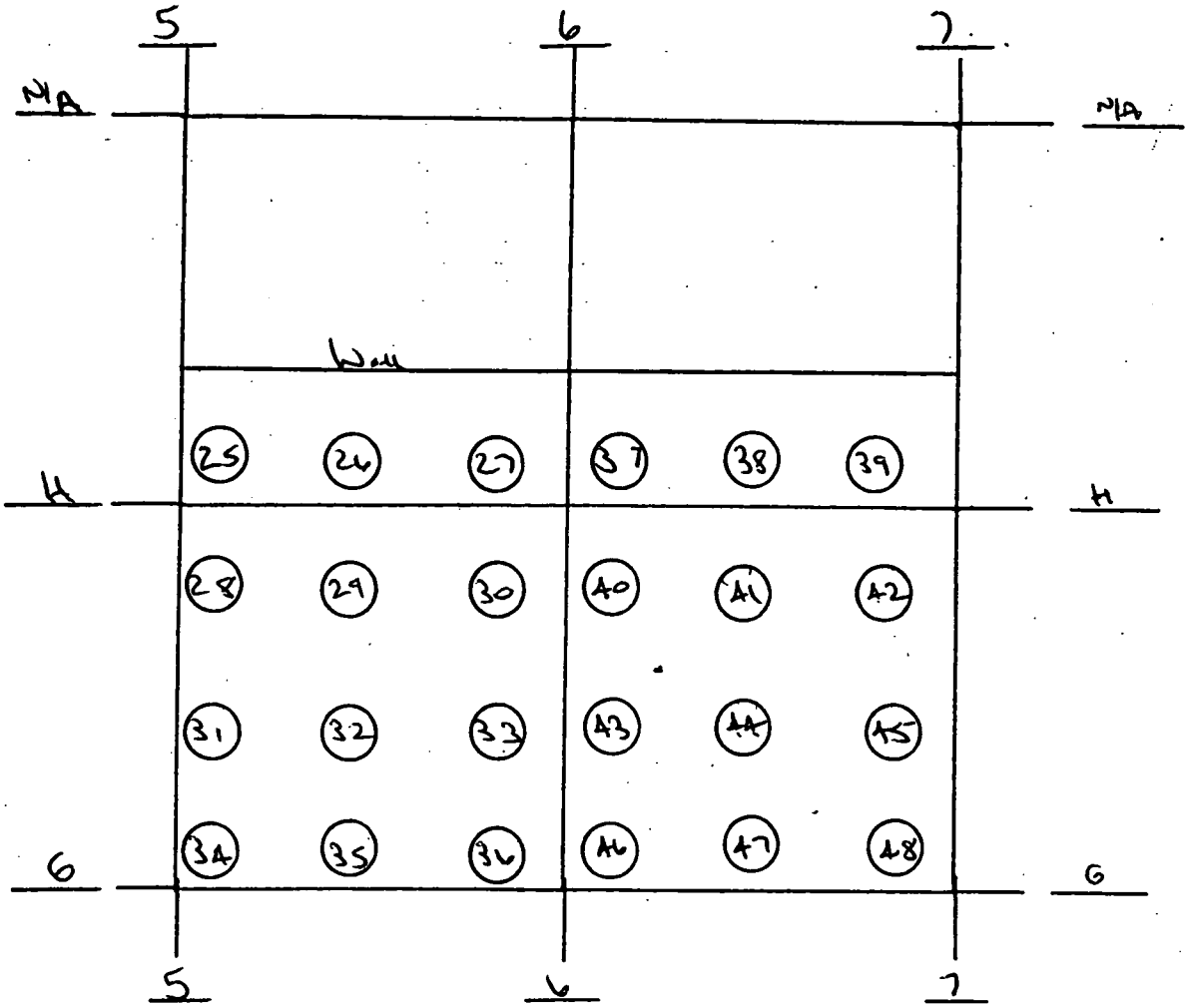
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-GK-04

MAP/DRAWING



ALL DIRECT MEASUREMENTS:

<100/α
<5K/β

<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GH-OA

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
25-48	SEE	ATTACHMENTS		
		NPE		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

COMMENTS:

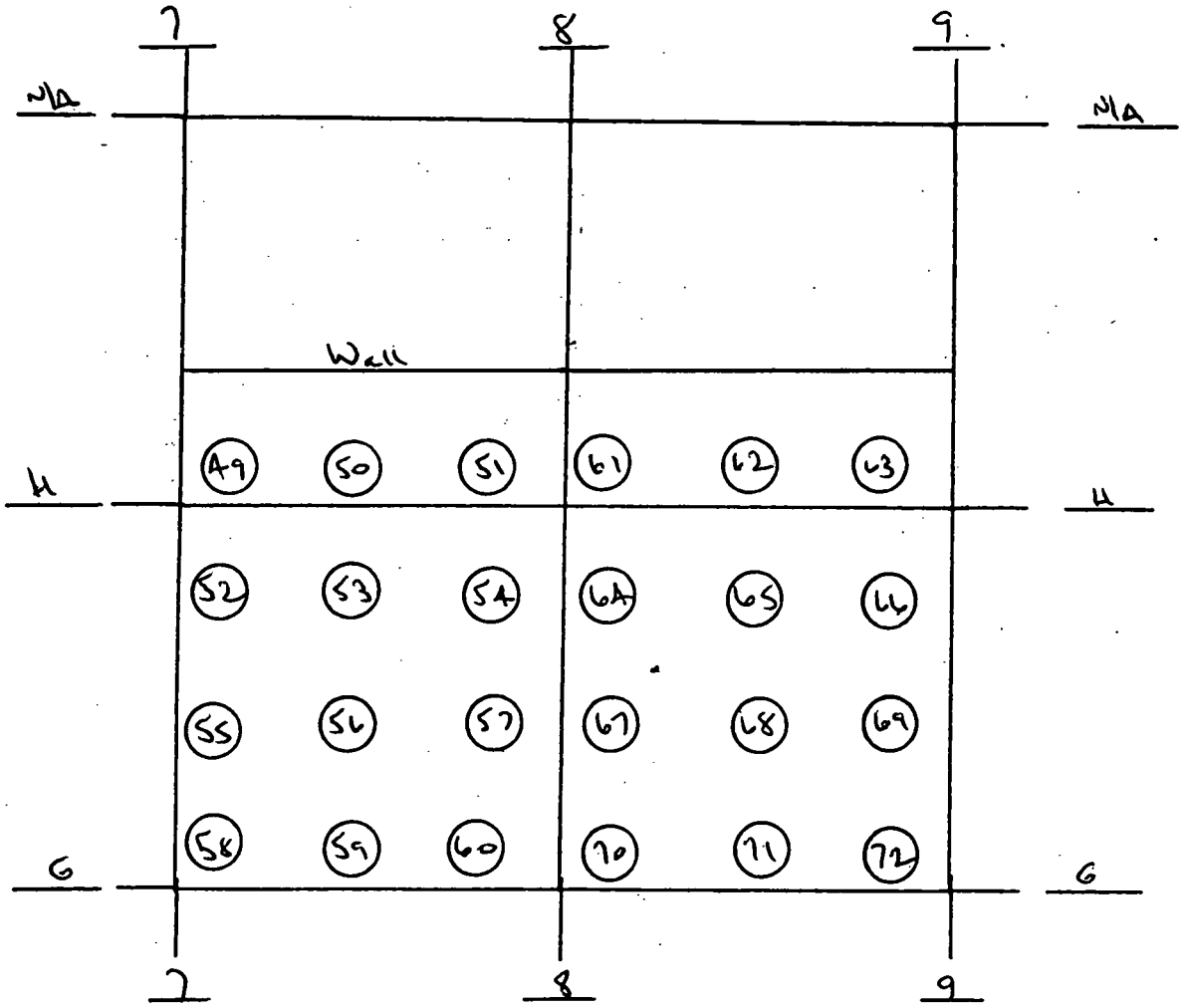
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-GH-04

MAP/DRAWING



ALL DIRECT MEASUREMENTS:

<100/α
<5K/β

<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GH-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
49-72	SEE ATTACHMENTS			
		NAE		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

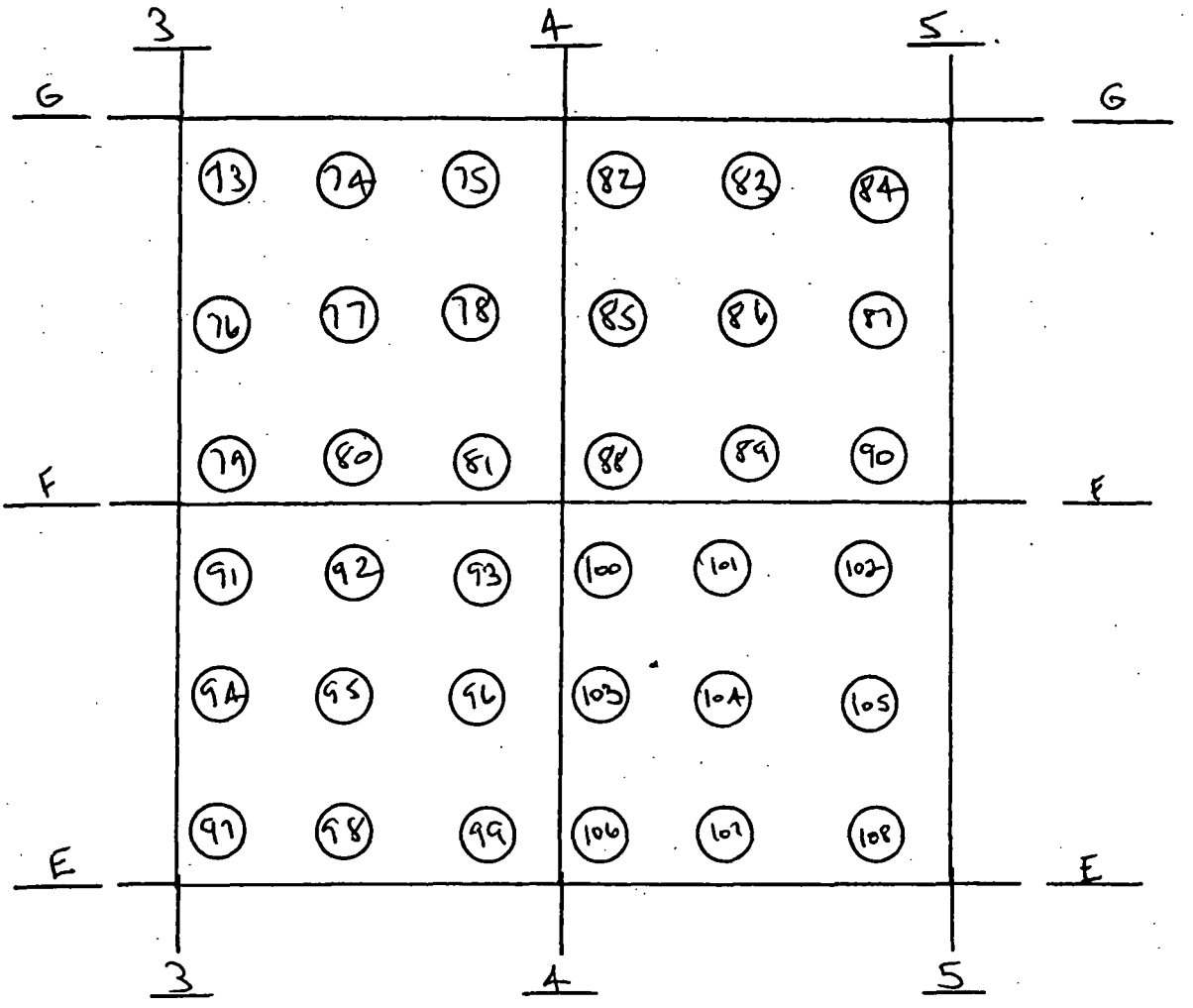
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98-GH-04

MAP/DRAWING



ALL DIRECT MEASUREMENTS:

< 100/α
< 5 K/β

< .02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No.
98 - GH - 04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
73-108	SEE	ATTACHMENTS		
		NFE		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

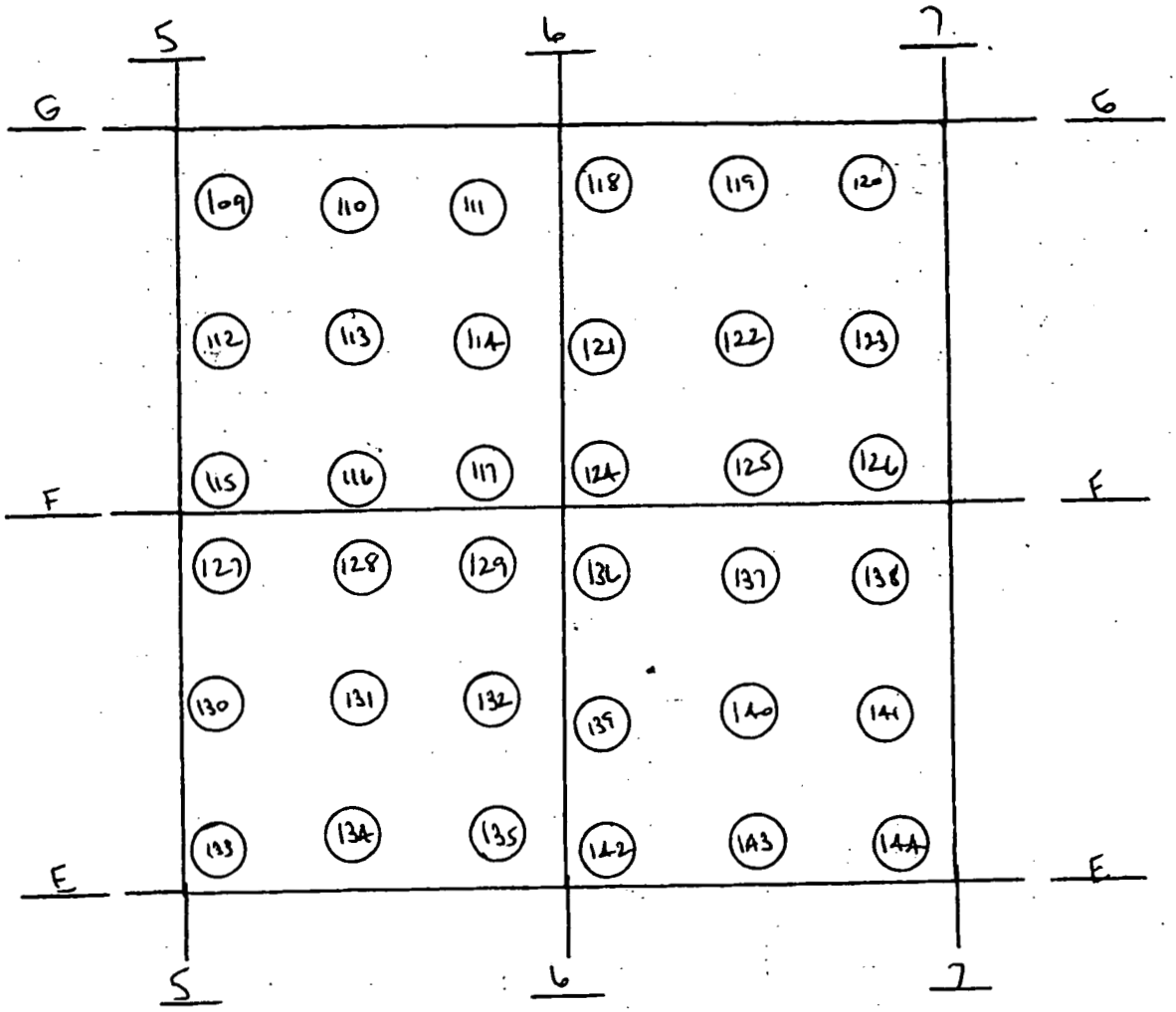
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98-GU-04

MAP/DRAWING



ALL DIRECT MEASUREMENTS:

<100/α
<5K/β

<.02 mrem/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-64-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
109-144	SEE ATTACHMENTS			
		N/A		

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

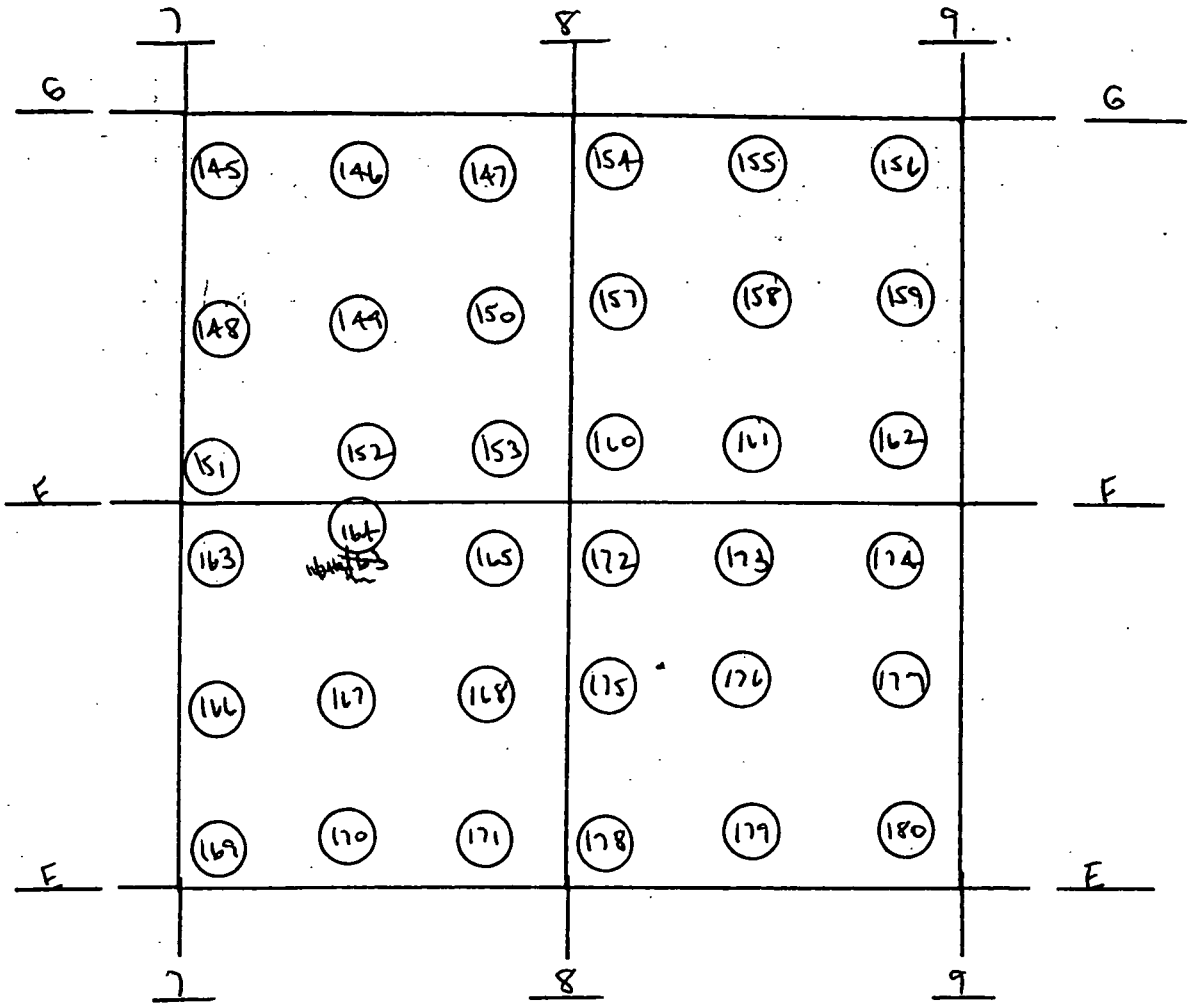
COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No.
98-GH-04

MAP/DRAWING



All Dose rates
<0.02 mr/hr

<100/α
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No.
98-GU-0A

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
145-180	See Attached sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

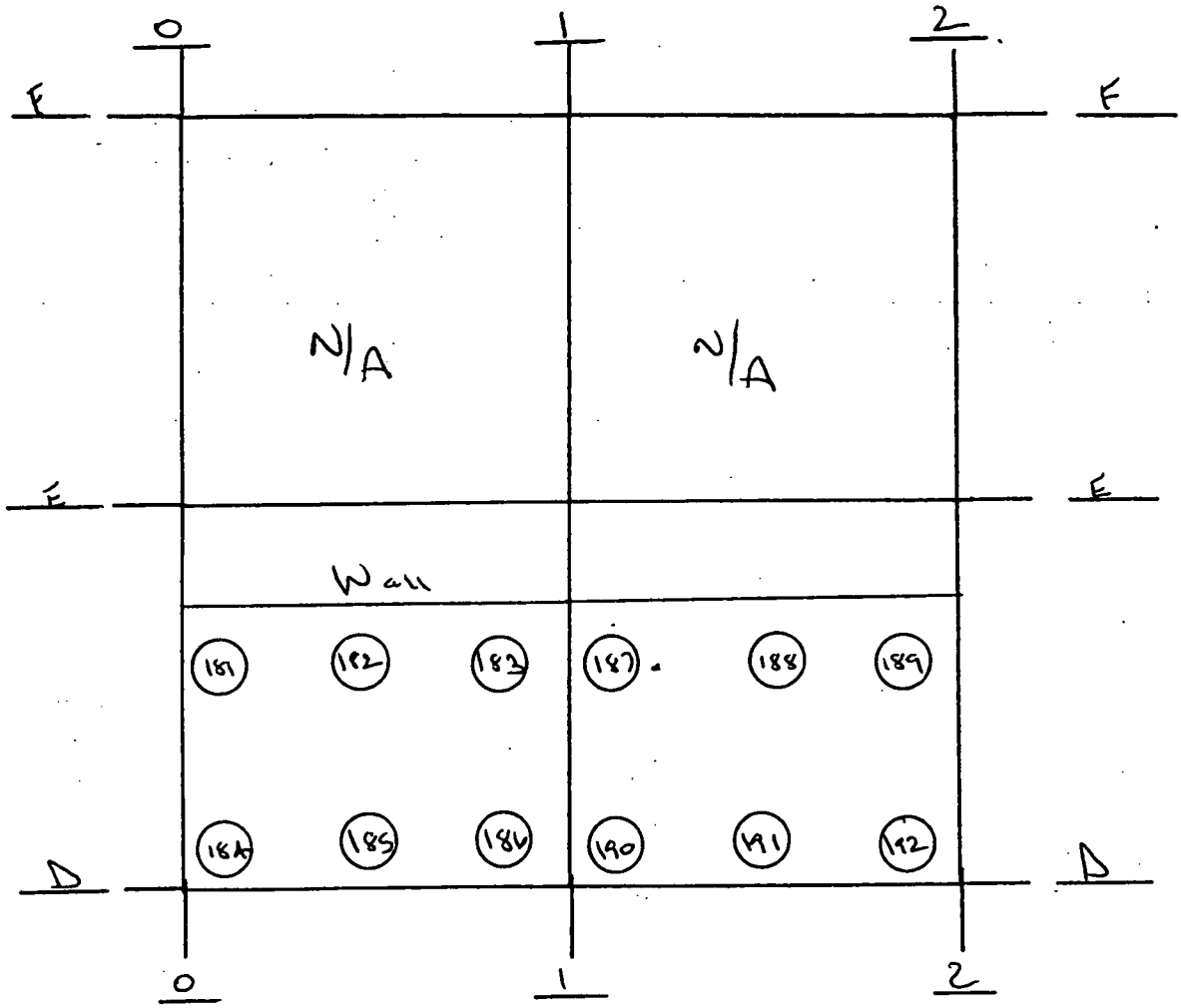
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 98- CH -04

MAP/DRAWING



All Doorsides
<0.02 mr/hr

<10dpm
<5k/B

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No.
98-GH-OA

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
181-192	See Attached Sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

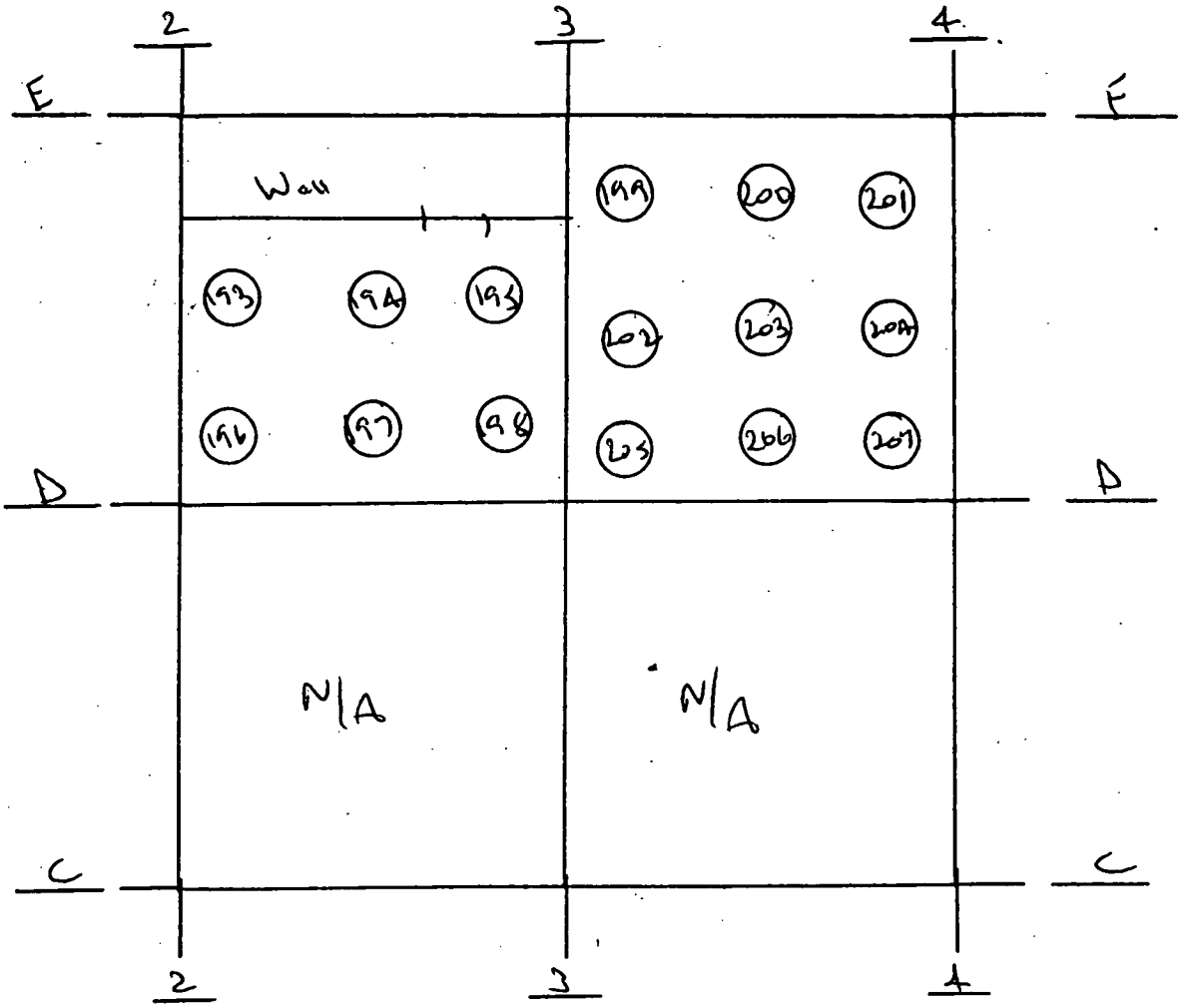
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-64-0A

MAP/DRAWING



All Dose rates < 0.02 mr/hr

<100/α
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-6H-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
191-207	See Attached Sheets			
N/A				

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
N/A				

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

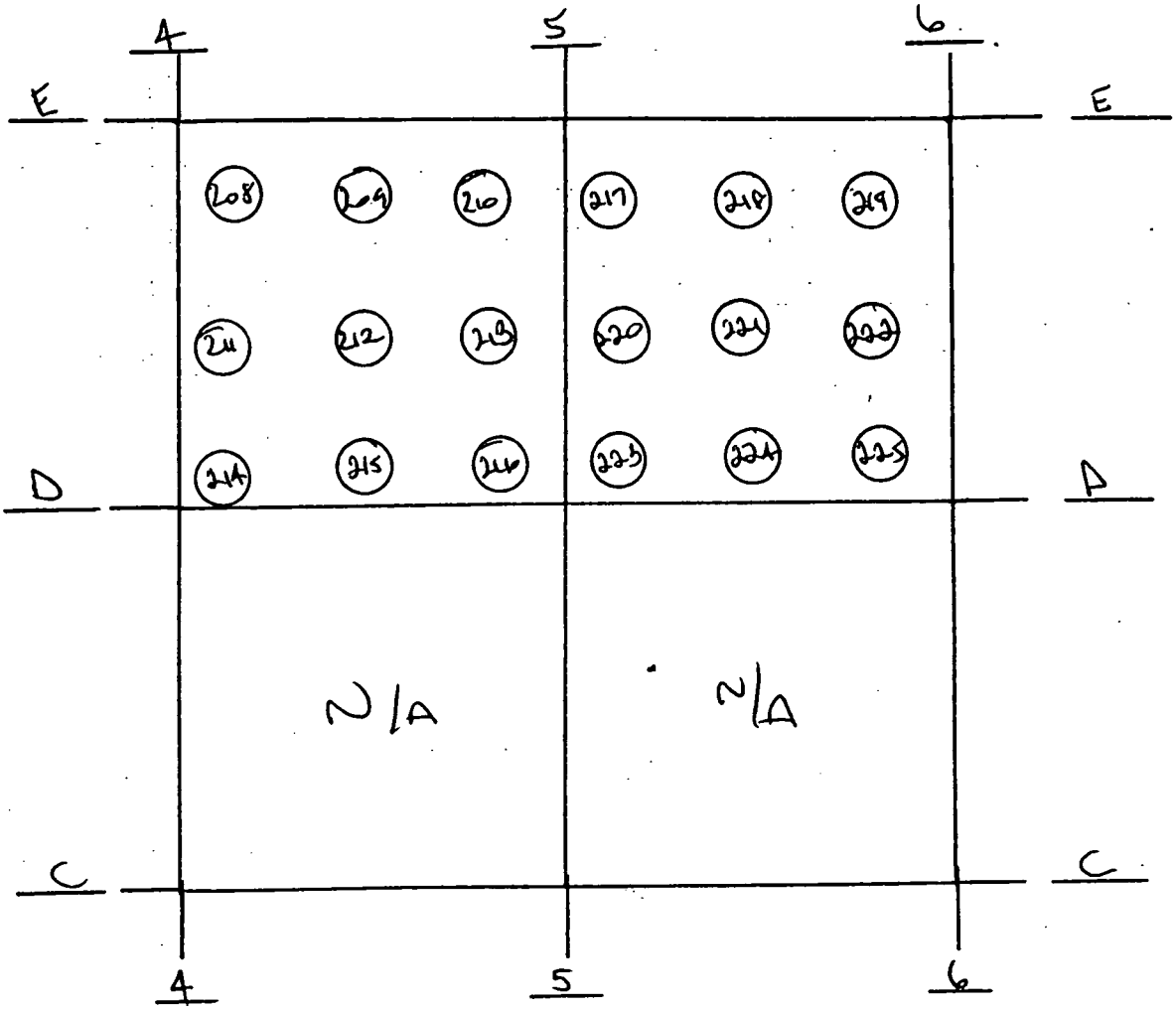
ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. AB- 6H -04

MAP/DRAWING



All Doserates <0.02 mr/hr

<100dpm <5K/B

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm^2

ML-9620B (2-98)

Survey No.
98-GH-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
208-225	See Attached Sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

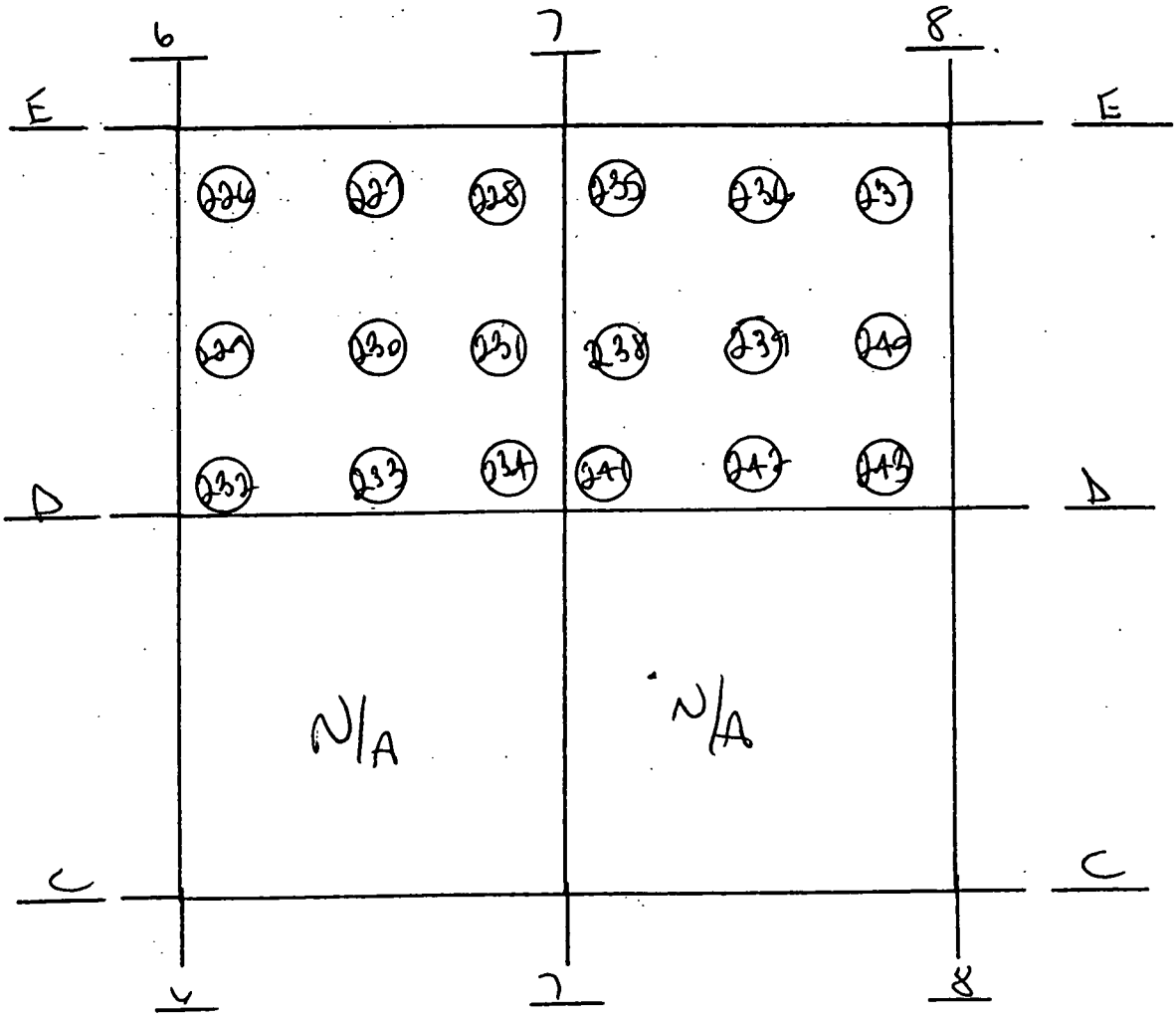
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

RADIOLOGICAL SURVEY DATA SHEET

MAP/DRAWING Continuation Page

Survey No. 58-6K-04

MAP/DRAWING



All Dose rates <0.02 mr/hr

<400/α
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-611-04

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
226-243	See Attached Sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

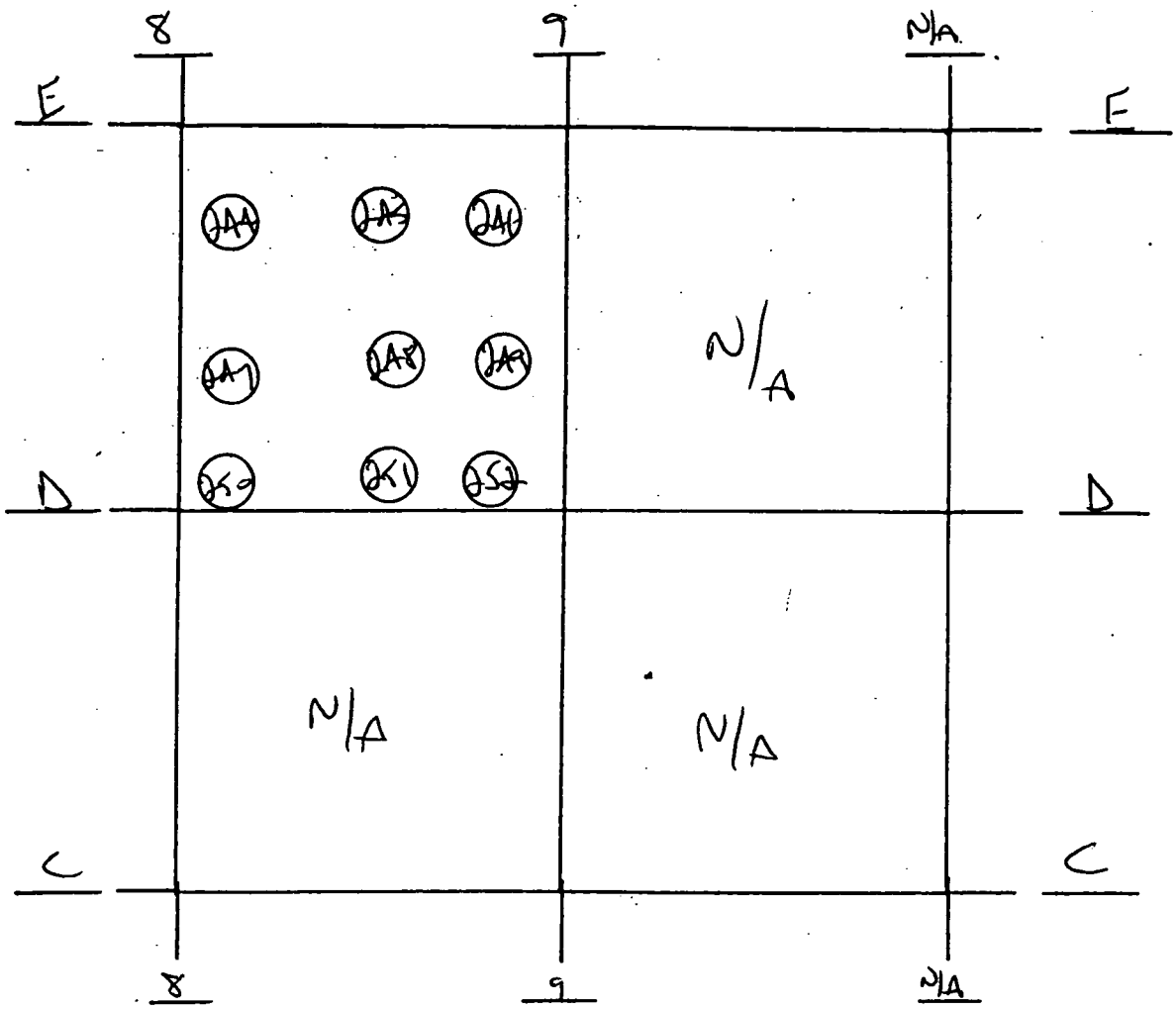
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

RADIOLOGICAL SURVEY DATA SHEET
MAP/DRAWING Continuation Page

Survey No. 98-GH-04

MAP/DRAWING



All Doserates
<0.02 mr/hr

<100/γ
<5K/β

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= mrem/hr neutron
= air sample number
= swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

ML-9620B (2-98)

Survey No. 98-GH-OA

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
2A-752	See Attached Sheets			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR055
Batch Ended: 11/25/98 9:22
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.00	<MDA	0.00	2.18	<MDA
A2	2	0.00	2.05	<MDA	0.12	1.94	<MDA
A3	3	0.00	2.04	<MDA	1.02	2.33	<MDA
A4	4	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	5	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	6	0.00	2.07	<MDA	2.92	2.74	<MDA
B3	7	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	8	0.00	2.09	<MDA	7.37	3.67	<AL
C1	9	1.60	1.98	<AL	0.00	1.37	<MDA
C2	10	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	11	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	12	0.00	2.05	<MDA	0.00	1.40	<MDA
D1	13	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	14	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	15	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	16	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	17	0.41	2.00	<MDA	0.00	2.18	<MDA
A2	18	1.35	2.06	<MDA	1.27	2.34	<MDA
A3	19	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	20	3.71	2.91	<AL	0.00	1.93	<MDA
B1	21	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	22	5.46	3.51	<AL	3.85	3.04	<AL
B3	23	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	24	1.73	2.06	<AL	3.21	2.84	<AL
C1	25	0.00	2.00	<MDA	1.59	2.29	<MDA
C2	26	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	27	0.00	2.14	<MDA	0.63	1.81	<MDA

Pg 25 of 39

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR055
Batch Ended: 11/25/98 9:22
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	29	1.57	1.97	<AL	0.00	1.47	<MDA
D2	30	3.41	2.82	<AL	0.12	2.01	<MDA
D3	31	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	32	1.73	2.23	<MDA	0.00	1.42	<MDA
A1	33	0.41	1.98	<MDA	0.00	1.75	<MDA
A2	34	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	35	1.58	2.03	<MDA	0.00	1.92	<MDA
A4	36	1.69	2.07	<AL	0.00	1.41	<MDA
B1	37	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	38	1.44	2.08	<MDA	5.44	3.32	<AL
B3	39	0.00	2.08	<MDA	1.91	2.40	<MDA
B4	40	1.75	2.04	<AL	0.53	2.11	<MDA
C1	41	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	42	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	43	3.73	2.99	<AL	2.89	2.54	<AL
C4	44	1.16	2.06	<MDA	0.00	1.88	<MDA
D1	45	1.57	1.97	<AL	0.00	1.47	<MDA
D2	46	3.42	2.81	<AL	0.00	1.49	<MDA
D3	47	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	48	0.00	2.23	<MDA	0.00	1.42	<MDA
A1	49	0.00	1.98	<MDA	0.00	1.75	<MDA
A2	50	0.00	2.07	<MDA	2.75	2.68	<MDA
A3	51	1.58	2.03	<MDA	0.00	1.92	<MDA
A4	52	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	53	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	54	1.47	2.07	<MDA	2.79	2.74	<MDA
B3	55	1.16	2.07	<MDA	0.00	1.47	<MDA
B4	56	1.73	2.06	<AL	3.21	2.84	<AL

Pg 26 of 3

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR055
Batch Ended: 11/25/98 9:22
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	57	0.00	1.98	<MDA	0.00	1.37	<MDA
C2	58	0.00	2.00	<MDA	1.26	2.23	<MDA
C3	59	1.67	2.15	<MDA	1.76	2.20	<MDA
C4	60	0.00	2.10	<MDA	2.28	2.86	<MDA
D1	61	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	62	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	63	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	64	0.00	2.23	<MDA	0.00	1.42	<MDA
A1	65	0.00	2.02	<MDA	0.00	2.55	<MDA
A2	66	0.00	2.05	<MDA	0.12	1.94	<MDA
A3	67	1.58	2.03	<MDA	0.00	1.41	<MDA
A4	68	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	69	1.54	2.19	<MDA	1.58	2.55	<MDA
B2	70	5.43	3.53	<AL	7.84	3.82	<AL
B3	71	1.16	2.08	<MDA	0.47	1.99	<MDA
B4	72	0.00	2.06	<MDA	3.35	2.84	<AL
C1	73	1.59	2.00	<AL	1.44	2.29	<MDA
C2	74	1.57	1.98	<AL	0.00	1.40	<MDA
C3	75	1.67	2.15	<MDA	1.76	2.20	<MDA
C4	76	0.00	2.05	<MDA	0.00	1.40	<MDA
D1	77	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	78	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	79	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	80	0.00	2.24	<MDA	1.80	2.41	<MDA
A1	81	0.40	2.03	<MDA	0.00	2.87	<MDA
A2	82	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	83	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	84	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	85	0.00	2.18	<MDA	0.00	1.60	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR055
Batch Ended: 11/25/98 9:22
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B2	86	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	87	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	88	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	89	1.59	1.99	<AL	0.13	1.89	<MDA
C2	90	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	91	0.00	2.14	<MDA	0.63	1.81	<MDA
C4	92	0.00	2.05	<MDA	0.00	1.40	<MDA
D1	93	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	94	1.46	2.02	<MDA	0.00	1.49	<MDA
D3	95	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	96	0.00	2.23	<MDA	0.00	1.43	<MDA
A1	97	0.41	2.02	<MDA	0.00	2.55	<MDA
A2	98	0.00	2.06	<MDA	1.43	2.34	<MDA
A3	99	0.00	2.04	<MDA	1.02	2.33	<MDA
A4	100	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	101	0.00	2.19	<MDA	0.31	2.13	<MDA
B2	102	1.44	2.08	<MDA	5.44	3.32	<AL
B3	103	3.13	2.90	<AL	4.37	3.05	<AL
B4	104	0.00	2.07	<MDA	4.69	3.14	<AL
C1	105	0.00	2.01	<MDA	2.89	2.64	<MDA
C2	106	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	107	1.66	2.16	<MDA	3.02	2.54	<AL
C4	108	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	109	1.54	1.99	<MDA	3.10	2.77	<AL
D2	110	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	111	0.86	2.33	<MDA	1.45	2.51	<MDA
D4	112	0.00	2.28	<MDA	7.29	3.66	<AL
A1	113	0.00	2.06	<MDA	1.84	3.42	<MDA
A2	114	0.00	2.06	<MDA	1.43	2.34	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR055
Batch Ended: 11/25/98 9:22
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A3	115	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	116	0.00	2.08	<MDA	0.00	1.93	<MDA
B1	117	1.58	2.18	<MDA	0.00	1.60	<MDA
B2	118	0.00	2.05	<MDA	0.26	1.99	<MDA
B3	119	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	120	1.77	2.04	<AL	0.00	1.63	<MDA
C1	121	1.59	2.01	<MDA	2.74	2.64	<MDA
C2	122	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	123	0.00	2.16	<MDA	3.15	2.54	<AL
C4	124	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	125	1.57	1.97	<AL	0.00	1.47	<MDA
D2	126	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	127	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	128	1.71	2.24	<MDA	1.66	2.41	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR056
Batch Ended: 11/25/98 9:57
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	129	0.00	2.00	<MDA	0.00	2.18	<MDA
A2	130	1.35	2.03	<MDA	0.00	1.42	<MDA
A3	131	0.00	2.04	<MDA	1.02	2.33	<MDA
A4	132	0.00	2.08	<MDA	0.00	1.93	<MDA
B1	133	1.52	2.20	<MDA	2.98	2.91	<MDA
B2	134	1.47	2.07	<MDA	2.79	2.74	<MDA
B3	135	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	136	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	137	1.59	2.00	<AL	1.44	2.29	<MDA
C2	138	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	139	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	140	0.00	2.05	<MDA	0.00	1.40	<MDA
D1	141	1.57	1.97	<AL	0.00	1.47	<MDA
D2	142	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	143	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	144	1.73	2.23	<MDA	0.00	1.42	<MDA
A1	145	0.40	2.03	<MDA	0.00	2.87	<MDA
A2	146	0.00	2.08	<MDA	4.06	2.99	<AL
A3	147	1.58	2.03	<MDA	0.00	1.92	<MDA
A4	148	0.00	2.08	<MDA	0.00	1.93	<MDA
B1	149	3.65	3.03	<AL	0.05	2.13	<MDA
B2	150	1.44	2.08	<MDA	5.44	3.32	<AL
B3	151	0.00	2.07	<MDA	0.00	1.47	<MDA
B4	152	0.00	2.05	<MDA	2.01	2.50	<MDA
C1	153	1.59	2.00	<AL	1.44	2.29	<MDA
C2	154	0.00	2.00	<MDA	1.26	2.23	<MDA
C3	155	0.00	2.14	<MDA	0.00	1.30	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR056
Batch Ended: 11/25/98 9:57
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	156	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	157	0.00	1.99	<MDA	1.89	2.42	<MDA
D2	158	0.00	2.02	<MDA	0.00	1.49	<MDA
D3	159	0.00	2.33	<MDA	1.56	2.51	<MDA
D4	160	0.00	2.24	<MDA	1.80	2.41	<MDA
A1	161	2.23	2.71	<MDA	0.00	2.18	<MDA
A2	162	0.00	2.03	<MDA	0.00	1.42	<MDA
A3	163	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	164	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	165	1.52	2.20	<MDA	2.98	2.91	<MDA
B2	166	0.00	2.09	<MDA	6.90	3.58	<AL
B3	167	0.00	2.09	<MDA	4.58	3.05	<AL
B4	168	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	169	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	170	1.56	1.99	<MDA	0.00	1.86	<MDA
C3	171	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	172	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	173	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	174	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	175	0.00	2.34	<MDA	4.25	3.15	<AL
D4	176	1.71	2.24	<MDA	1.66	2.41	<MDA
A1	177	0.00	2.06	<MDA	1.84	3.42	<MDA
A2	178	0.00	2.03	<MDA	0.00	1.42	<MDA
A3	179	1.58	2.03	<AL	0.00	1.41	<MDA
A4	180	1.68	2.15	<MDA	6.34	3.52	<AL
B1	181	0.00	2.19	<MDA	1.72	2.55	<MDA
B2	182	1.49	2.05	<MDA	0.13	1.99	<MDA
B3	183	1.13	2.09	<MDA	4.47	3.05	<AL
B4	184	1.73	2.06	<AL	3.21	2.84	<AL

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR056
Batch Ended: 11/25/98 9:57
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	185	0.00	2.00	<MDA	1.59	2.29	<MDA
C2	186	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	187	0.00	2.15	<MDA	1.89	2.20	<MDA
C4	188	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	189	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	190	0.00	2.03	<MDA	0.38	2.01	<MDA
D3	191	0.00	2.32	<MDA	0.21	2.12	<MDA
D4	192	0.00	2.23	<MDA	0.43	1.98	<MDA
A1	193	0.00	2.00	<MDA	0.00	2.18	<MDA
A2	194	1.35	2.05	<MDA	0.00	1.94	<MDA
A3	195	1.58	2.04	<MDA	0.91	2.33	<MDA
A4	196	1.69	2.08	<AL	0.00	1.93	<MDA
B1	197	0.00	2.20	<MDA	3.12	2.91	<MDA
B2	198	0.00	2.07	<MDA	2.92	2.74	<MDA
B3	199	1.16	2.07	<MDA	0.00	1.47	<MDA
B4	200	1.72	2.07	<AL	4.55	3.14	<AL
C1	201	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	202	0.00	1.99	<MDA	0.03	1.86	<MDA
C3	203	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	204	0.00	2.10	<MDA	2.28	2.86	<MDA
D1	205	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	206	0.00	2.04	<MDA	1.73	2.42	<MDA
D3	207	0.00	2.34	<MDA	4.25	3.15	<AL
D4	208	1.73	2.23	<MDA	0.00	1.42	<MDA
A1	209	0.00	1.98	<MDA	0.00	1.75	<MDA
A2	210	0.00	2.08	<MDA	4.06	2.99	<AL
A3	211	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	212	0.00	2.07	<MDA	0.00	1.41	<MDA
B1	213	0.00	2.19	<MDA	0.31	2.13	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR056
Batch Ended: 11/25/98 9:57
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 - RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B2	214	0.00	2.06	<MDA	1.59	2.39	<MDA
B3	215	0.00	2.08	<MDA	0.57	1.99	<MDA
B4	216	0.00	2.04	<MDA	0.00	1.63	<MDA
C1	217	0.00	2.02	<MDA	4.20	2.94	<AL
C2	218	0.00	2.00	<MDA	1.26	2.23	<MDA
C3	219	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	220	0.00	2.07	<MDA	0.00	2.25	<MDA
D1	221	0.00	1.97	<MDA	0.00	1.47	<MDA
D2	222	0.00	2.04	<MDA	1.73	2.42	<MDA
D3	223	0.00	2.32	<MDA	0.00	1.63	<MDA
D4	224	0.00	2.23	<MDA	0.00	1.42	<MDA
A1	225	0.00	1.98	<MDA	0.00	1.75	<MDA
A2	226	1.35	2.03	<MDA	0.00	1.42	<MDA
A3	227	0.00	2.03	<MDA	0.00	1.41	<MDA
A4	228	0.00	2.08	<MDA	0.00	1.93	<MDA
B1	229	0.00	2.21	<MDA	4.52	3.23	<AL
B2	230	0.00	2.05	<MDA	0.26	1.99	<MDA
B3	231	1.15	2.08	<MDA	1.80	2.40	<MDA
B4	232	0.00	2.04	<MDA	0.67	2.11	<MDA
C1	233	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	234	1.56	2.00	<MDA	1.12	2.23	<MDA
C3	235	1.67	2.15	<MDA	1.76	2.20	<MDA
C4	236	0.00	2.08	<MDA	1.04	2.58	<MDA
D1	237	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	238	3.41	2.82	<AL	0.12	2.01	<MDA
D3	239	0.00	2.33	<MDA	2.91	2.85	<MDA
D4	240	0.00	2.24	<MDA	1.80	2.41	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR057
Batch Ended: 11/25/98 10:39
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-GH-04 RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	241	1.35	2.06	<MDA	1.27	2.34	<MDA
A3	242	1.58	2.03	<MDA	0.00	1.41	<MDA
A4	243	0.00	2.10	<MDA	1.25	2.33	<MDA
B1	244	0.00	2.18	<MDA	0.00	1.60	<MDA
B2	245	1.47	2.07	<MDA	2.79	2.74	<MDA
B3	246	0.00	2.08	<MDA	1.91	2.40	<MDA
B4	247	5.71	3.51	<AL	5.62	3.41	<AL
C1	248	0.00	1.99	<MDA	0.29	1.89	<MDA
C2	249	0.00	1.98	<MDA	0.00	1.40	<MDA
C3	250	0.00	2.14	<MDA	0.00	1.30	<MDA
C4	251	0.00	2.06	<MDA	0.00	1.88	<MDA
D1	252	1.58	1.97	<AL	0.00	1.47	<MDA

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Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

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	LL	UL	LCR	2SX	BKG
Region A:	0.5	18.6	0	0.0	7.60
Region B:	2.0	18.6	0	0.0	7.10
Region C:	40.0	2000	0	0.0	11.60

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-04 RYAN GH-BLDG 1st FLOOR (30-12 B1-B252) CR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT5.DAT
Count Data Filename: C:\DATA\SDATA5.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	7.60	7.10	11.60	618.61	3	B		0.00
0	2.00	1083.40	1034.90	0.90	607.38	0		2439.59	207.29
1	2.00	0.00	0.00	0.00	590.76	0		0.00	0.00
2	2.00	0.40	0.90	0.00	604.33	0		0.90	9.86
3	2.00	0.00	0.00	0.00	583.88	0		0.00	0.00
4	2.00	0.00	0.00	0.00	585.70	0		0.00	0.00
5	2.00	0.00	0.00	1.40	592.90	0		0.00	0.00
6	2.00	0.00	0.00	0.00	607.04	0		0.00	0.00
7	2.00	0.00	0.00	0.40	590.59	0		0.00	0.00
8	2.00	0.00	0.00	0.00	597.65	0		0.00	0.00
9	2.00	0.00	0.00	0.00	618.03	0		0.00	0.00
10	2.00	0.00	0.00	0.00	593.09	0		0.00	0.00
11	2.00	0.00	0.00	0.00	598.36	0		0.00	0.00
12	2.00	1.40	1.90	0.00	559.28	0		3.34	10.94
13	2.00	0.90	0.90	0.00	587.30	0		2.07	10.30
14	2.00	0.00	0.00	0.00	589.31	0		0.00	0.00
15	2.00	1.40	1.90	0.00	609.43	0		3.15	10.31
16	2.00	0.90	1.40	0.00	593.91	0		2.05	10.22
17	2.00	0.00	0.00	0.00	597.81	0		0.00	0.00
18	2.00	0.00	0.00	0.00	603.13	0		0.00	0.00
19	2.00	0.00	0.00	0.00	603.60	0		0.00	0.00
20	2.00	0.40	0.90	0.00	587.73	0		0.92	10.03
21	2.00	0.00	0.00	0.00	597.64	0		0.00	0.00
22	2.00	2.40	2.90	0.00	584.47	0		5.54	11.09
23	2.00	1.90	1.90	0.40	568.47	0		4.48	11.07
24	2.00	0.00	0.00	0.00	562.09	0		0.00	0.00
25	2.00	0.00	0.40	0.00	588.84	0		0.00	0.00
26	2.00	0.00	0.00	1.40	596.91	0		0.00	0.00
27	2.00	0.00	0.00	0.00	591.22	0		0.00	0.00
28	2.00	0.00	0.00	0.00	594.88	0		0.00	0.00
29	2.00	0.00	0.00	0.00	593.81	0		0.00	0.00
30	2.00	0.40	0.40	0.00	597.87	0		0.91	9.92
31	2.00	0.00	0.40	0.00	587.30	0		0.00	0.00
32	2.00	0.40	0.40	0.00	563.39	0		0.95	10.36
33	2.00	1.40	1.90	0.00	599.08	0		3.18	10.42
34	2.00	4.40	3.90	0.00	565.72	0		10.41	12.33
35	2.00	0.00	0.00	0.00	600.93	0		0.00	0.00

Protocol #: 5 PW 5CC H3 #403727 User : 568

Pg 36

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.90	588.78	0	0.00	0.00
37	2.00	0.40	0.90	0.00	586.30	0	0.92	10.05
38	2.00	0.00	0.00	0.00	574.84	0	0.00	0.00
39	2.00	0.40	0.90	0.40	603.38	0	0.90	9.87
40	2.00	0.00	0.00	0.00	580.96	0	0.00	0.00
41	2.00	0.00	0.00	0.00	595.01	0	0.00	0.00
42	2.00	2.90	3.40	0.00	610.88	0	6.51	11.01
43	2.00	0.00	0.00	0.00	555.28	0	0.00	0.00
44	2.00	0.40	0.90	0.00	568.25	0	0.94	10.29
45	2.00	2.40	2.90	1.40	536.93	0	5.86	11.73
46	2.00	0.90	0.90	0.00	588.36	0	2.07	10.29
47	2.00	0.00	0.00	0.00	593.08	0	0.00	0.00
48	2.00	0.00	0.00	0.00	604.39	0	0.00	0.00
49	2.00	0.40	0.90	0.00	566.01	0	0.95	10.32
50	2.00	3.40	3.90	0.00	526.66	0	8.39	12.37
51	2.00	0.00	0.00	0.40	569.29	0	0.00	0.00
52	2.00	4.40	4.90	0.00	523.43	0	10.90	12.91
53	2.00	0.00	0.00	0.40	552.16	0	0.00	0.00
54	2.00	0.90	1.40	0.90	545.90	0	2.18	10.83
55	2.00	0.00	0.00	0.40	522.76	0	0.00	0.00
56	2.00	0.00	0.00	0.00	611.16	0	0.00	0.00
57	2.00	0.00	0.00	0.00	593.94	0	0.00	0.00
58	2.00	0.00	0.00	0.00	591.42	0	0.00	0.00
59	2.00	0.00	0.00	0.00	610.58	0	0.00	0.00
60	2.00	1.90	2.40	0.00	582.00	0	4.40	10.88
61	2.00	0.00	0.00	0.00	611.62	0	0.00	0.00
62	2.00	0.40	0.40	0.90	596.78	0	0.91	9.93
63	2.00	0.00	0.00	0.00	610.25	0	0.00	0.00
64	2.00	0.00	0.00	0.00	623.92	0	0.00	0.00
65	2.00	0.00	0.00	0.00	585.63	0	0.00	0.00
66	2.00	0.00	0.00	0.00	603.12	0	0.00	0.00
67	2.00	0.00	0.00	0.00	604.26	0	0.00	0.00
68	2.00	0.00	0.00	0.00	605.70	0	0.00	0.00
69	2.00	2.40	1.90	0.00	594.83	0	5.47	10.95
70	2.00	0.00	0.00	0.00	604.78	0	0.00	0.00
71	2.00	0.00	0.00	0.00	606.38	0	0.00	0.00
72	2.00	0.00	0.00	0.90	552.90	0	0.00	0.00
73	2.00	0.00	0.00	0.00	556.12	0	0.00	0.00
74	2.00	0.00	0.00	0.00	571.98	0	0.00	0.00
75	2.00	0.00	0.00	0.00	596.58	0	0.00	0.00
76	2.00	0.00	0.00	0.00	535.59	0	0.00	0.00
77	2.00	0.00	0.00	0.00	533.83	0	0.00	0.00
78	2.00	0.00	0.00	0.00	434.92	0	0.00	0.00
79	2.00	0.00	0.00	0.00	548.51	0	0.00	0.00
80	2.00	0.40	0.90	0.00	619.69	0	0.89	9.71
81	2.00	3.40	2.90	0.00	589.39	0	7.80	11.49
82	2.00	0.00	0.00	0.00	572.28	0	0.00	0.00
83	2.00	0.90	1.40	0.00	589.49	0	2.06	10.27
84	2.00	0.00	0.00	0.00	551.19	0	0.00	0.00
85	2.00	0.00	0.00	0.90	602.38	0	0.00	0.00
86	2.00	0.00	0.40	0.00	578.43	0	0.00	0.00
87	2.00	0.00	0.00	0.00	583.39	0	0.00	0.00
88	2.00	0.00	0.00	0.00	578.96	0	0.00	0.00
89	2.00	0.00	0.00	0.00	604.19	0	0.00	0.00
90	2.00	0.00	0.00	0.00	593.92	0	0.00	0.00
91	2.00	0.00	0.00	0.40	568.24	0	0.00	0.00

Pg 37.
3

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
92	2.00	0.00	0.00	0.00	596.33	0	0.00	0.00
93	2.00	0.00	0.00	0.90	497.53	0	0.00	0.00
94	2.00	0.00	0.00	3.90	562.53	0	0.00	0.00
95	2.00	1.90	2.40	1.90	583.87	0	4.39	10.85
96	2.00	0.00	0.00	1.40	555.92	0	0.00	0.00
97	2.00	0.00	0.00	0.00	583.63	0	0.00	0.00
98	2.00	0.00	0.00	0.00	575.05	0	0.00	0.00
99	2.00	0.00	0.00	0.00	556.41	0	0.00	0.00
100	2.00	1.90	2.40	0.00	580.48	0	4.41	10.90
101	2.00	2.40	2.40	0.00	588.87	0	5.51	11.03
102	2.00	0.00	0.00	0.00	589.29	0	0.00	0.00
103	2.00	0.00	0.00	0.00	594.74	0	0.00	0.00
104	2.00	0.00	0.00	0.00	573.83	0	0.00	0.00
105	2.00	0.00	0.00	0.00	587.08	0	0.00	0.00
106	2.00	0.00	0.40	0.00	571.86	0	0.00	0.00
107	2.00	0.00	0.00	0.90	565.96	0	0.00	0.00
108	2.00	0.00	0.00	0.00	561.45	0	0.00	0.00
109	2.00	0.00	0.00	0.00	583.98	0	0.00	0.00
110	2.00	0.00	0.00	0.00	591.82	0	0.00	0.00
111	2.00	0.00	0.00	0.00	581.71	0	0.00	0.00
112	2.00	0.40	0.90	0.40	584.67	0	0.92	10.07
113	2.00	0.00	0.00	0.00	583.07	0	0.00	0.00
114	2.00	0.00	0.00	0.00	587.51	0	0.00	0.00
115	2.00	0.00	0.00	0.00	612.08	0	0.00	0.00
116	2.00	0.00	0.00	0.00	589.92	0	0.00	0.00
117	2.00	0.00	0.00	1.40	615.42	0	0.00	0.00
118	2.00	0.00	0.00	0.00	580.29	0	0.00	0.00
119	2.00	0.00	0.00	0.00	573.77	0	0.00	0.00
120	2.00	0.00	0.00	0.00	584.08	0	0.00	0.00
121	2.00	0.00	0.00	0.00	584.73	0	0.00	0.00
122	2.00	0.40	0.90	0.00	624.18	0	0.89	9.66
123	2.00	0.00	0.00	0.00	579.94	0	0.00	0.00
124	2.00	0.00	0.00	0.00	605.77	0	0.00	0.00
125	2.00	0.00	0.00	0.00	596.18	0	0.00	0.00
126	2.00	0.00	0.00	0.90	583.44	0	0.00	0.00
127	2.00	0.00	0.00	0.00	560.09	0	0.00	0.00
128	2.00	0.00	0.00	0.00	592.30	0	0.00	0.00
129	2.00	0.00	0.00	0.00	599.07	0	0.00	0.00
130	2.00	0.00	0.00	0.90	564.54	0	0.00	0.00
131	2.00	0.40	0.40	0.00	589.90	0	0.92	10.00
132	2.00	0.00	0.00	0.00	585.70	0	0.00	0.00
133	2.00	2.40	2.90	0.40	577.00	0	5.60	11.20
134	2.00	0.00	0.00	0.00	599.09	0	0.00	0.00
135	2.00	0.00	0.00	0.00	586.65	0	0.00	0.00
136	2.00	0.00	0.40	0.00	575.70	0	0.00	0.00
137	2.00	0.40	0.40	0.00	598.21	0	0.91	9.92
138	2.00	0.00	0.00	0.00	547.05	0	0.00	0.00
139	2.00	0.00	0.40	0.00	585.41	0	0.00	0.00
140	2.00	0.00	0.00	0.00	594.83	0	0.00	0.00
141	2.00	0.40	0.90	2.90	603.05	0	0.90	9.87
142	2.00	0.00	0.40	0.00	584.74	0	0.00	0.00
143	2.00	0.00	0.00	4.40	586.35	0	0.00	0.00
144	2.00	1.40	1.40	0.00	588.90	0	3.21	10.53
145	2.00	1.40	1.90	0.00	576.46	0	3.27	10.71
146	2.00	0.00	0.00	0.90	586.92	0	0.00	0.00
147	2.00	0.00	0.00	0.00	600.44	0	0.00	0.00

pg 38a

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
148	2.00	0.40	0.90	0.00	581.06	0		0.93	10.12
149	2.00	0.00	0.00	0.90	572.53	0		0.00	0.00
150	2.00	0.00	0.00	0.00	586.82	0		0.00	0.00
151	2.00	0.00	0.00	0.00	566.18	0		0.00	0.00
152	2.00	0.00	0.00	0.00	566.39	0		0.00	0.00
153	2.00	0.00	0.00	0.00	590.76	0		0.00	0.00
154	2.00	0.00	0.00	0.00	607.41	0		0.00	0.00
155	2.00	0.00	0.00	0.00	605.29	0		0.00	0.00
156	2.00	0.40	0.40	0.00	579.24	0		0.93	10.14
157	2.00	0.00	0.00	0.00	572.69	0		0.00	0.00
158	2.00	0.00	0.00	0.00	571.76	0		0.00	0.00
159	2.00	0.00	0.00	0.00	569.03	0		0.00	0.00
160	2.00	0.40	0.90	0.00	563.53	0		0.95	10.36
161	2.00	0.00	0.00	0.00	586.07	0		0.00	0.00
162	2.00	0.00	0.00	1.40	580.73	0		0.00	0.00
163	2.00	0.00	0.00	0.40	569.27	0		0.00	0.00
164	2.00	0.00	0.00	0.40	575.53	0		0.00	0.00
165	2.00	1.90	2.40	0.00	582.38	0		4.40	10.87
166	2.00	0.00	0.00	0.00	590.01	0		0.00	0.00
167	2.00	0.00	0.00	2.90	596.27	0		0.00	0.00
168	2.00	0.00	0.00	0.00	592.15	0		0.00	0.00
169	2.00	0.00	0.00	0.00	589.09	0		0.00	0.00
170	2.00	0.00	0.00	2.90	558.67	0		0.00	0.00
171	2.00	0.00	0.00	0.00	581.78	0		0.00	0.00
172	2.00	0.00	0.00	0.00	567.09	0		0.00	0.00
173	2.00	0.00	0.40	0.00	592.48	0		0.00	0.00
174	2.00	0.00	0.00	0.40	580.18	0		0.00	0.00
175	2.00	0.00	0.00	0.00	590.61	0		0.00	0.00
176	2.00	0.00	0.00	0.00	562.64	0		0.00	0.00
177	2.00	0.00	0.00	0.00	602.03	0		0.00	0.00
178	2.00	0.00	0.00	1.90	579.48	0		0.00	0.00
179	2.00	0.00	0.00	0.00	572.78	0		0.00	0.00
180	2.00	0.40	0.90	0.00	618.60	0		0.89	9.72
181	2.00	0.40	0.40	0.00	590.35	0		0.92	10.00
182	2.00	0.90	1.40	0.00	601.27	0		2.04	10.14
183	2.00	0.00	0.00	0.00	598.69	0		0.00	0.00
184	2.00	0.00	0.00	0.00	590.67	0		0.00	0.00
185	2.00	0.00	0.00	0.00	584.16	0		0.00	0.00
186	2.00	0.00	0.00	0.00	605.00	0		0.00	0.00
187	2.00	0.90	0.90	0.00	584.89	0		2.08	10.33
188	2.00	0.90	1.40	0.00	580.62	0		2.09	10.39
189	2.00	0.00	0.00	0.00	614.91	0		0.00	0.00
190	2.00	0.00	0.00	0.00	572.61	0		0.00	0.00
191	2.00	0.00	0.00	0.00	574.22	0		0.00	0.00
192	2.00	0.90	1.40	0.00	582.09	0		2.08	10.37
193	2.00	0.00	0.00	0.00	588.37	0		0.00	0.00
194	2.00	0.40	0.90	0.00	584.56	0		0.92	10.07
195	2.00	2.40	1.90	0.00	568.94	0		5.66	11.32
196	2.00	0.00	0.00	0.00	577.16	0		0.00	0.00
197	2.00	0.00	0.00	0.00	554.00	0		0.00	0.00
198	2.00	0.00	0.00	0.00	561.75	0		0.00	0.00
199	2.00	0.00	0.00	0.00	568.89	0		0.00	0.00
200	2.00	0.00	0.00	0.00	581.96	0		0.00	0.00
201	2.00	0.00	0.00	0.00	581.97	0		0.00	0.00
202	2.00	0.00	0.40	0.00	580.69	0		0.00	0.00
203	2.00	0.00	0.00	0.00	564.13	0		0.00	0.00

Pg 39.

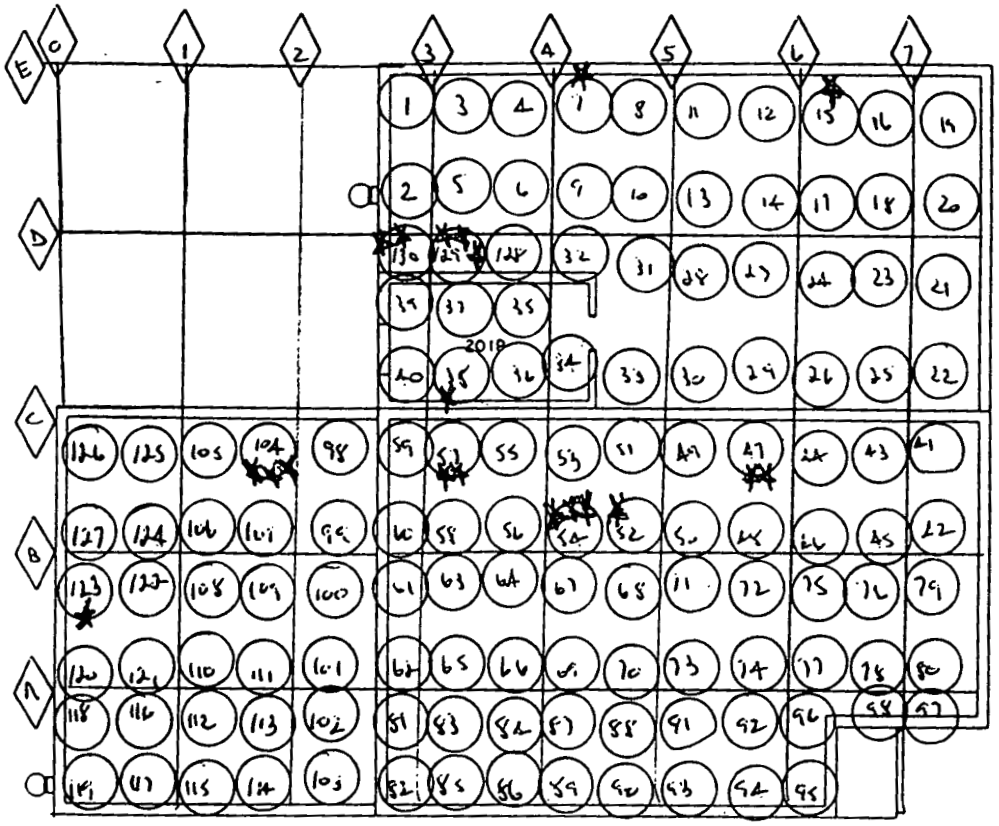
S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
204	2.00	0.00	0.00	0.00	570.65	0		0.00	0.00
205	2.00	0.00	0.00	0.00	530.61	0		0.00	0.00
206	2.00	0.00	0.00	0.00	587.29	0		0.00	0.00
207	2.00	0.90	1.40	0.00	517.87	0		2.24	11.16
208	2.00	0.00	0.00	0.40	589.70	0		0.00	0.00
209	2.00	0.00	0.00	0.00	599.43	0		0.00	0.00
210	2.00	0.00	0.00	0.00	562.07	0		0.00	0.00
211	2.00	0.00	0.00	0.00	595.00	0		0.00	0.00
212	2.00	0.00	0.00	0.00	621.23	0		0.00	0.00
213	2.00	0.00	0.00	0.40	591.17	0		0.00	0.00
214	2.00	0.00	0.00	0.00	566.85	0		0.00	0.00
215	2.00	0.00	0.00	0.00	542.86	0		0.00	0.00
216	2.00	0.00	0.00	0.00	571.11	0		0.00	0.00
217	2.00	0.00	0.00	0.00	602.20	0		0.00	0.00
218	2.00	0.00	0.00	0.00	599.52	0		0.00	0.00
219	2.00	0.00	0.00	0.00	601.74	0		0.00	0.00
220	2.00	0.00	0.40	0.00	592.37	0		0.00	0.00
221	2.00	0.00	0.40	0.00	585.71	0		0.00	0.00
222	2.00	0.00	0.00	0.00	571.49	0		0.00	0.00
223	2.00	0.00	0.00	0.00	582.28	0		0.00	0.00
224	2.00	0.40	0.90	0.00	578.97	0		0.93	10.15
225	2.00	1.90	1.90	0.00	595.96	0		4.33	10.70
226	2.00	1.40	1.90	0.00	599.61	0		3.18	10.41
227	2.00	1.40	1.90	0.00	586.55	0		3.22	10.56
228	2.00	0.00	0.00	0.00	591.02	0		0.00	0.00
229	2.00	0.00	0.00	0.00	587.66	0		0.00	0.00
230	2.00	0.00	0.00	0.00	568.42	0		0.00	0.00
231	2.00	0.00	0.00	0.00	549.49	0		0.00	0.00
232	2.00	0.00	0.00	1.40	577.83	0		0.00	0.00
233	2.00	1.90	1.40	0.00	548.41	0		4.58	11.33
234	2.00	0.00	0.00	2.90	555.81	0		0.00	0.00
235	2.00	0.00	0.00	0.00	598.16	0		0.00	0.00
236	2.00	0.00	0.40	0.00	576.19	0		0.00	0.00
237	2.00	0.00	0.40	0.00	563.30	0		0.00	0.00
238	2.00	0.40	0.90	0.00	559.57	0		0.95	10.40
239	2.00	1.40	1.40	1.90	598.26	0		3.18	10.43
240	2.00	0.00	0.00	0.00	583.38	0		0.00	0.00
241	2.00	0.00	0.00	0.00	594.97	0		0.00	0.00
242	2.00	0.00	0.00	0.00	593.03	0		0.00	0.00
243	2.00	0.00	0.00	0.00	583.92	0		0.00	0.00
244	2.00	0.00	0.00	0.00	613.32	0		0.00	0.00
245	2.00	0.00	0.00	0.00	574.46	0		0.00	0.00
246	2.00	0.00	0.00	0.00	579.64	0		0.00	0.00
247	2.00	1.90	1.90	0.00	581.87	0		4.40	10.88
248	2.00	0.00	0.00	0.00	582.85	0		0.00	0.00
249	2.00	0.00	0.40	0.00	590.70	0		0.00	0.00
250	2.00	0.90	0.90	0.00	594.87	0		2.05	10.21
251	2.00	0.00	0.00	0.00	612.70	0		0.00	0.00
252	2.00	1.40	1.90	0.00	553.17	0		3.36	11.01

1-130 30-12 P4

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GH Bldg Roof + Penthouse	SURVEY NO. 98-GH-05
PURPOSE: Free-Release Survey	RWP NO. N/A
	DATE: 11/25/98
	TIME: 0845

MAP/DRAWING



EG&G MOUND APPLIED TECHNOLOGIES
SMALL SCALE FLOOR PLANS
GH BLDG.
PENTHOUSE
BLDG. CODE : 3587
REV. DATE 12/15/88 CLASSIFICATION UNCL

<100/α
<5k/β

✱ Drain
✱✱ Vent
✱✱✱ Ventilation Unit

All Dose rates
<0.02 mr/hr

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5364/5285	4/15/99
NE Electra	5340/5343	2/6/99
Micro-R	3929	4/8/99
	N	
	A	

[redacted]

HP#	Date:
7889/4992	11/25/98
HP# 5681	Date: 11/25/98
HP# 5496	Date: 12-9-98

IJ
LOI-13
2B
1-10

ML-9620 (2-98)

Survey No. 98-CH-05

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-130	See	Attached	Sheets.	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

Health Physics Counting Lab -- Wipe Analysis

Date: 11/30/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2G001.csv
Batch Ended: 11/25/98 17:11
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-05 RYAN GR.G (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
7	1	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 14:24
103	2	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:25
23	3	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:27
70	4	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 14:29
93	5	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 14:31
27	6	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:32
9	7	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:34
69	8	3.181	2.66	<AL	0.00	2.47	<MDA	1.50	11/25/98 14:36
77	9	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 14:37
8	10	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:39
140	11	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:41
94	12	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 14:42
105	13	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:44
93	14	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:46
107	15	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 14:47
57	16	3.181	2.66	<AL	0.00	2.47	<MDA	1.50	11/25/98 14:49
55	17	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 14:51
19	18	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 14:52
140	19	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 14:54
55	20	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 14:56
10	21	1.362	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:57
119	22	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 14:59
20	23	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 15:01
7	24	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:03
14	25	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 15:04
103	26	3.197	2.65	<AL	0.00	1.84	<MDA	1.50	11/25/98 15:06
29	27	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:08
112	28	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 15:09
42	29	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 15:11
81	30	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 15:13

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Health Physics Counting Lab -- Wipe Analysis

Date: 11/30/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2G001.csv
Batch Ended: 11/25/98 17:11
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-05 RYAN GR.G (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
6	31	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 15:14
102	32	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:16
84	33	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:18
140	34	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 15:20
1	35	3.181	2.66	<AL	0.00	2.47	<MDA	1.50	11/25/98 15:21
136	36	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	11/25/98 15:23
36	37	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 15:25
24	38	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	11/25/98 15:26
9	39	3.164	2.67	<AL	1.58	2.97	<MDA	1.50	11/25/98 15:28
2	40	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:30
147	41	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 15:31
19	42	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:33
47	43	5.016	3.25	<AL	1.36	2.97	<MDA	1.50	11/25/98 15:35
34	44	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 15:37
144	45	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 15:38
30	46	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:40
96	47	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	11/25/98 15:42
38	48	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:43
36	49	1.362	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:45
113	50	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:47
73	51	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:48
89	52	3.197	2.65	<AL	0.00	1.84	<MDA	1.50	11/25/98 15:50
113	53	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	11/25/98 15:52
52	54	5.032	3.24	<AL	0.00	2.47	<MDA	1.50	11/25/98 15:53
32	55	1.362	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 15:55
37	56	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 15:57
1	57	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 15:58
11	58	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 16:00
113	59	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 16:02
70	60	0.000	1.96	<MDA	6.97	4.11	<AL	1.50	11/25/98 16:03

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Health Physics Counting Lab -- Wipe Analysis

Date: 11/30/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2G001.csv
Batch Ended: 11/25/98 17:11
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-05 RYAN GR.G (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
89	61	3.148	2.68	<AL	3.23	3.39	<MDA	1.50	11/25/98 16:05
38	62	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 16:07
112	63	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:09
18	64	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:10
29	65	3.132	2.69	<AL	4.87	3.77	<AL	1.50	11/25/98 16:12
31	66	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 16:14
34	67	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:15
33	68	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:17
112	69	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 16:19
30	70	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:20
31	71	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:22
15	72	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:24
57	73	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	11/25/98 16:25
59	74	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:27
95	75	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 16:29
108	76	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:31
4	77	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:32
109	78	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 16:34
3	79	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:36
36	80	1.362	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:37
35	81	3.213	2.65	<AL	0.00	1.84	<MDA	1.50	11/25/98 16:39
115	82	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 16:41
89	83	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	11/25/98 16:42
4	84	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:44
37	85	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 16:46
53	86	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:48
14	87	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	11/25/98 16:49
79	88	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	11/25/98 16:51
140	89	3.148	2.68	<AL	3.23	3.39	<MDA	1.50	11/25/98 16:53
30	90	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	11/25/98 16:54

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Health Physics Counting Lab -- Wipe Analysis

Date: 11/30/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2G001.csv
Batch Ended: 11/25/98 17:11
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-05 RYAN GR.G (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
26	91	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:56
100	92	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 16:58
4	93	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	11/25/98 16:59
128	94	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 17:01
34	95	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	11/25/98 17:03
58	96	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 17:04
89	97	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 17:06
139	98	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	11/25/98 17:08
43	99	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	11/25/98 17:09
15	100	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	11/25/98 17:11

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Health Physics Counting Lab -- Wipe Analysis

Date: 11/25/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1J002.csv
Batch Ended: 11/25/98 15:11
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-05 RYAN GR.J (101-130) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
39	1	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	11/25/98 14:23
21	2	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:24
7	3	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 14:26
33	4	3.975	2.97	<AL	8.85	4.36	<AL	1.50	11/25/98 14:28
2	5	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:29
8	6	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:31
69	7	2.518	2.41	<AL	0.00	2.28	<MDA	1.50	11/25/98 14:33
61	8	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	11/25/98 14:34
88	9	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:36
58	10	0.000	1.79	<MDA	6.42	3.80	<AL	1.50	11/25/98 14:38
21	11	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:39
65	12	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:41
10	13	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 14:43
134	14	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 14:44
1	15	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 14:46
111	16	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	11/25/98 14:48
3	17	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	11/25/98 14:49
107	18	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	11/25/98 14:51
41	19	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 14:53
76	20	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	11/25/98 14:54
12	21	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 14:56
2	22	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	11/25/98 14:58
116	23	0.000	1.78	<MDA	4.91	3.48	<AL	1.50	11/25/98 15:00
31	24	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 15:01
84	25	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 15:03
60	26	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 15:05
39	27	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 15:06
2	28	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 15:08
128	29	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	11/25/98 15:10
40	30	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	11/25/98 15:11

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30 Nov 98 10:28 ALPHA/BETA - 1.01
Protocol #: 4 PW 5CC H3 #403727 User : 568

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL UL	LCR	2S%	BKG
Region A:	0.5 - 18.6	0	0.0	5.70
Region B:	2.0 - 18.6	0	0.0	5.50
Region C:	40.0 - 2000	0	0.0	11.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-05 RYAN GHH-BLDG.PENT (30-12 1-130) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT4.DAT
Count Data Filename: C:\DATA\SDATA4.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.70	5.50	11.50	605.08	2	B		0.00
0	2.00	1284.30	1226.00	3.00	613.26	0		2871.60	238.94
1	2.00	1.30	0.50	0.00	404.77	13		3.64	11.29
2	2.00	4.80	5.00	1.50	528.85	0		11.81	11.90
3	2.00	6.30	6.00	6.00	603.83	0		14.22	11.62
4	2.00	0.00	0.00	0.00	547.09	0		0.00	0.00
5	2.00	1.30	1.50	2.50	356.52	0		4.06	12.60
6	2.00	1.30	1.00	4.50	519.95	0		3.23	10.02
7	2.00	4.80	5.00	0.00	505.84	0		12.11	12.21
8	2.00	0.30	0.00	7.50	506.50	0		0.76	9.53
9	2.00	0.00	0.00	1.50	467.71	0		0.00	0.00
10	2.00	1.80	1.50	0.00	539.60	0		4.38	10.11
11	2.00	0.00	0.00	0.00	589.62	0		0.00	0.00
12	2.00	1.30	1.50	0.00	574.80	0		3.04	9.43
13	2.00	0.80	1.00	0.00	554.18	0		1.91	9.36
14	2.00	0.00	0.00	0.00	542.59	0		0.00	0.00
15	2.00	2.30	2.50	0.00	514.69	0		5.75	10.69
16	2.00	6.80	6.50	6.50	557.73	0		16.22	12.51
17	2.00	4.30	4.00	0.00	567.04	0		10.15	11.16
18	2.00	0.00	0.00	0.00	599.96	0		0.00	0.00
19	2.00	1.30	1.50	0.00	615.33	0		2.90	9.01
20	2.00	0.00	0.00	0.50	610.26	0		0.00	0.00
21	2.00	1.30	1.00	0.00	627.67	0		2.87	8.90
22	2.00	4.30	4.00	1.50	592.10	0		9.82	10.80
23	2.00	5.30	4.50	0.00	517.86	0		13.20	12.31
24	2.00	3.80	4.00	0.00	609.72	0		8.53	10.37
25	2.00	0.00	0.00	0.00	563.71	0		0.00	0.00
26	2.00	2.30	2.00	0.50	602.94	0		5.20	9.67
27	2.00	2.80	3.00	0.00	492.31	0		7.17	11.26
28	2.00	0.30	0.00	4.00	543.98	0		0.73	9.14
29	2.00	1.30	1.00	0.00	611.78	0		2.91	9.04
30	2.00	0.00	0.00	0.00	573.35	0		0.00	0.00
31	2.00	0.00	0.00	1.00	570.59	0		0.00	0.00
32	2.00	2.30	2.00	5.00	605.70	0		5.18	9.64
33	2.00	2.30	2.50	8.00	598.06	0		5.22	9.71
34	2.00	0.30	0.00	0.00	385.51	0		0.88	11.03
35	2.00	0.00	0.00	1.00	445.61	0		0.00	0.00

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	397.68	0	0.00	0.00
37	2.00	2.30	2.50	0.00	454.42	0	5.90	10.97
38	2.00	0.00	0.00	0.50	471.22	0	0.00	0.00
39	2.00	0.80	1.00	0.00	431.76	0	2.11	10.33
40	2.00	0.00	0.00	0.00	456.65	0	0.00	0.00
41	2.00	0.00	0.00	0.00	541.03	0	0.00	0.00
42	2.00	0.00	0.00	4.50	323.93	8	0.00	0.00
43	2.00	1.30	1.50	0.00	379.29	0	3.85	11.95
44	2.00	1.30	1.50	8.00	280.13	19	5.12	17.75
45	2.00	1.30	1.00	0.00	570.93	0	3.05	9.47
46	2.00	0.00	0.00	3.00	232.66	40	0.00	0.00
47	2.00	0.00	0.00	0.50	341.00	0	0.00	0.00
48	2.00	0.00	0.00	0.00	238.25	60	0.00	0.00
49	2.00	1.80	2.00	0.00	454.17	0	4.62	10.67
50	2.00	0.80	1.00	0.00	221.07	31	4.29	24.76
51	2.00	0.80	1.00	0.00	510.20	0	2.01	9.82
52	2.00	0.80	1.00	0.00	448.60	0	2.05	10.03
53	2.00	0.30	0.50	0.00	509.86	0	0.75	9.49
54	2.00	2.30	2.50	0.00	508.76	0	5.78	10.76
55	2.00	0.30	0.50	0.00	574.04	0	0.70	8.83
56	2.00	0.00	0.00	0.00	554.09	0	0.00	0.00
57	2.00	1.80	2.00	0.00	569.01	0	4.24	9.79
58	2.00	2.30	2.50	1.00	378.15	0	6.83	12.70
59	2.00	0.00	0.00	1.00	581.26	0	0.00	0.00
60	2.00	0.80	1.00	0.50	523.33	0	1.98	9.67
61	2.00	0.80	0.50	0.00	601.73	0	1.81	8.84
62	2.00	0.00	0.00	0.00	322.27	0	0.00	0.00
63	2.00	0.30	0.50	0.00	561.29	0	0.71	8.98
64	2.00	0.00	0.00	1.00	206.48	33	0.00	0.00
65	2.00	0.00	0.00	0.00	316.95	0	0.00	0.00
66	2.00	0.00	0.00	0.00	374.09	0	0.00	0.00
67	2.00	0.00	0.00	2.00	192.16	27	0.00	0.00
68	2.00	0.30	0.50	0.00	234.80	15	1.47	18.55
69	2.00	1.30	1.50	2.50	507.25	0	3.27	10.17
70	2.00	2.30	2.50	0.00	638.92	0	5.01	9.33
71	2.00	0.00	0.00	0.00	135.24	25	0.00	0.00
72	2.00	0.30	0.50	0.50	290.93	17	1.14	14.31
73	2.00	0.00	0.00	0.00	275.99	10	0.00	0.00
74	2.00	0.00	0.00	0.00	283.61	20	0.00	0.00
75	2.00	0.00	0.00	0.00	148.89	50	0.00	0.00
76	2.00	0.30	0.00	0.00	292.01	8	1.13	14.26
77	2.00	0.00	0.00	0.00	183.95	18	0.00	0.00
78	2.00	0.00	0.00	0.00	184.57	0	0.00	0.00
79	2.00	0.00	0.00	0.00	315.35	50	0.00	0.00
80	2.00	0.00	0.00	0.00	255.95	22	0.00	0.00
81	2.00	0.80	0.50	0.00	354.07	8	2.51	12.28
82	2.00	0.00	0.00	0.00	271.18	0	0.00	0.00
83	2.00	0.00	0.00	0.00	500.93	0	0.00	0.00
84	2.00	0.00	0.00	0.00	199.03	18	0.00	0.00
85	2.00	1.30	1.50	0.00	462.38	0	3.33	10.35
86	2.00	0.00	0.00	0.00	342.21	0	0.00	0.00
87	2.00	0.00	0.00	0.00	364.15	14	0.00	0.00
88	2.00	0.00	0.00	0.00	392.90	0	0.00	0.00
89	2.00	0.00	0.00	0.00	226.97	33	0.00	0.00
90	2.00	0.00	0.00	2.50	428.04	0	0.00	0.00
91	2.00	0.00	0.00	3.00	253.84	14	0.00	0.00

30 Nov 98 15:06 ALPHA/BETA - 1.01 Page #3

Protocol #: 4 PW 5CC H3 #403727 User : 568

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
92	2.00	0.00	0.00	0.00	239.45	22		0.00	0.00
93	2.00	0.00	0.00	0.00	527.31	0		0.00	0.00
94	2.00	0.80	0.50	0.00	518.09	0		1.99	9.73
95	2.00	0.00	0.00	0.00	210.22	45		0.00	0.00
96	2.00	0.00	0.00	0.50	196.68	43		0.00	0.00
97	2.00	0.30	0.50	0.00	237.97	17		1.44	18.19
98	2.00	0.00	0.00	0.00	520.15	0		0.00	0.00
99	2.00	3.30	3.50	0.00	512.50	0		8.26	11.29
100	2.00	0.30	0.50	0.00	536.20	0		0.73	9.22
101	2.00	0.00	0.00	0.00	354.40	0		0.00	0.00
102	2.00	0.00	0.00	0.00	210.38	0		0.00	0.00
103	2.00	1.80	2.00	0.00	469.75	0		4.62	10.67
104	2.00	0.80	1.00	0.50	453.06	0		2.05	10.03
105	2.00	2.80	3.00	1.00	527.19	0		6.90	10.83
106	2.00	2.80	3.00	0.00	478.70	0		7.18	11.28
107	2.00	1.80	1.50	0.00	566.21	0		4.25	9.82
108	2.00	0.00	0.00	0.00	585.34	0		0.00	0.00
109	2.00	0.00	0.00	3.00	528.84	0		0.00	0.00
110	2.00	0.00	0.00	0.00	302.64	0		0.00	0.00
111	2.00	0.00	0.00	0.00	579.94	0		0.00	0.00
112	2.00	0.00	0.00	0.00	535.83	0		0.00	0.00
113	2.00	0.00	0.00	0.00	495.15	0		0.00	0.00
114	2.00	0.00	0.00	0.00	151.47	14		0.00	0.00
115	2.00	0.00	0.00	0.00	385.07	0		0.00	0.00
116	2.00	2.30	2.50	0.00	478.99	0		5.90	10.98
117	2.00	0.00	0.00	0.00	250.07	20		0.00	0.00
118	2.00	0.30	0.50	2.50	505.82	0		0.76	9.53
119	2.00	0.80	1.00	0.00	571.68	0		1.88	9.17
120	2.00	0.00	0.00	2.00	517.08	0		0.00	0.00
121	2.00	0.30	0.50	0.00	414.79	0		0.82	10.35
122	2.00	0.30	0.50	0.00	500.16	0		0.76	9.60
123	2.00	0.80	1.00	1.50	288.08	0		3.06	14.96
124	2.00	0.00	0.00	0.00	581.70	0		0.00	0.00
125	2.00	0.00	0.00	0.00	497.02	0		0.00	0.00
126	2.00	0.00	0.00	0.00	538.48	0		0.00	0.00
127	2.00	0.00	0.00	0.00	221.46	0		0.00	0.00
128	2.00	3.80	4.00	0.00	600.19	0		8.61	10.47
129	2.00	0.00	0.00	0.00	494.33	0		0.00	0.00
130	2.00	0.00	0.00	0.00	475.72	0		0.00	0.00

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) GH Bldg.

PURPOSE: Exterior Survey for Surrounding Areas of GH (within 15 feet of Bldg)

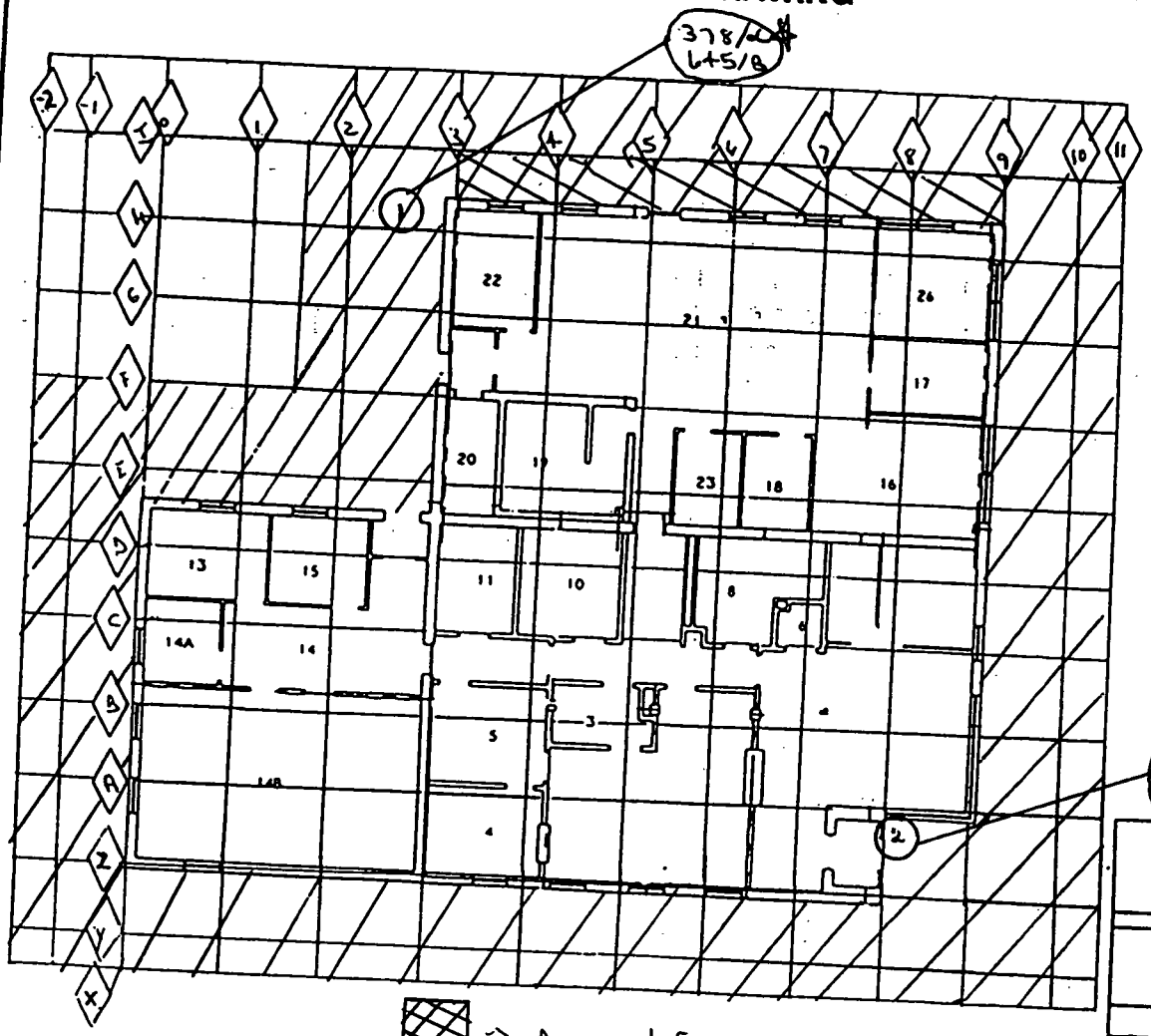
SURVEY NO. 98-Gh-026

RWP NO. N/A

DATE: 11/30/98

TIME: 0800

MAP/DRAWING



⇒ Area not frisked will be sampled later

☆ Posted Boiler Areas Compressed Boiler/Rmd/FLA/Cockroach Pest Control

⇒ Direct frisked

All areas <100/α + <5k/β except as noted 1 + 2.

LEGEND:
- # = mrem/hr (γ) whole body
- # E = mrem/hr (β+η+γ) extremity on contact
- # = mrem/hr neutron
- # = air sample number
- # = swipe number
- #/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Eberline	5340/5343	2/6/99
NE Electric	5364/5285	4/15/99
Micro R	3929	4/8/99

[redacted]

HP#	Date:
7885/	11/30/98
HP#	Date:
5968	12/9/98
HP#	Date:
5996	12-10-98

ML-9620 (2-98)

Survey No. 98-64-06

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				
2	See	Attachment		Sheet

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR071
Batch Ended: 12/1/98 13:03
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: X 98-GH-06 KAM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	1	0.00	1.98	<MDA	0.54	2.00	<MDA
D2	2	0.00	2.02	<MDA	0.00	1.49	<MDA

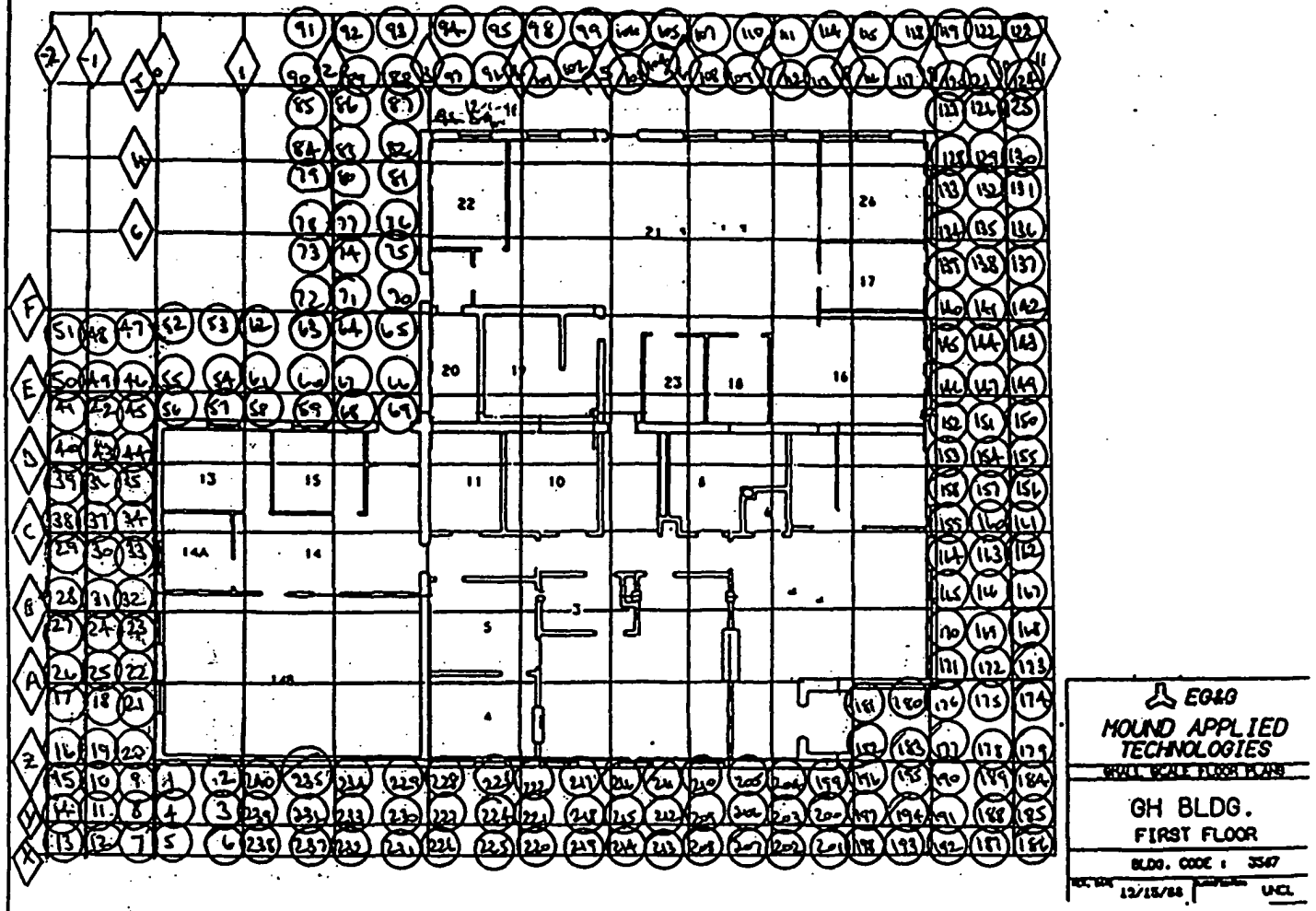
 KSK 12-10-98

RADIOLOGICAL SURVEY DATA SHEET

1-240 30-12 P

LOCATION: (BLDG/AREA/ROOM) GH Bldg	SURVEY NO. 98-GH-07
PURPOSE: Release of GH Bldg Surrounding Area	RWP NO. N/A
	DATE: 12-1-98
	TIME: 1300

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5340 / 5343	2/6/99
	N	
	A	

[redacted]

HPS	Date:
7889	12/1/98
HPS	Date:
5681	12/8/98
HPS	Date:
3996	12-9-98

1B (1-100
2E (101-2
1D (201-2

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
~~1-240~~	~~12-1-98~~			
1-240	See Attached pages			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1B004.csv
Batch Ended: 12/2/98 11:49
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
78	1	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:02
114	2	4.145	2.93	<AL	1.26	2.74	<MDA	1.50	12/2/98 9:04
90	3	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:05
112	4	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 9:07
30	5	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 9:09
31	6	4.212	2.92	<AL	0.00	1.70	<MDA	1.50	12/2/98 9:10
89	7	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:12
4	8	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	12/2/98 9:14
37	9	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 9:16
53	10	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 9:17
14	11	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 9:19
79	12	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 9:21
140	13	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 9:22
30	14	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:24
26	15	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:26
15	16	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:27
4	17	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:29
128	18	0.000	1.78	<MDA	4.91	3.48	<AL	1.50	12/2/98 9:31
34	19	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 9:32
58	20	2.518	2.41	<AL	0.00	2.28	<MDA	1.50	12/2/98 9:34
89	21	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:36
139	22	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 9:37
43	23	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:39
15	24	0.756	1.78	<MDA	4.70	3.48	<AL	1.50	12/2/98 9:41
102	25	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 9:42
84	26	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 9:44
57	27	2.518	2.41	<AL	0.00	2.28	<MDA	1.50	12/2/98 9:46
1	28	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:47
136	29	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 9:49
36	30	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:51

3 of 7

Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1B004.csv
Batch Ended: 12/2/98 11:49
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
24	31	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 9:53
9	32	0.756	1.78	<MDA	4.70	3.48	<AL	1.50	12/2/98 9:54
2	33	4.145	2.93	<AL	1.26	2.74	<MDA	1.50	12/2/98 9:56
147	34	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 9:58
19	35	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 9:59
140	36	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:01
47	37	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	12/2/98 10:03
34	38	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:04
144	39	2.450	2.43	<AL	2.98	3.13	<MDA	1.50	12/2/98 10:06
30	40	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:08
96	41	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:09
38	42	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:11
36	43	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:13
11	44	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:14
113	45	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:16
70	46	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 10:18
117	47	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 10:19
70	48	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:21
13	49	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:23
144	50	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	12/2/98 10:24
10	51	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:26
119	52	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 10:28
20	53	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:30
7	54	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:31
14	55	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:33
103	56	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 10:35
29	57	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	12/2/98 10:36
112	58	2.552	2.40	<AL	0.00	1.70	<MDA	1.50	12/2/98 10:38
139	59	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 10:40
37	60	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:41

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1B004.csv
Batch Ended: 12/2/98 11:49
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
1	61	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:43
33	62	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 10:45
76	63	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 10:46
113	64	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:48
23	65	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:50
85	66	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 10:51
7	67	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:53
103	68	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 10:55
23	69	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 10:56
70	70	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 10:58
93	71	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:00
27	72	2.518	2.41	<AL	0.00	2.28	<MDA	1.50	12/2/98 11:01
9	73	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:03
69	74	0.722	1.79	<MDA	6.22	3.80	<AL	1.50	12/2/98 11:05
77	75	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 11:07
8	76	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 11:08
140	77	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 11:10
94	78	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 11:12
105	79	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:13
93	80	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 11:15
107	81	0.790	1.77	<MDA	3.18	3.13	<MDA	1.50	12/2/98 11:17
57	82	0.000	1.81	<MDA	7.94	4.09	<AL	1.50	12/2/98 11:18
55	83	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:20
19	84	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:22
73	85	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:23
89	86	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:25
113	87	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:27
28	88	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 11:28
102	89	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:30
4	90	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:32

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1B004.csv
Batch Ended: 12/2/98 11:49
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (1-100) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
15	91	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 11:33
129	92	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:35
133	93	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:37
9	94	2.416	2.44	<AL	4.50	3.48	<AL	1.50	12/2/98 11:38
112	95	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:40
57	96	4.246	2.92	<AL	0.00	1.70	<MDA	1.50	12/2/98 11:42
74	97	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 11:44
70	98	0.000	1.76	<MDA	1.87	2.74	<MDA	1.50	12/2/98 11:45
150	99	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 11:47
114	100	4.043	2.96	<AL	5.81	3.80	<AL	1.50	12/2/98 11:49

Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2E003.csv
Batch Ended: 12/2/98 12:40
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (101-200) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
116	1	5.048	3.23	<AL	0.00	1.84	<MDA	1.50	12/2/98 9:53
31	2	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 9:54
33	3	1.362	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 9:56
12	4	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 9:58
30	5	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 9:59
22	6	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	12/2/98 10:01
75	7	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:03
138	8	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:04
100	9	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:06
94	10	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:08
9	11	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:09
97	12	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:11
139	13	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:13
127	14	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:15
35	15	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:16
91	16	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:18
87	17	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:20
38	18	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	12/2/98 10:21
124	19	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	12/2/98 10:23
66	20	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	12/2/98 10:25
40	21	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 10:26
145	22	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:28
142	23	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:30
55	24	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 10:32
11	25	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:33
125	26	3.148	2.68	<AL	3.23	3.39	<MDA	1.50	12/2/98 10:35
148	27	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 10:37
5	28	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 10:38
14	29	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	12/2/98 10:40
11	30	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:42

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2E003.csv
Batch Ended: 12/2/98 12:40
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (101-200) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
89	31	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:43
43	32	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 10:45
123	33	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 10:47
83	34	3.181	2.66	<AL	0.00	2.47	<MDA	1.50	12/2/98 10:48
114	35	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	12/2/98 10:50
14	36	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	12/2/98 10:52
71	37	3.181	2.66	<AL	0.00	2.47	<MDA	1.50	12/2/98 10:53
55	38	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/2/98 10:55
95	39	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	12/2/98 10:57
137	40	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 10:58
85	41	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/2/98 11:00
22	42	1.264	1.96	<MDA	6.74	4.11	<AL	1.50	12/2/98 11:02
9	43	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:04
18	44	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 11:05
8	45	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/2/98 11:07
64	46	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:09
5	47	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:10
11	48	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:12
42	49	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:14
54	50	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	12/2/98 11:15
86	51	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:17
73	52	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:19
10	53	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:20
39	54	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:22
136	55	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:24
128	56	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:26
1	57	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:27
12	58	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:29
148	59	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:31
84	60	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 11:32

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2E003.csv
Batch Ended: 12/2/98 12:40
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (101-200) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
23	61	1.297	1.93	<MDA	3.45	3.39	<MDA	1.50	12/2/98 11:34
33	62	1.346	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:36
98	63	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:37
7	64	3.213	2.65	<AL	0.00	1.84	<MDA	1.50	12/2/98 11:39
94	65	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	12/2/98 11:41
139	66	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/2/98 11:43
17	67	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	12/2/98 11:44
3	68	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:46
124	69	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/2/98 11:48
24	70	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:49
10	71	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:51
20	72	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 11:53
101	73	4.999	3.25	<AL	3.00	3.39	<MDA	1.50	12/2/98 11:54
65	74	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 11:56
19	75	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 11:58
37	76	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 11:59
128	77	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 12:01
124	78	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 12:03
29	79	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:04
143	80	1.281	1.95	<MDA	5.10	3.77	<AL	1.50	12/2/98 12:06
6	81	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:08
136	82	1.330	1.91	<MDA	0.17	2.47	<MDA	1.50	12/2/98 12:10
54	83	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 12:11
30	84	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	12/2/98 12:13
12	85	0.000	1.96	<MDA	6.97	4.11	<AL	1.50	12/2/98 12:15
113	86	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:16
31	87	3.132	2.69	<AL	4.87	3.77	<AL	1.50	12/2/98 12:18
44	88	0.000	1.92	<MDA	2.04	2.97	<MDA	1.50	12/2/98 12:20
99	89	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:21
143	90	3.164	2.67	<AL	1.58	2.97	<MDA	1.50	12/2/98 12:23

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2E003.csv
Batch Ended: 12/2/98 12:40
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.B (101-200) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
2	91	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	12/2/98 12:25
16	92	0.000	1.95	<MDA	5.32	3.77	<AL	1.50	12/2/98 12:26
14	93	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 12:28
29	94	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 12:30
2	95	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 12:31
128	96	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:33
40	97	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:35
84	98	1.313	1.92	<MDA	1.81	2.97	<MDA	1.50	12/2/98 12:37
60	99	0.000	1.91	<MDA	0.39	2.47	<MDA	1.50	12/2/98 12:38
39	100	0.000	1.89	<MDA	0.00	1.84	<MDA	1.50	12/2/98 12:40

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Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1D005.csv
Batch Ended: 12/2/98 13:57
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.D (201-240) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
33	1	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 12:51
2	2	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 12:53
8	3	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 12:54
69	4	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 12:56
61	5	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 12:58
58	6	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 12:59
21	7	0.756	1.78	<MDA	4.70	3.48	<AL	1.50	12/2/98 13:01
65	8	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:03
10	9	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:04
134	10	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:06
1	11	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:08
111	12	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:09
3	13	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 13:11
107	14	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:13
41	15	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:15
46	16	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:16
2	17	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:18
24	18	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:20
12	19	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:21
8	20	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:23
23	21	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:25
14	22	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:26
38	23	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:28
112	24	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:30
52	25	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:31
32	26	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 13:33
37	27	0.892	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:35
36	28	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:36
91	29	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 13:38
85	30	0.925	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:40

1 of 17

Health Physics Counting Lab -- Wipe Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1D005.csv
Batch Ended: 12/2/98 13:57
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-GH-07 CHILDERS GH-BLDG. GR.D (201-240) CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
130	31	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:41
39	32	0.000	1.77	<MDA	3.39	3.13	<MDA	1.50	12/2/98 13:43
92	33	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:45
130	34	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 13:47
131	35	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:48
113	36	0.858	1.75	<MDA	0.15	2.28	<MDA	1.50	12/2/98 13:50
46	37	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:52
15	38	0.824	1.76	<MDA	1.67	2.74	<MDA	1.50	12/2/98 13:53
95	39	0.000	1.75	<MDA	0.35	2.28	<MDA	1.50	12/2/98 13:55
129	40	0.000	1.74	<MDA	0.00	1.70	<MDA	1.50	12/2/98 13:57

12 of 17

13-417

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

12/1/98
13-642

	LL	UL	LCR	2S%	BKG
Region A:	0.5	18.6	0	0.0	6.10
Region B:	2.0	18.6	0	0.0	5.90
Region C:	40.0	2000	0	0.0	12.20

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-07 CHILDERS GH-BLDG. (30-12 1-240) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.10	5.90	12.20	582.09	10	B		0.00
0	2.00	1381.40	1309.10	0.00	607.04	0		3108.75	256.67
1	2.00	0.40	0.60	0.00	484.45	0		1.03	10.16
2	2.00	0.00	0.00	2.30	587.47	0		0.00	0.00
3	2.00	0.00	0.00	0.00	595.90	0		0.00	0.00
4	2.00	1.40	1.60	0.00	576.90	0		3.26	9.80
5	2.00	3.40	3.60	0.00	574.04	0		7.95	10.90
6	2.00	1.40	1.60	0.80	587.88	0		3.22	9.66
7	2.00	0.00	0.00	1.30	584.60	0		0.00	0.00
8	2.00	1.90	2.10	0.00	594.89	0		4.33	9.85
9	2.00	0.00	0.00	0.00	600.25	0		0.00	0.00
10	2.00	0.00	0.00	0.00	577.15	0		0.00	0.00
11	2.00	1.90	2.10	0.00	569.89	0		4.47	10.17
12	2.00	0.00	0.00	0.00	583.53	0		0.00	0.00
13	2.00	0.90	1.10	0.00	582.32	0		2.08	9.45
14	2.00	0.00	0.10	0.00	596.05	0		0.00	0.00
15	2.00	0.00	0.00	0.00	589.96	0		0.00	0.00
16	2.00	0.90	1.10	0.00	580.70	0		2.09	9.47
17	2.00	1.90	2.10	0.00	560.75	0		4.52	10.28
18	2.00	0.00	0.00	0.00	591.51	0		0.00	0.00
19	2.00	0.00	0.00	0.00	574.62	0		0.00	0.00
20	2.00	0.00	0.10	0.00	577.74	0		0.00	0.00
21	2.00	0.00	0.10	0.00	575.14	0		0.00	0.00
22	2.00	0.00	0.00	0.00	611.65	0		0.00	0.00
23	2.00	0.00	0.00	0.00	599.90	0		0.00	0.00
24	2.00	0.00	0.10	0.00	534.28	0		0.00	0.00
25	2.00	0.00	0.00	0.00	589.89	0		0.00	0.00
26	2.00	0.00	0.10	0.00	571.76	0		0.00	0.00
27	2.00	0.00	0.00	0.00	589.34	0		0.00	0.00
28	2.00	0.00	0.00	0.00	481.47	0		0.00	0.00
29	2.00	2.90	2.10	2.30	581.00	0		6.72	10.55
30	2.00	0.00	0.00	0.00	562.75	0		0.00	0.00
31	2.00	0.00	0.00	0.00	573.57	0		0.00	0.00
32	2.00	0.00	0.00	0.00	601.59	0		0.00	0.00
33	2.00	0.00	0.00	0.00	573.78	0		0.00	0.00
34	2.00	3.90	3.60	0.00	585.67	0		8.98	10.99
35	2.00	0.00	0.00	0.00	591.18	0		0.00	0.00

02 Dec 98 21:41 ALPHA/BETA - 1.01

Protocol #: 1 PW 5CC H3 #403727 User : 568

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	0.00	0.10	0.00	566.85	0	0.00	0.00
37	2.00	2.40	2.10	0.00	567.51	0	5.66	10.47
38	2.00	0.00	0.00	1.80	320.99	0	0.00	0.00
39	2.00	0.00	0.00	0.80	551.90	0	0.00	0.00
40	2.00	0.40	0.10	0.80	560.21	0	0.95	9.42
41	2.00	0.00	0.00	0.30	579.03	0	0.00	0.00
42	2.00	1.40	1.60	0.00	580.60	0	3.25	9.75
43	2.00	0.00	0.00	0.00	561.23	0	0.00	0.00
44	2.00	0.00	0.00	0.00	587.61	0	0.00	0.00
45	2.00	2.40	2.60	0.00	587.81	0	5.51	10.20
46	2.00	0.40	0.60	0.00	568.11	0	0.94	9.33
47	2.00	0.00	0.00	0.00	250.30	0	0.00	0.00
48	2.00	0.00	0.00	0.00	591.05	0	0.00	0.00
49	2.00	1.90	2.10	0.00	575.98	0	4.43	10.09
50	2.00	0.00	0.00	0.00	592.52	0	0.00	0.00
51	2.00	0.00	0.00	0.00	578.90	0	0.00	0.00
52	2.00	0.90	0.10	0.00	481.77	0	2.31	10.48
53	2.00	3.90	4.10	0.00	548.15	0	9.40	11.50
54	2.00	0.00	0.10	0.00	445.35	0	0.00	0.00
55	2.00	0.00	0.00	0.00	474.15	0	0.00	0.00
56	2.00	1.90	2.10	0.00	582.00	0	4.40	10.01
57	2.00	0.00	0.00	0.00	548.41	0	0.00	0.00
58	2.00	0.00	0.00	0.00	589.34	0	0.00	0.00
59	2.00	2.40	2.60	0.00	586.55	0	5.52	10.21
60	2.00	3.40	3.60	0.00	580.27	0	7.89	10.81
61	2.00	0.00	0.00	0.00	577.13	0	0.00	0.00
62	2.00	1.40	1.10	0.30	553.52	0	3.35	10.08
63	2.00	0.00	0.00	0.00	521.67	0	0.00	0.00
64	2.00	0.00	0.00	0.30	509.60	0	0.00	0.00
65	2.00	0.00	0.00	0.00	577.47	0	0.00	0.00
66	2.00	0.40	0.10	0.00	591.00	0	0.91	9.06
67	2.00	0.00	0.00	0.00	539.46	0	0.00	0.00
68	2.00	0.00	0.00	0.00	561.61	0	0.00	0.00
69	2.00	1.40	1.60	0.00	575.82	0	3.27	9.81
70	2.00	0.00	0.00	0.00	551.62	0	0.00	0.00
71	2.00	0.00	0.00	0.00	496.19	0	0.00	0.00
72	2.00	2.90	3.10	0.00	498.94	0	7.38	11.58
73	2.00	0.90	1.10	0.00	511.00	0	2.26	10.25
74	2.00	0.00	0.10	0.00	572.70	0	0.00	0.00
75	2.00	0.00	0.00	0.00	586.83	0	0.00	0.00
76	2.00	0.90	1.10	0.00	568.09	0	2.12	9.63
77	2.00	1.90	2.10	0.00	586.04	0	4.37	9.95
78	2.00	0.00	0.00	0.00	475.62	0	0.00	0.00
79	2.00	0.40	0.10	2.80	552.53	0	0.96	9.50
80	2.00	0.90	0.60	0.00	601.45	0	2.04	9.24
81	2.00	0.40	0.60	0.00	598.55	0	0.91	8.99
82	2.00	1.90	2.10	0.00	553.85	0	4.55	10.36
83	2.00	1.40	1.10	0.00	618.35	0	3.12	9.36
84	2.00	0.40	0.60	0.00	391.58	0	1.15	11.41
85	2.00	2.90	2.60	0.00	600.84	0	6.57	10.31
86	2.00	0.00	0.00	0.00	576.43	0	0.00	0.00
87	2.00	0.00	0.00	0.00	560.96	0	0.00	0.00
88	2.00	0.00	0.00	0.00	328.82	0	0.00	0.00
89	2.00	0.00	0.00	0.00	553.95	0	0.00	0.00
90	2.00	0.40	0.10	0.00	575.82	0	0.93	9.24
91	2.00	2.40	2.60	0.00	507.37	0	6.05	11.19

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Protocol #: 1 PW 5CC H3 #403727 User : 568

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
92	2.00	0.00	0.10	0.00	291.96	0	0.00	0.00
93	2.00	0.00	0.00	0.00	333.73	0	0.00	0.00
94	2.00	0.00	0.00	0.00	587.93	0	0.00	0.00
95	2.00	0.00	0.00	0.00	349.44	0	0.00	0.00
96	2.00	2.90	2.60	0.00	596.83	0	6.59	10.35
97	2.00	2.40	2.60	0.00	614.16	0	5.36	9.92
98	2.00	0.00	0.00	0.00	353.92	0	0.00	0.00
99	2.00	0.00	0.10	0.00	317.84	0	0.00	0.00
100	2.00	0.00	0.00	0.00	544.30	0	0.00	0.00
101	2.00	3.40	3.10	0.00	601.65	0	7.69	10.55
102	2.00	0.00	0.00	0.00	617.26	0	0.00	0.00
103	2.00	0.00	0.00	0.30	603.84	0	0.00	0.00
104	2.00	0.00	0.00	0.00	594.77	0	0.00	0.00
105	2.00	0.00	0.00	0.30	333.83	0	0.00	0.00
106	2.00	0.00	0.00	0.00	338.59	0	0.00	0.00
107	2.00	0.00	0.00	0.00	265.77	0	0.00	0.00
108	2.00	0.00	0.00	0.00	287.76	0	0.00	0.00
109	2.00	0.40	0.10	0.00	570.96	0	0.94	9.30
110	2.00	1.40	1.10	0.00	595.93	0	3.19	9.57
111	2.00	0.00	0.00	0.00	387.87	0	0.00	0.00
112	2.00	0.40	0.60	1.30	284.75	0	1.55	15.34
113	2.00	0.00	0.00	0.00	594.58	0	0.00	0.00
114	2.00	0.00	0.00	0.00	524.02	0	0.00	0.00
115	2.00	0.00	0.00	0.00	574.49	0	0.00	0.00
116	2.00	0.00	0.00	0.00	575.12	0	0.00	0.00
117	2.00	0.00	0.00	0.00	571.48	0	0.00	0.00
118	2.00	0.00	0.00	0.00	608.18	0	0.00	0.00
119	2.00	0.90	1.10	0.00	563.12	0	2.13	9.69
120	2.00	0.00	0.00	0.80	276.14	20	0.00	0.00
121	2.00	0.90	1.10	0.00	614.96	0	2.01	9.12
122	2.00	0.00	0.00	0.00	602.05	0	0.00	0.00
123	2.00	0.00	0.00	0.00	288.82	0	0.00	0.00
124	2.00	0.00	0.00	0.00	204.71	0	0.00	0.00
125	2.00	2.90	3.10	0.00	574.92	0	6.77	10.63
126	2.00	4.40	4.60	3.80	570.80	0	10.33	11.45
127	2.00	1.40	1.10	0.00	607.01	0	3.15	9.47
128	2.00	1.90	2.10	0.00	601.10	0	4.30	9.79
129	2.00	0.00	0.00	0.00	585.32	0	0.00	0.00
130	2.00	0.00	0.00	0.00	553.46	0	0.00	0.00
131	2.00	0.00	0.00	0.30	593.93	0	0.00	0.00
132	2.00	0.00	0.00	0.00	585.25	0	0.00	0.00
133	2.00	0.90	1.10	2.30	602.21	0	2.04	9.24
134	2.00	0.00	0.00	0.00	607.14	0	0.00	0.00
135	2.00	1.90	2.10	0.00	599.45	0	4.31	9.81
136	2.00	0.00	0.00	0.00	600.72	0	0.00	0.00
137	2.00	2.40	2.60	0.00	584.75	0	5.53	10.24
138	2.00	1.90	1.60	0.00	591.96	0	4.34	9.88
139	2.00	1.40	1.60	0.00	602.38	0	3.17	9.51
140	2.00	2.90	1.60	0.00	598.69	0	6.58	10.33
141	2.00	1.40	1.10	0.00	593.48	0	3.19	9.60
142	2.00	0.00	0.00	0.00	610.45	0	0.00	0.00
143	2.00	1.40	1.60	0.00	604.23	0	3.16	9.49
144	2.00	0.00	0.00	0.00	585.31	0	0.00	0.00
145	2.00	0.00	0.00	0.00	602.35	0	0.00	0.00
146	2.00	1.90	1.60	0.00	597.34	0	4.32	9.83
147	2.00	2.40	2.60	0.00	603.15	0	5.42	10.03

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
148	2.00	0.90	1.10	0.00	603.69	0	2.03	9.22
149	2.00	4.90	5.10	2.80	607.31	0	11.02	11.21
150	2.00	1.40	1.60	0.00	589.94	0	3.21	9.63
151	2.00	0.00	0.00	0.00	594.85	0	0.00	0.00
152	2.00	1.40	0.60	0.00	610.92	0	3.14	9.43
153	2.00	0.00	0.10	0.00	583.28	0	0.00	0.00
154	2.00	0.00	0.00	0.00	591.57	0	0.00	0.00
155	2.00	0.00	0.00	0.00	599.27	0	0.00	0.00
156	2.00	0.00	0.10	0.00	585.54	0	0.00	0.00
157	2.00	0.00	0.00	0.80	578.96	0	0.00	0.00
158	2.00	0.00	0.10	0.00	599.02	0	0.00	0.00
159	2.00	1.40	0.60	0.00	606.70	0	3.15	9.47
160	2.00	0.40	0.60	0.00	576.41	0	0.93	9.23
161	2.00	1.90	2.10	0.00	584.72	0	4.38	9.97
162	2.00	0.40	0.60	2.80	593.56	0	0.91	9.03
163	2.00	0.00	0.00	0.00	586.07	0	0.00	0.00
164	2.00	0.00	0.00	0.00	603.34	0	0.00	0.00
165	2.00	0.00	0.00	0.00	602.86	0	0.00	0.00
166	2.00	0.00	0.00	0.00	601.45	0	0.00	0.00
167	2.00	2.40	2.60	0.00	603.33	0	5.42	10.03
168	2.00	0.00	0.00	0.00	591.03	0	0.00	0.00
169	2.00	0.00	0.00	0.00	601.98	0	0.00	0.00
170	2.00	3.90	3.60	0.00	604.36	0	8.80	10.77
171	2.00	1.90	1.60	0.00	612.09	0	4.25	9.68
172	2.00	0.40	0.60	0.00	586.91	0	0.92	9.11
173	2.00	3.90	4.10	0.00	592.18	0	8.91	10.90
174	2.00	3.40	2.10	0.00	595.22	0	7.74	10.62
175	2.00	0.00	0.00	2.30	592.91	0	0.00	0.00
176	2.00	0.00	0.00	0.00	601.90	0	0.00	0.00
177	2.00	0.00	0.00	0.00	598.70	0	0.00	0.00
178	2.00	0.00	0.00	0.00	321.15	0	0.00	0.00
179	2.00	0.00	0.00	0.00	370.62	0	0.00	0.00
180	2.00	3.90	3.60	0.00	594.31	0	8.89	10.88
181	2.00	1.40	1.60	0.00	573.37	0	3.28	9.84
182	2.00	0.40	0.60	0.80	590.22	0	0.92	9.07
183	2.00	0.00	0.00	0.00	573.52	0	0.00	0.00
184	2.00	3.40	3.60	0.00	512.37	0	8.52	11.68
185	2.00	0.00	0.10	0.00	548.54	0	0.00	0.00
186	2.00	0.00	0.00	0.00	563.15	0	0.00	0.00
187	2.00	1.90	1.60	0.00	589.83	0	4.35	9.91
188	2.00	0.00	0.00	0.00	259.39	0	0.00	0.00
189	2.00	0.00	0.00	0.30	313.03	0	0.00	0.00
190	2.00	0.00	0.00	0.00	533.59	0	0.00	0.00
191	2.00	0.00	0.00	0.00	588.75	0	0.00	0.00
192	2.00	1.40	1.10	0.00	584.30	0	3.23	9.70
193	2.00	3.40	3.60	0.00	616.33	0	7.58	10.40
194	2.00	1.90	2.10	0.00	581.88	0	4.40	10.01
195	2.00	1.90	1.60	0.00	579.28	0	4.41	10.04
196	2.00	0.00	0.00	0.00	537.67	0	0.00	0.00
197	2.00	1.40	1.10	0.00	594.20	0	3.19	9.59
198	2.00	0.00	0.10	0.00	582.12	0	0.00	0.00
199	2.00	0.00	0.10	0.00	570.06	0	0.00	0.00
200	2.00	1.90	1.60	0.00	597.10	0	4.32	9.83
201	2.00	0.40	0.60	0.00	581.83	0	0.93	9.17
202	2.00	0.00	0.00	0.00	307.88	0	0.00	0.00
203	2.00	2.40	1.60	0.00	607.06	0	5.40	9.99

03 Dec 98 05:58 ALPHA/BETA - 1.01 Page #5

Protocol #: 1 PW 5CC H3 #403727 User : 568

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
204	2.00	2.90	2.60	0.30	558.84	0	6.91	10.85
205	2.00	2.40	2.10	0.00	602.60	0	5.43	10.04
206	2.00	0.00	0.00	0.00	598.51	0	0.00	0.00
207	2.00	0.00	0.00	0.00	298.50	0	0.00	0.00
208	2.00	1.40	1.60	0.00	583.19	0	3.23	9.72
209	2.00	0.00	0.00	0.00	322.00	0	0.00	0.00
210	2.00	0.40	0.60	0.80	614.40	0	0.89	8.85
211	2.00	0.00	0.00	0.00	582.69	0	0.00	0.00
212	2.00	1.90	1.10	0.00	586.57	0	4.37	9.95
213	2.00	0.00	0.00	0.00	311.85	0	0.00	0.00
214	2.00	0.00	0.00	0.00	592.01	0	0.00	0.00
215	2.00	0.40	0.60	0.00	593.25	0	0.91	9.04
216	2.00	0.00	0.10	0.00	615.41	0	0.00	0.00
217	2.00	0.00	0.00	0.00	571.92	0	0.00	0.00
218	2.00	0.00	0.10	0.00	588.71	0	0.00	0.00
219	2.00	0.00	0.00	0.00	480.23	0	0.00	0.00
220	2.00	1.40	1.10	0.00	330.63	0	4.67	14.02
221	2.00	0.00	0.00	0.00	586.67	0	0.00	0.00
222	2.00	1.40	1.10	0.00	591.72	0	3.20	9.61
223	2.00	0.00	0.00	0.00	589.36	0	0.00	0.00
224	2.00	0.00	0.00	0.00	608.78	0	0.00	0.00
225	2.00	2.40	2.10	0.00	573.64	0	5.62	10.39
226	2.00	0.00	0.00	0.00	618.85	0	0.00	0.00
227	2.00	0.00	0.00	0.80	597.03	0	0.00	0.00
228	2.00	0.90	0.10	0.00	587.24	0	2.07	9.39
229	2.00	2.40	2.60	0.00	570.20	0	5.64	10.43
230	2.00	0.00	0.00	0.00	604.73	0	0.00	0.00
231	2.00	0.40	0.60	0.00	538.02	0	0.97	9.65
232	2.00	1.90	2.10	0.00	581.81	0	4.40	10.01
233	2.00	1.90	2.10	0.00	594.71	0	4.33	9.85
234	2.00	1.90	2.10	0.00	594.00	0	4.33	9.86
235	2.00	0.00	0.00	0.00	587.52	0	0.00	0.00
236	2.00	0.00	0.00	1.30	601.93	0	0.00	0.00
237	2.00	0.00	0.00	1.30	252.66	0	0.00	0.00
238	2.00	4.40	4.10	0.00	548.93	0	10.59	11.74
239	2.00	0.00	0.00	0.00	588.24	0	0.00	0.00
240	2.00	2.40	2.10	0.00	599.29	0	5.44	10.07

RADIOLOGICAL SURVEY DATA SHEET

D1 30-12 F

LOCATION: (BLDG./AREA/ROOM) GH

PURPOSE: Remove small amount (≈ 8-10 grams) of fixed or contaminant to verify isotope & contain samples from Gravel Pit Area.

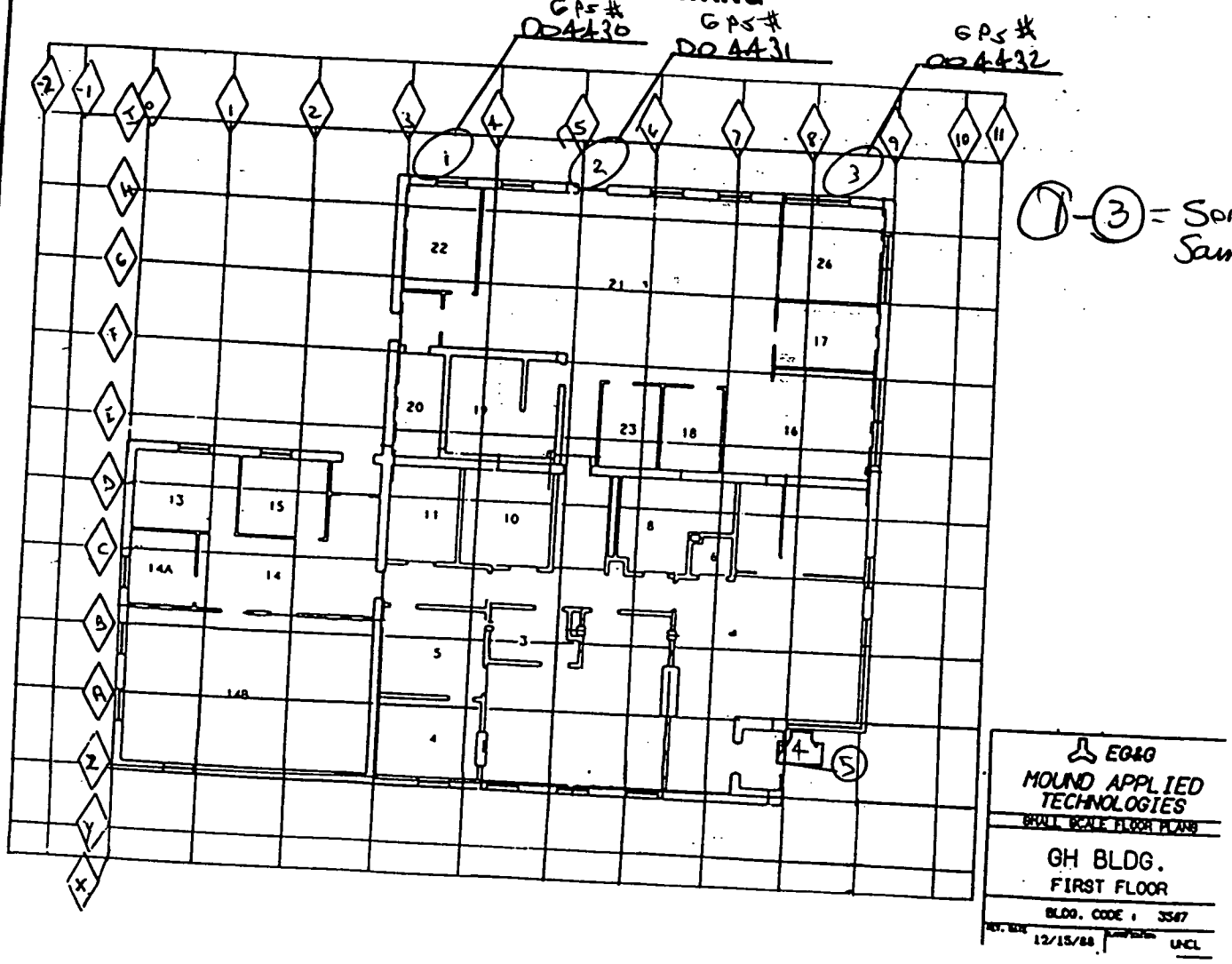
SURVEY NO. 98-GH-08

RWP NO. GH-001-98

DATE: 12/2/98

TIME: 0830

MAP/DRAWING



LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
(#) => Soil Sample
=> Sample of Fixed
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5340/5343	2-6-99

[redacted]

HP#	Date:
7889	12/2/98
5681	12/7/98
5996	12-9-98

T 2I1

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See			Soil
2				↓
3		Attached		↓
4	Sheets			Concrete
5				Smear
	N/A			

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
			N/A	

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

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SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004430
LAB SAMPLE ID: ML800204
FILE ID: MG100186.SO
PRIORITY: N

Description\Location:
98-gh-08, #1
(gravel pit area)

Collector: [redacted]7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.07	45,000
Cs-137	*	0.04	0.07	45,000
Pb-210	*	0.00	0.70	45,000
Ra-226		2.06	0.56	800
Ac-227 (D)	*	0.00	0.26	40
Th-230	*	0.17	6.88	800
Th-232 (D)		0.36	0.28	130
Pu-238	*	0.00	16.13	500
Am-241		0.09	0.07	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.03 nCi/g

Σ Respirator 0.05

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

A06 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004430
LAB SAMPLE ID: ML800207
FILE ID: MG100189.SO
PRIORITY: N

Description\Location:
98-GH-08, #1
Long Count (10hr)

Collector: [redacted] 7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.02	45,000
Cs-137		0.05	0.01	45,000
Pb-210		0.49	0.13	45,000
Ra-226		1.33	0.19	800
Ac-227 (D)	*	0.02	0.05	40
Th-230	•	0.42	1.47	800
Th-232 (D)		0.44	0.04	130
Pu-238	*	0.00	3.44	500
Am-241		0.02	0.01	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

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SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004431
LAB SAMPLE ID: ML800209
FILE ID: MG100191.SO
PRIORITY: N

Description\Location:
98-GH-08, #2
Long Count

Collector: [redacted] 7839

Date Received: 12/3/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.02	45,000
Cs-137	*	0.02	0.02	45,000
Pb-210		0.43	0.20	45,000
Ra-226		0.76	0.26	800
Ac-227 (D)	*	0.00	0.08	40
Th-230	*	0.00	2.19	800
Th-232 (D)		0.25	0.07	130
Pu-238	*	0.00	5.57	500
Am-241	*	0.00	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted]

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SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004431
LAB SAMPLE ID: ML800205
FILE ID: MG100187.SO
PRIORITY: N

Description\Location:
98-GH-08, #2
(gravel pit area)

Collector: [redacted] 7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.05	45,000
Cs-137	•	0.02	0.04	45,000
Pb-210	*	0.31	0.52	45,000
Ra-226	*	0.70	0.76	800
Ac-227 (D)	•	0.12	0.16	40
Th-230	*	0.00	5.90	800
Th-232 (D)		0.28	0.18	130
Pu-238	*	6.71	11.49	500
Am-241	•	0.00	0.07	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.02 nCi/g

Σ Respirator 0.04

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

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SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004432
LAB SAMPLE ID: ML800206
FILE ID: MG100188.SO
PRIORITY: N

Description\Location:
98-GH-08, #3
(gravel pit area)

Collector: [redacted] 7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.07	45,000
Cs-137	*	0.06	0.07	45,000
Pb-210	*	0.52	0.70	45,000
Ra-226		1.56	0.78	800
Ac-227 (D)	*	0.11	0.25	40
Th-230	*	1.72	7.25	800
Th-232 (D)		0.61	0.24	130
Pu-238	*	0.00	18.99	500
Am-241	*	0.00	0.08	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.03 nCi/g

Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

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SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004432
LAB SAMPLE ID: ML800210
FILE ID: MG100192.SO
PRIORITY: N

Description\Location:
98-GH-08, #3
Long Count

Collector: [redacted] 7839

Date Received: 12/3/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.03	45,000
Cs-137		0.08	0.03	45,000
Pb-210		0.51	0.31	45,000
Ra-226		1.42	0.36	800
Ac-227 (D)	*	0.10	0.10	40
Th-230	*	0.62	2.99	800
Th-232 (D)		0.56	0.08	130
Pu-238	*	5.26	6.64	500
Am-241	*	0.02	0.03	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.03

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted]

5 of 11

Project: **Radiological Concentrations; GH Survey**
Submitted: Dec. 2, 1998
Sampling Event: **Dec. 2, 1998**
Submitted by: B. Childers, K. Kent

12" x 5" Surface sample: 387.1 cm^2 Sample Mass: 20 grams

Initial field reading: 220 dpm/100 cm^2

Plutonium Concentrations

Sample ID	Pu-238, pCi/g	+/- pCi/g	MDA, pCi/g	Pu-239, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.342	0.066	0.050	<LLD		0.041

Uranium Concentrations

Sample ID	-233/234, pCi/	+/- pCi/g	MDA, pCi/g	U-235, pCi/g	+/- pCi/g	MDA, pCi/g	U-238, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.251	0.075	0.0523	<LDL		0.0734	0.327	0.087	0.0734

Thorium Concentrations

Sample ID	Th-227, pCi/g	+/- pCi/g	MDA, pCi/g	Th-228, pCi/g	+/- pCi/g	MDA, pCi/g	Th-230, pCi/g	+/- pCi/g	MDA, pCi/g	Th-232, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.207	0.048	0.026	0.461	0.077	0.036	0.367	0.067	0.026	0.235	0.051	0.036

Data Verification: S. L. Howard Date: 12/3/98

S. L. Howard

Environmental Monitoring

Health Physics Counting Lab -- Wipe Analysis

Date: 12/7/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2I001.csv
Batch Ended: 12/7/98 13:07
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-08 CHILDERS GR.I (1) + $19:$19CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
37	1	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/7/98 13:07

10 of 11

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	5.80
Region B:	2.0	- 18.6	0	0.0	5.50
Region C:	40.0	- 2000	0	0.0	10.90

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-08 CHILDERS GH.-BLDG. (30-12 D1) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT4.DAT
Count Data Filename: C:\DATA\SDATA4.DAT

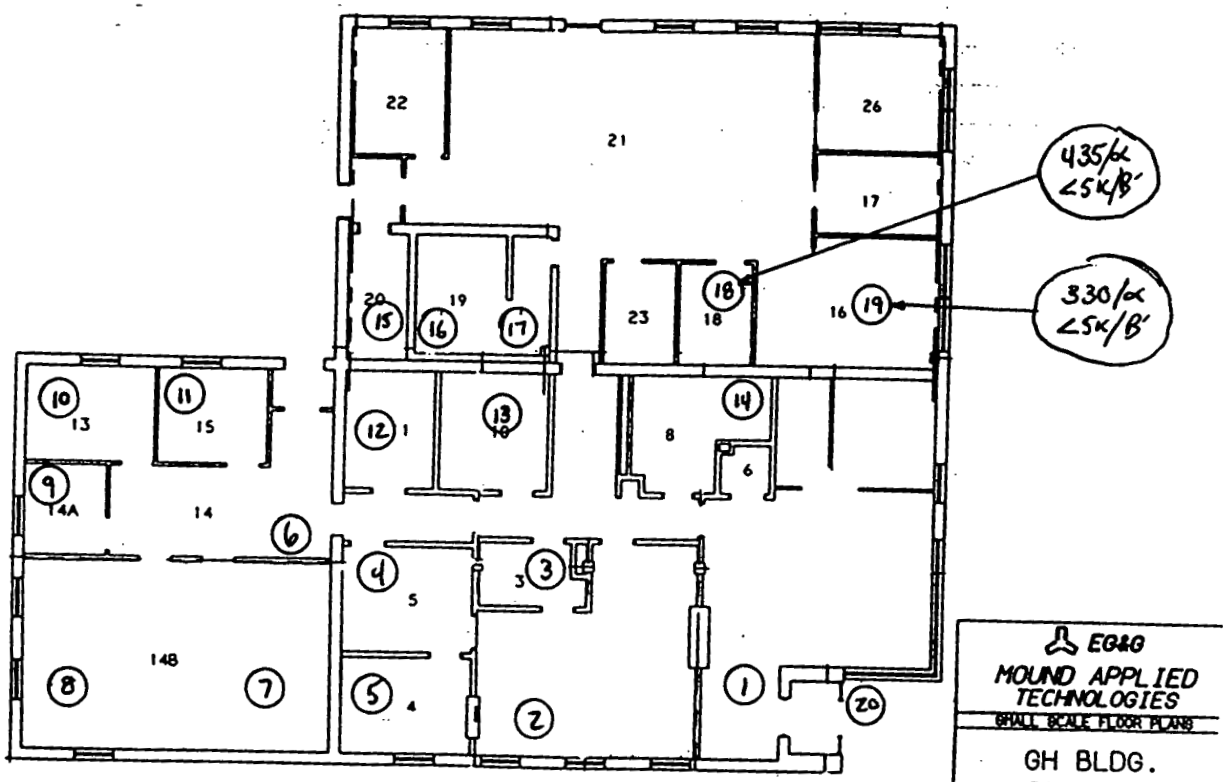
S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.80	5.50	10.90	598.20	2	B		0.00
0	2.00	1289.70	1232.00	1.10	606.70	0		2902.81	241.43
1	2.00	5.70	6.00	1.60	560.91	0		13.55	12.00

RADIOLOGICAL SURVEY DATA SHEET

0-1 / 0-20 Page 1 of 4 P5

LOCATION: (BLDG/AREA/ROOM) GH	SURVEY NO. 98-GH-10
PURPOSE: CONTAMINATION EVALUATION OF INTAKE VENTS AND WEEKLY SURVEY OF FCA-GH-01	RWP NO. N/A
	DATE: 120998
	TIME: 1500

MAP/DRAWING



* ALL DIRECT READINGS = <100/α <5K β' UNLESS OTHERWISE NOTED (ATTRIBUTABLE TO RADON)

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
#/α or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE-ELECTRA	5308/5325	051199
	N/E	

[redacted]

HPS	Date:
4992	120998
5379	12-10-98
5996	1-7-99

ML-9620 (2-98)

#4

Survey No. 98-GH-10

Page ___ of ___

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

See Attachments

NFE

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

N/A

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR037
Batch Ended: 12/10/98 8:19

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Certainty level for MDA and flags: 95%

Crosstalk correction performed.

Batch ID: T 98-GH-10 RYAN 12-10-98 TAS

Recalibration Date: 2/2/99
Serial Number: 26966-1

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.19	<MDA	0.00	1.41	<MDA
A2	2	1.93	2.16	<AL	1.62	2.72	<MDA
A3	3	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	4	0.00	1.97	<MDA	0.40	2.33	<MDA
B1	5	0.00	2.06	<MDA	0.72	2.10	<MDA
B2	6	0.00	2.03	<MDA	0.91	2.25	<MDA
B3	7	0.00	1.91	<MDA	4.78	2.95	<AL
B4	8	0.00	1.89	<MDA	0.00	1.65	<MDA
C1	9	0.00	2.24	<MDA	1.77	2.24	<MDA
C2	10	0.00	2.29	<MDA	2.67	2.76	<MDA
C3	11	0.00	1.99	<MDA	2.42	2.23	<MDA
C4	12	0.00	1.99	<MDA	3.53	2.49	<AL
D1	13	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	14	0.00	2.49	<MDA	0.00	1.56	<MDA
D3	15	1.69	1.99	<AL	0.00	1.49	<MDA
D4	16	0.00	2.03	<MDA	0.23	2.38	<MDA
A1	17	4.03	3.12	<AL	4.40	3.12	<AL
A2	18	1.92	2.19	<AL	5.55	3.55	<AL
A3	19	1.65	1.96	<AL	0.20	2.06	<MDA
A4	20	0.00	1.97	<MDA	0.40	2.33	<MDA

KSK 1-7-99

Protocol #: 5 Name:PW H3 #401387 10-Dec-98 18:14
Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
T 98-GH-10 [01-020] RYAN 12-10-98 RLH
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On

S#	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1
-1	10.00	7.80	8.00	11.30	B	11	560.	
0	2.00	1198.70	1148.50	0.00		1	576.	2893.06
1	2.00	0.00	0.00	0.00		23	635.	0.00
2	2.00	0.20	0.00	0.00		0	637.	0.44
3	2.00	0.20	0.00	0.00		0	597.	0.46
4	2.00	0.00	0.00	0.00		10	574.	0.00
5	2.00	0.00	0.00	0.00		7	607.	0.00
6	2.00	0.00	0.00	0.00		14	591.	0.00
7	2.00	0.20	0.00	0.00		6	634.	0.44
8	2.00	1.20	0.50	0.00		0	587.	2.81
9	2.00	6.20	3.50	0.00		0	602.	14.18
10	2.00	1.20	0.50	0.00		0	609.	2.72
11	2.00	0.20	0.50	0.00		17	566.	0.49
12	2.00	0.00	0.00	0.00		13	601.	0.00
13	2.00	0.00	0.00	0.00		24	542.	0.00
14	2.00	0.00	0.00	0.00		9	603.	0.00
15	2.00	1.70	1.00	1.20		5	549.	4.25
16	2.00	0.00	0.00	0.00		8	644.	0.00
17	2.00	0.00	0.00	0.00		20	647.	0.00
18	2.00	0.00	0.00	0.00		7	414.	0.00
19	2.00	4.20	3.00	0.00		0	612.	9.48
20	2.00	0.00	0.00	0.00		8	622.	0.00

Appendix H

Radon Survey/Information

UNC Geotech

UNC Geotech
2597 B 3/4 Road
P.O. Box 14000
Grand Junction, Colorado 81502-5504
303/242-8621

April 12, 1990

Dennis Murphy
EG&G Mound Applied Technonogies
P.O. Box 3000
Mound Road
Miamisburg, OH 45343-3000

Dear Mr. Murphy:

I have enclosed the results of the radon measurements made at your site as part of the DOE Indoor Radon Study. A copy of these results can be provided in electronic format if desired. The results will be forwarded to the study sponsor, the DOE Office of Projects and Facilities Management, by the end of April.

Please contact me at FTS 326-6293 or commercial (303) 248-6293 if you have any questions.

Sincerely yours,

Mark D. Pearson

Mark D. Pearson
Project Manager
UNC Geotech

cc: DOE Points of Contact

Area	Bldg	Bldg Description	Room	Any Radon pCi/l	Duplicate Radon pCi/l	Monitor Monid	Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	21		ABOVE AIR SAMPLER	161.1	125.0	1678055	1666782	12/14/89	2/16/90	MET - OLD THORIUM STORAGE
	21		ABOVE AIR SAMPLERS	116.7		1660588		12/14/89	2/16/90	MET - OLD THORIUM STORAGE
		SM	19 MID EAST WALL	4.0		1661547		12/12/89	2/19/90	HISTORY OF ELEVATED READINGS
	40		114 B CLOSET ON SPRINKLER PIPE	3.2		1671292		12/12/89	2/19/90	
	19		ROOM 1	2.6		1678051		12/13/89	2/19/90	
		OLD SO BLDG	BASEMENT RIGHT CABINET	2.4		1681595		12/14/89	2/19/90	
	55		1 BELOW THERMOSTAT ON E WALL	2.1		1661515		12/18/89	2/19/90	
	57		ROOM 1	1.9		1681565		12/12/89	2/19/90	
	61		103	1.5		1681563		12/13/89	2/19/90	
	998	FIRE STATION	ROOM 002 EQUIPMENT ROOM WITH SUMP	1.4		1654460		12/12/89	2/19/90	
	24		ROOM 1 PLANT NORTH WALL	1.3		1672087		12/12/89	2/19/90	
		PAINT SHOP	PS 4	1.2		1661518		12/12/89	2/16/90	
	30		ROOM 3 EAST	1.1		1671262		12/12/89	2/16/90	
	100		103 MIDDLE OF NORTH WALL	1.0		1678060		12/12/89	2/19/90	
	37		6 NORTH WALL	1.0		1678046		12/12/89	2/19/90	
	34		34 A WEST WALL	.9	.6	1672062	1672042	12/12/89	2/19/90	MET
	102		123	.9		1681577		12/14/89	2/19/90	
	61		RM 221 MIDDLE OF NORTH WALL	.9		1681585		12/13/89	2/19/90	
	67		101 H	.9		1678029		12/12/89	2/19/90	
	G-13	LOG	G-514 WEST WALL	.9		1661544		12/12/89	2/16/90	
		T	CORRIDOR 28	.9		1678039		1/15/90	2/19/90	
		T	153	.9		1678067		1/15/90	2/19/90	
		T	78	.9		1678077		1/15/90	2/19/90	
		T	36	.9		1681586		1/15/90	2/19/90	
	105	PARTS MACHINING BUILDING	STAIRWELL NEXT TO ROOM 127	.9		1681564		12/12/89	2/19/90	
	25	ARAC	3 ON BOOK CASE MIDDLE	.8		1671316		12/18/89	2/19/90	
	60		1 ON DOOR TO ROOM 3	.8		1678049		12/12/89	2/19/90	
		A	153C CENTER CUBICLE WEST WALL	.8		1672056		12/14/89	2/16/90	
		C BUILDING OLD CAFETERIA	NORTHEAST SECTION INTERNAL WALL RM2	.8		1672052		12/12/89	2/16/90	
		R BUILDING	68 NORTH WALL	.8		1678068		12/13/89	2/16/90	
		SM	8 WEST WALL AT OLD RECOVERY	.8		1672057		12/11/89	2/16/90	
		WO BLDG	WO 8	.8		1678045		12/18/89	2/16/90	
	87		124	.8		1678032		12/12/89	2/19/90	
	88		ROOM 118 ON NORHT WALL RIGHT OF CEN	.7	.5	1661524	1661535	12/12/89	2/19/90	
	89		101 NEAR BACK CORNER BY ROOF DRAIN	.7	.5	1666783	1660532	12/15/89	2/19/90	
	22		RM 1 EAST CORRIDOR ON STORAGE RACK	.7		1678070		12/13/89	2/19/90	
	56	FIRE PUMP HOUSE	ROOM 1 THERE IS ONLY 1 ROOM	.7		1678066		12/12/89	2/19/90	
		E ANNEX	E 225 EAST WALL	.7		1681552		12/19/89	2/16/90	
		POWER HOUSE PH-1	REPAIR SHOP NORTH EAST CORNER	.7		1678040		12/12/89	2/19/90	
		W BLDG	W-135	.7		1681553		12/12/89	2/16/90	
	26		ROOM 84 SOUTH WEST WALL	.6	.9	1672048	1687159	12/13/89	2/16/90	
	69		RM 7 ON NORTH WALL	.6	.4	1672044	1672077	12/12/89	2/19/90	
	26		ROOM 84 SOUTH WEST WALL	.6		1671279		12/13/89	2/16/90	
	35		RM 7	.6		1654458		12/14/89	2/19/90	
	38	PP BLDG	PP CORR 136	.6		1678016		12/14/89	2/19/90	
	72		ON OVERHEAD DOOR BEAM	.6		1672069		1/03/90	2/19/90	
	93		HALLWAY 107 (MIDWAY)	.6		1681629		12/13/89	2/20/90	
	98	FIRE STATION	ROOM 114 DORM	.6		1661507		12/12/89	2/19/90	
		COS	NW STAIRWELL AT BASEMENT LEVEL	.6		1672086		12/14/89	2/19/90	
		OSW	120 C	.6		1681573		12/12/89	2/16/90	
		SW	150 WEST END GAS BOX	.6		1678043		12/11/89	2/16/90	
		A	34 EAST WALL	.5	.7	1672075	1672051	12/14/89	2/16/90	
	47		102 MIDDLE OF EAST WALL	.5	.5	1658110	1666816	12/12/89	2/16/90	

Bldg	Bldg Description	Room	Avg Radon pCi/l	Duplicate Radon pCi/l	Monid	Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	R BUILDING	163 NEXT TO NORTH WALL	.5	.5	1660533	1666816	12/13/89	2/16/90	
101		ROOM 5 ON SOUTH WEST WALL IN OFFSET	.5		1671288		12/12/89	2/19/90	
	"B" 175	175 WEST WALL	.5		1678040		12/12/89	2/19/90	
36		ELECTRICAL PANEL RM IN ELECTRONICS	.5		1678062		12/12/89	2/19/90	
40		100	.5		1654480		12/13/89	2/16/90	
43		1 EAST WALL OVER WATER DISPENSER	.5		1678076		12/12/89	2/20/90	
44		ON BULLETTIN BOARD	.5		1678047		12/12/89	2/16/90	
47		102 MIDDLE OF EAST WALL	.5		1678058		12/12/89	2/16/90	
50		CELL 113	.5		1661502		12/13/89	2/19/90	
78		CENTRAL HALLWAY WEST OF DOOR TO RM7	.5		1661605		12/18/89	2/16/90	
89		101 NEAR BACK CORNER BY ROOF DRAIN	.5		1678079		12/15/89	2/19/90	
91		1ST FLOOR	.5		1661525		12/15/89	2/16/90	
91		2ND FLOOR OUTSIDE RM215	.5		1661593		12/15/89	2/16/90	
92		HALLWAY RIGHT OFF ROOM 8	.5		1661589		12/12/89	2/19/90	
94		BAY 2 NORTH WALL	.5		1654477		12/12/89	2/19/90	
	A	215 WEST WALL	.5		1661572		12/14/89	2/16/90	
	A	1080 WEST WALL	.5		1661580		12/14/89	2/16/90	
	COS	119 N WALL NEAR PUNCH PRESS	.5		1654456		12/12/89	2/19/90	
	COS	319 WALL CABINET TO RIGHT OF SINK	.5		1661590		12/12/89	2/19/90	
	E BUILDING	159 WEST WALL	.5		1678033		12/14/89	2/16/90	
	E BUILDING	103 WEST WALL	.5		1678072		12/14/89	2/16/90	
	E ANNEX	E 212 NORTH WALL	.5		1661582		12/18/89	2/16/90	
	GH BUILDING	ROOM 2	.5		1678065		12/12/89	2/16/90	
	GP 81	1A MIDDLE OF WEST WALL	.5		1678054		12/12/89	2/19/90	
	H BLDG	ROOM 127	.5		1661571		12/12/89	2/16/90	
	HH	HH-8	.5		1671269		12/18/89	2/19/90	
	I BUILDING	BASEMENT LEFT CRAWL SPACE DOOR	.5		1671260		12/12/89	2/16/90	
	M BUILDING	M 108	.5		1678056		12/15/89	2/19/90	
	OSE	CORRIDOR 437	.5		1661536		12/15/89	2/16/90	
	OSE	CORRIDOR 301 ACROSS FROM WATER FOUN	.5		1672084		12/15/89	2/16/90	
	OSM	4HT FLOOR	.5		1678028		12/12/89	2/16/90	
	OSE	CORR 212 SOUTH WALL NEAR 218 DOOR	.5		1678036		12/15/89	2/16/90	
	OSM	319	.5		1678069		12/13/89	2/16/90	
	OSM	2ND FLOOR	.5		1661611		12/12/89	2/16/90	
	POWER HOUSE PH-1	STATIONARY BOARD CORNER	.5		1678073		12/12/89	2/19/90	
	R BUILDING	145 WEST WALL ABOVE BALANCE	.5		1654530		12/14/89	2/16/90	
	SM/R TRITIUM COMPLEX	128 OVER LARGE METAL FLOOR DISC	.5		1678019		12/12/89	2/16/90	
	W BLDG	W135 WEST CENTRAL WALL	.5		1671293		12/12/89	2/16/90	
	WO BLDG	WOA 110	.5		1671301		12/18/89	2/16/90	
	"B" 124	EAST WALL	.5		1667189		12/12/89	2/16/90	
	OSE	113 BULLETIN BOARD OPPOSITE ELEVATO	.5		1678027		12/15/89	2/16/90	
TF-2		114 EAST WALL CENTER OF ROOM	.4		1678064		12/12/89	2/19/90	
	HH	HH-24	.4		1667187		12/14/89	2/19/90	
	OS BUILDING	CORRIDOR 7 NEXT TO ROOM 216	.4		1661514		12/12/89	2/19/90	
	GP 81	1A MIDDLE OF WEST WALL	.4	.6	1672135	1661542	12/12/89	2/19/90	
105	PARTS MACHINING BUILDING	136 QC OFFICE	.4		1678017		12/12/89	2/19/90	
27		CELL 8 - WALL	.4		1661583		12/12/89	2/19/90	
28	CERAMIC PRODUCTION	101	.4		1672061		12/12/89	2/19/90	
29		HALLWAY	.4		1672105		12/14/89	2/19/90	
	TEST FIRE BUILDING 3	3-315	.4		1672036		12/12/89	2/19/90	
38	PP BLDG	PP CORR 16/BAY 2 WALL	.4		1661578		12/14/89	2/19/90	
39		BREAK RM	.4		1678050		12/14/89	2/19/90	
42		101 B EAST WALL	.4		1678031		12/13/89	2/19/90	

/14/90 Radon Monitor Results for 88 Mound Facility

Area	Bldg	Bldg Description	Room	Avg Radon pCi/l	Duplicate Radon pCi/l	Monid	Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	45		WORK STATION AREA	.4		1681560		12/14/89	2/19/90	
	46		81 EAST WALL	.4		1672070		12/12/89	2/19/90	
	49		WALL OUTSIDE RM 125	.4		1678020		12/14/89	2/19/90	
	51		107 TOP OF FUME HOOD	.4		1681575		12/12/89	2/19/90	
	63		ROOM 134	.4		1672059		12/13/89	2/20/90	
	63W		RM 4	.4		1678078		12/14/89	2/19/90	
	65		ROOM 10 CONFERANCE ROOM	.4		1671284		12/14/89	2/19/90	
	66		OFFICE AREA	.4		1681554		12/12/89	2/19/90	
	68		EAST WALL CENTER BEAM	.4		1681555		12/14/89	2/19/90	
	69		RM 10A	.4		1681576		12/12/89	2/19/90	
	70		170 MEETING ROOM CENTER WALL	.4		1678041		12/12/89	2/19/90	
	88		ROOM 116	.4		1671285		12/12/89	2/19/90	
	95	SW/PP	95- BLD-ROOM81	.4		1661531		12/12/89	2/20/90	
		DS BUILDING	CORRIDOR 2 - 6 FT. ABOVE FLOOR	.4		1678071		12/13/89	2/19/90	
		I	I HALLWAY	.4		1667194		12/12/89	2/19/90	
		N BUILDING	N 21 WEST WALL	.4		1678057		12/15/89	2/20/90	
		POWER HOUSE PH-1	OFFICE SUPERVISOR	.4		1678036		12/12/89	2/19/90	
		R BUILDING	12 SOUTH WALL	.4		1681566		12/13/89	2/19/90	
	34		BURN ROOM			1654481		12/12/89		BURNT (NOT AVAILABLE)
	61		RM 151			1681567		12/13/89		MISSING

Appendix I

Asbestos Summary/Information

MOUND ASBESTOS SURVEY
BUILDING SUMMARY

BUILDING GH

FLOORS:	One	PIPE CHASES:	Yes
DATE BUILT:	1948	PENTHOUSE:	Yes
CRAWLSPACE:	Yes	GROSS AREA, SQ. FT.:	5,347
SUSPENDED CEILING:	Yes	ADDITIONS:	1966

Asbestos was found to be present in Thermal System Insulation and/or other material in Building GH. The homogeneous areas for the suspect Asbestos Containing Materials are shown below. Refer to the Mound Asbestos Survey Sample Data Report for specific information on sample constituents, estimated amounts of the material, assessments, and percentages of each constituent in the sample.

HOMOGENEOUS AREAS
Sample Numbers: 1.248-1.277

No.	Description	Result
1	Pipe Insulation, Type II, Hard	Positive
2	Pipe Joint Insulation, Type II, Hard	Positive
3	Pipe Joint Insulation, Type I, Hard Joints w/Fiberglass Runs	Positive
4	Pipe Insulation, Type III, Paper	Negative
5	Pipe Joint Insulation, Type III, Paper	Positive
6	Ceiling Tile, CT1-H, (1'x1'), Holes	Negative
7	Ceiling Tile, CT2-B, (2'x2'), Fissured w/Pinholes	Negative
8	Ceiling Tile, CT3-B, (2'x4'), Fissured w/Pinholes	Negative
9	Plaster	Negative
10	Drywall	Negative
11	Drywall Joint Compound	Negative

Assumed ACM:	Amount	Location
* Floor Tile	N/A	N/A
** Carpet	N/A	N/A

Drawing Reference: P75, P76

* Floor tile quantities not included in scope.
** Carpet quantities not included in scope.

Building GH

Inspection Date 1/22/92

Inspector..... Randy Hayes

Sample Numbers..... 1.248 -1.277

Data Review

The visual inspection and sampling/analysis of "GH" Building identified 3 types of pipe lagging or fitting insulation as asbestos-containing. Although this building is relatively small, the material is divided between several areas by floor to ceiling walls separating the mechanical rooms from the office areas. Therefore, the pipe insulation comprises the following response areas:

A) Pipe Insulation - Rooms 6; 8; 9
B) Pipe Insulation - Room 10
C) Pipe Insulation - Room 11
D) Pipe Insulation - Room 14
E) Pipe Insulation - Room 20
F) Pipe Insulation - Rooms 4; 17; 18

Additionally, the floor tile, tile mastic, and carpet mastic are assumed to contain asbestos and make up a 7th response area.

Total Abatement Cost..... $250.00

Total O&M Cost/Year..... $480.00

BUILDING GH

RESPONSE AREA DESIGNATION..... A

Rooms Included:

6; 8; 9

Materials Included:

Pipe Joint Insulation - Paper Runs

Response Area Description

Pipe Joint Insulation - North

Recommended Response O&M

Priority Level..... Planned

Hazard Rank..... 2

Response Justification

This material is currently in good condition and not exposed to factors likely to lead to damage. A Hazard Rank #2 is assigned.

The recommended response action is to place the material in the plant O&M program for regular re-inspections.

Annual O&M Cost..... $120.00

Abatement Cost..... $Not Considered

BUILDING GH

RESPONSE AREA DESIGNATION..... B

Rooms Included:

10

Materials Included:

Pipe Insulation - Hard
Pipe Joint Insulation - Hard
Pipe Joint Insulation - Paper Runs
Pipe Joint Insulation - Hard w/Fiberglass Runs

Response Area Description

Pipe Insulation - Room 10

Recommended Response O&M

Priority Level..... Planned

Hazard Rank..... 2

Response Justification

This material is currently in good condition and not exposed to conditions likely to cause damage. Although the Survey Report as damaged/significantly damaged," the damage is confined to Room 20, which is not included in this response area. A Hazard Rank #2 is assigned.

The recommended response is to place the area in the plant O&M program and re-inspect on a regular basis.

Annual O&M Cost..... $60.00

Abatement Cost..... $Not Considered

BUILDING GH

RESPONSE AREA DESIGNATION.....C

Rooms Included:

11

Materials Included:

Pipe Joint Insulation - Hard w/Fiberglass Runs

Response Area Description

Pipe Insulation - Room 11

Recommended Response O&M

Priority Level.....Planned

Hazard Rank.....2

Response Justification

This material is currently in good condition and not exposed to conditions likely to cause damage. Although the Survey Report as damaged/significantly damaged," the damage is confined to Room 20, which is not included in this response area. A Hazard Rank #2 is assigned.

The recommended response is to place the area in the plant O&M program and re-inspect on a regular basis.

Annual O&M Cost.....$60.00

Abatement Cost.....$Not Considered

BUILDING GH

RESPONSE AREA DESIGNATION..... D

Rooms Included:

14

Materials Included:

Pipe Joint Insulation - Hard w/Fiberglass Runs

Response Area Description

Pipe Insulation - Room 14

Recommended Response O&M

Priority Level..... Planned

Hazard Rank..... 2

Response Justification

This response area includes the building entrance foyer on the west side of Room 14.

The material is currently in good condition and not exposed to conditions likely to cause damage. Although the Survey Report as damaged/significantly damaged," the damage is confined to Room 20, which is not included in this response area. A Hazard Rank #2 is assigned.

The recommended response is to place the area in the plant O&M program and re-inspect on a regular basis.

Annual O&M Cost..... $60.00

Abatement Cost..... $Not Considered

BUILDING GH

RESPONSE AREA DESIGNATION.....E

Rooms Included:

20

Materials Included:

Pipe Joint Insulation - Hard w/Fiberglass Runs

Response Area Description

Pipe Insulation - Room 20

Recommended Response Repair/Protect/O&M

Priority Level.....ASAP

Hazard Rank.....5

Response Justification

There is damage to some of the fitting insulation in this janitor's closet. It appears that the damage was caused by impact resulting from activities of the custodial staff. The existing damage is minor, but because there is some risk of significant damage, the area is assigned a Hazard Rank #5.

The recommended response action is to repair the existing damage as soon as possible and take measures designed to prevent future damage. One possibility is to apply aluminum jackets over the existing insulation in areas where contact is likely to occur. If repairs or protective measures are impracticable, the damaged insulation should be removed and replace with a non-asbestos substitute. Following abatement action, the area should be included in the plant O&M program for regular re-inspections and the Hazard Rank be reduced to #2.

Annual O&M Cost.....$60.00

Abatement Cost.....$250.00

BUILDING GH

RESPONSE AREA DESIGNATION..... F

Rooms Included:

4; 17; 18

Materials Included:

Pipe Insulation - Hard
Pipe Joint Insulation - Hard

Response Area Description

Pipe Insulation - Rooms 4, 7, 18

Recommended Response O&M

Priority Level..... Planned

Hazard Rank..... 2

Response Justification

The material in this response area is limited to 3 small sections of insulation covering the roof drains above the suspended ceiling in the listed rooms.

The material is currently in good condition and not exposed to conditions likely to cause damage. A Hazard Rank #2 is assigned.

The recommended response is to place the area in the plant O&M program and re-inspect on a regular basis.

Annual O&M Cost..... $60.00

Abatement Cost..... $Not Considered

BUILDING GH

RESPONSE AREA DESIGNATION.....G

Rooms Included:

1; 2; 3; 4; 5; 6; 9; 13; 14; 14A; 14B; 15; 16; 17; 18; NORTH FOYER; SOUTH FOYER; WEST FOYER

Materials Included:

Floor Tile
Mastic
Carpet Mastic

Response Area Description

Flooring

Recommended Response O&M

Priority Level.....Planned

Hazard Rank.....1

Response Justification

This material has not been positively identified as asbestos-containing and is currently in good condition with little potential for damage. Therefore, a Hazard Rank #1 is assigned and the material should be included in the O&M program.

An alternative is to sample and analyze the material possibly enabling it to be removed from surveillance with a resultant long-term cost savings.

Sampling and analysis is recommended prior to any activity that might disturb the material or cause it to become friable.

Annual O&M Cost.....$60.00

Abatement Cost.....$Not Considered

PDR E[illegible]NEERS, INC.
CHAIN OF [illegible]STODY RECORD

1/3

Asbestos Survey Abatement Plans - 18148-00-

PROJECT/CLIENT NAME EG&G Mound Applied Technologies

SAMPLER (Signature) Randell R Hayes II DATE 1/22/92

SAMPLE NO.	LABID	TIME	AIR	BULK	SAMPLE LOCATION/DESCRIPTION	
1.248	920728			✓	PIPE INSUL TYPE ~~I~~ II - HARD	BUILDING GN
1.249	920729			✓	"	"
1.250	920730			✓	"	"
1.251	920731			✓	PIPE JOINT INSUL TYPE ~~I~~ II - HARD	"
1.252	920732			✓	"	"
1.253	920733			✓	"	"
1.254	920734			✓	PIPE JOINT INSUL TYPE ~~II~~ I - HARD FIB RUNS	"
1.255	920735			✓	"	"
1.256	920736			✓	"	"
1.257	920737			✓	PIPE INSUL TYPE III - PAPER	"

SAMPLE CONTAINER	
1. Plastic bag	
2. Cassette	
3. Film canister	✓

ANALYSIS	
1. Fiber counting	
2. Asbestos ID	✓

Relinquished by	Date	Time	Accepted by
Randell R Hayes II	1/29	1:00pm	Sean A. Fisher
Sean A. Fisher			L. Hauer
L. Hauer			

PDH ENGINEERS, INC.
CHAIN OF CUSTODY RECORD

2/3

PROJECT/CLIENT NAME Asbestos Survey, Abatement Plans - 18148-00 - EG&G Mound Applied Technologies

SAMPLER (Signature) Randell R Hayes II DATE 1/22/92

SAMPLE NO.	LABID	TIME	AIR	BULK	SAMPLE LOCATION/DESCRIPTION	
1.258	920738			✓	PIPE INSUL TYPE III - PAPER	BUILDING "G H"
1.259	920739			✓	"	"
1.260	920740			✓	PIPE JOINT INSUL TYPE III - PAPER	"
1.261	920741			✓	"	"
1.262	920742			✓	"	"
1.263	920743			✓	CT1 - ~~B~~ H - NOLES	"
1.264	920744			✓	"	"
1.265	920745			✓	CT2 - ~~U~~ B - FISSURED & PINNOLES	"
1.266	920746			✓	"	"
1.267	920747			✓	CT3 - ~~C~~ B - FISSURED & PINNOLES	"

SAMPLE CONTAINER	
1. Plastic bag	
2. Cassette	
3. Film canister	✓

ANALYSIS	
1. Fiber counting	
2. Asbestos ID	✓

Relinquished by	Date	Time	Accepted by
Randell R Hayes II	1/29	1:00p	Sean L. Fish
Sean L. Fish			J. Hayes
J. Hayes			

PDR E 'HEERS, INC.
CHAIN OF STODY RECORD

3/3

PROJECT/CLIENT NAME Asbestos Survey Abatement Plans - 18148-00 - EG&G Mound Applied Technologies

SAMPLER (Signature) Randell R Hayes II DATE 1/22/92

SAMPLE NO.	LABID	TIME	AIR	BULK	SAMPLE LOCATION/DESCRIPTION	
1.268	920748			✓	CT3-~~C2~~B FISSURED w/ PINHOLES	BUILDING GN
1.269	920749			✓	PLASTER	"
1.270	920750			✓	"	"
1.271	920751			✓	"	"
1.272	920752			✓	"	"
1.273	920753			✓	"	"
1.274	920754			✓	DRYWALL	"
1.275	920755			✓	"	"
1.276	920756			✓	DRYWALL JOINT COMPOUND	"
1.277	920757			✓	"	"

SAMPLE CONTAINER	
1. Plastic bag	
2. Cassette	
3. Film canister	✓
ANALYSIS	
1. Fiber counting	
2. Asbestos ID	✓

Relinquished by	Date	Time	Accepted by
Randell R Hayes II	1/22	1:00	[illegible]
[illegible]			D. Hayes
D. Hayes			

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920728
Date Sampled: 01/21/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type I - hard
Building GH
1.248

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: Brown and straight AND blue and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	43 %	blue-magenta	golden yellow	1.680
Crocidolite	2 %	red-magenta	blue-magenta	1.700
Total Asbestos	45 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	5 %
Cotton	5 %
Nonfibrous	
Binder	45 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920729
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type i - hard
Building GH
1.249

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	10 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	2 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	12 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	15 %
Cellulose	3 %
Cotton	15 %
Nonfibrous	
Binder	55 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920730
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type I - hard
Building GH
1.250

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	10 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	*** %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	***10%			

OTHER MATERIALS:

Fibrous		
Fibrous Glass	0	%
Mineral Wool	15	%
Cellulose	2	%
Cotton	15	%
Nonfibrous		
Binder	58	%

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES

2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920731
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type I - hard
Building GH
1.251

Sample Treatment:
Teased apart with forceps

GROSS SAMPLE APPEARANCE

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	13 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	2 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	15 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	2 %
Cotton	10 %
Nonfibrous	
Binder	53 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920732
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type I - hard
Building GH
1.252

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	13 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	2 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	15 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	23 %
Cellulose	2 %
Cotton	10 %
Nonfibrous	
Foil	5 %
Binder	45 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920733
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type I - hard
Building GH
1.253

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	10 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	*** %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	~~***~~ 10 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	2 %
Cotton	10 %
Nonfibrous	
Foil	5 %
Binder	53 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920734
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulatin
Type II - hard fib run
Building GH
1.254

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	5 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	5 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	10 %			

OTHER MATERIALS:

Fibrous		
Fibrous Glass	0	%
Mineral Wool	20	%
Cellulose	0	%
Cotton	10	%
Nonfibrous		
Binder	60	%

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920735
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type II - hard fib run
Building GH
1.255

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	7 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	3 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	10 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	0 %
Cotton	10 %
Nonfibrous	
Binder	60 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920736
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type II - hard fib run
Building Gh
1.256

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly AND brown and straight asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	10 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	3 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	13 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	2 %
Cotton	10 %
Nonfibrous	
Binder	55 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920737
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/07/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type III - paper
Building GH
1.257

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	75 %
Nonfibrous	
Opaques	5 %
Binder	20 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920738
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type III - paper
Building GH
1.258

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	70 %
Nonfibrous	
Opaques	3 %
Binder	27 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920739
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type III - paper
Building GH
1.259

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? NO
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	75 %
Nonfibrous	
Binder	25 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920740
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type III - paper
Building GH
1.260

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	25 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	25 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	0 %
Cotton	5 %
Nonfibrous	
Binder	45 %
Opaques	5 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920741
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pie joint insulation
Type III - paper
Building GH
1.261

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: White and curly asbestos were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	25 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	25 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	20 %
Cellulose	0 %
Cotton	5 %
Nonfibrous	
Binder	45 %
Opaques	5 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920742
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe joint insulation
Type III - paper
Building GH
1.262

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? NO
Are fibers visible by stereoscopic examination? YES
Comments: White and curly asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	40 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	40 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	5 %
Cellulose	5 %
Nonfibrous	
Lizardite	5 %
Binder	45 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES

2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920743
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT1-B1 - holes
Building GH
1.263

Sample Treatment:
Teased apart with forceps

GROSS SAMPLE APPEARANCE

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	80 %
Nonfibrous	
Opaques	5 %
Binder	15 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920744
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT1-B1 - holes
Building GH
1.264

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	80 %
Nonfibrous	
Opaques	5 %
Binder	15 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920745
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT2-U - fissured w/ pinholes
Building GH
1.265

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	30 %
Cellulose	40 %
Nonfibrous	
Perlite	20 %
Binder	5 %
Opaques	5 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920746
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT2-U - fissured W/ pinholes
Building GH
1.266

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	30 %
Cellulose	40 %
Nonfibrous	
Perlite	20 %
Binder	5 %
Opaques	5 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920747
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT3-C2- fissured w/ pinholes
Building GH
1.267

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	30 %
Cellulose	40 %
Nonfibrous	
Perlite	20 %
Binder	7 %
Opaques	3 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920748
Date Sampled: 01/22/92
Date Received:02/04/92
Date Analyzed:02/08/92
Analyst:T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
CT3-C2-fissured w/ pinholes
Building GH
1.268

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	30 %
Cellulose	40 %
Nonfibrous	
Perlite	20 %
Binder	7 %
Opaques	3 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920749
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Plaster
Building GH
1.269

Sample Treatment:
Broken apart with force

GROSS SAMPLE APPEARANCE

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? NO
Comments: No asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	0 %
Nonfibrous	
Opaques	10 %
Plaster	55 %
Aggregates	25 %
Binder	10 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920750
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Plaster
Building GH
1.270

Sample Treatment:
Broken apart with force

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? NO
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	0 %
Nonfibrous	
Opaques	10 %
Plaster	65 %
Binder	10 %
Aggregates	15 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920751
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Plaster
Building GH
1.271

Sample Treatment:
Broken apart with force

GROSS SAMPLE APPEARANCE

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? NO
Comments: No asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	0 %
Nonfibrous	
Opaques	10 %
Plaster	60 %
Binder	10 %
Aggregates	20 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920752
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Plaster
Building GH
1.272

Sample Treatment:
Broken apart with force

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? NO
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous		
Fibrous Glass	0	%
Mineral Wool	0	%
Cellulose	***	%
Nonfibrous		
Opaques	10	%
Plaster	50	%
Binder	10	%
Aggregates	30	%

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

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2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920753
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Plaster
Building GH
1.273

Sample Treatment:
Broken apart with force

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? NO
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	0 %
Nonfibrous	
Opaques	10 %
Plaster	55 %
Binder	10 %
Aggregates	25 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920754
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Drywall
Building GH
1.274

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? NO
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	5 %
Mineral Wool	0 %
Cellulose	15 %
Nonfibrous	
Gypsum	60 %
Binder	20 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920755
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Drywall
Building GH
1.275

Sample Treatment:
Teased apart with forceps

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? YES Are layers obvious? NO
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	5 %
Mineral Wool	0 %
Cellulose	15 %
Nonfibrous	
Gypsum	60 %
Binder	20 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

---------- SAMPLE INFORMATION ----------

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920756
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Drywall joint compound
Building Gh
1.276

Sample Treatment:
Broken apart with force

---------- GROSS SAMPLE APPEARANCE ----------

Is sample friable? NO Are layers obvious? NO
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

---------- MICROSCOPIC ANALYSIS ----------

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	5 %
Nonfibrous	
Mica	20 %
Binder	75 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 920757
Date Sampled: 01/22/92
Date Received: 02/04/92
Date Analyzed: 02/08/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Drywall joint compound
Building GH
1.277

Sample Treatment:
Broken apart with force

GROSS SAMPLE APPEARANCE

Is sample friable? NO Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	25 %
Nonfibrous	
Opaques	5 %
Mica	15 %
Binder	55 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented
*** = < 1% Detected

Reviewed by T. Hayes

P D R ENVIRONMENTAL LABORATORIES
2000 Lindell Avenue * (615) 298-2065 * Nashville, TN 37203

BULK ASBESTOS ANALYSIS REPORT
EPA Polarized Light Microscopy Method

SAMPLE INFORMATION

Client:
Sean Fisher
Barge, Waggoner, Sumner & Cannon
162 Third Avenue North
Nashville, TN 37201

Lab ID: 921219
Date Sampled: 01/28/92
Date Received: 02/26/92
Date Analyzed: 03/04/92
Analyst: T. Hayes
Sampled by: CLIENT W/DATA

Sample Description:
EG&G Mound
Pipe insulation
Type I - paper
Building WD
1.278

Sample Treatment:
Teased apart with forceps

GROSS SAMPLE APPEARANCE

Is sample friable? YES Are layers obvious? YES
Are fibers visible by stereoscopic examination? YES
Comments: No asbestos fibers were detected.

MICROSCOPIC ANALYSIS

ASBESTOS CONSTITUENTS: (Central Stop Dispersion Staining Colors)

Mineral	Percent	Perpendicular	Parallel	RI Oil
Chrysotile	0 %	blue	blue-magenta	1.550
Anthophyllite	0 %	blue	gold-magenta	1.605
Tremolite	0 %	pale blue	yellow	1.605
Actinolite	0 %	magenta	golden yellow	1.630
Amosite	0 %	blue-magenta	golden yellow	1.680
Crocidolite	0 %	red-magenta	blue-magenta	1.700
Total Asbestos	0 %			

OTHER MATERIALS:

Fibrous	
Fibrous Glass	0 %
Mineral Wool	0 %
Cellulose	80 %
Cotton	5 %
Nonfibrous	
Opaques	5 %
Binder	10 %

NOTES:
NVLAP Accreditation #1479
Method Published in EPA 600/M4-82-020
Results Apply Only to Sample Submitted
QAP Being Implemented

*** = < 1% Detected

Reviewed by T. Hayes

4.9 Building GH

The following asbestos-containing materials were found in Building GH.

- Cementitious insulation on elbows and fittings
- Floor tile

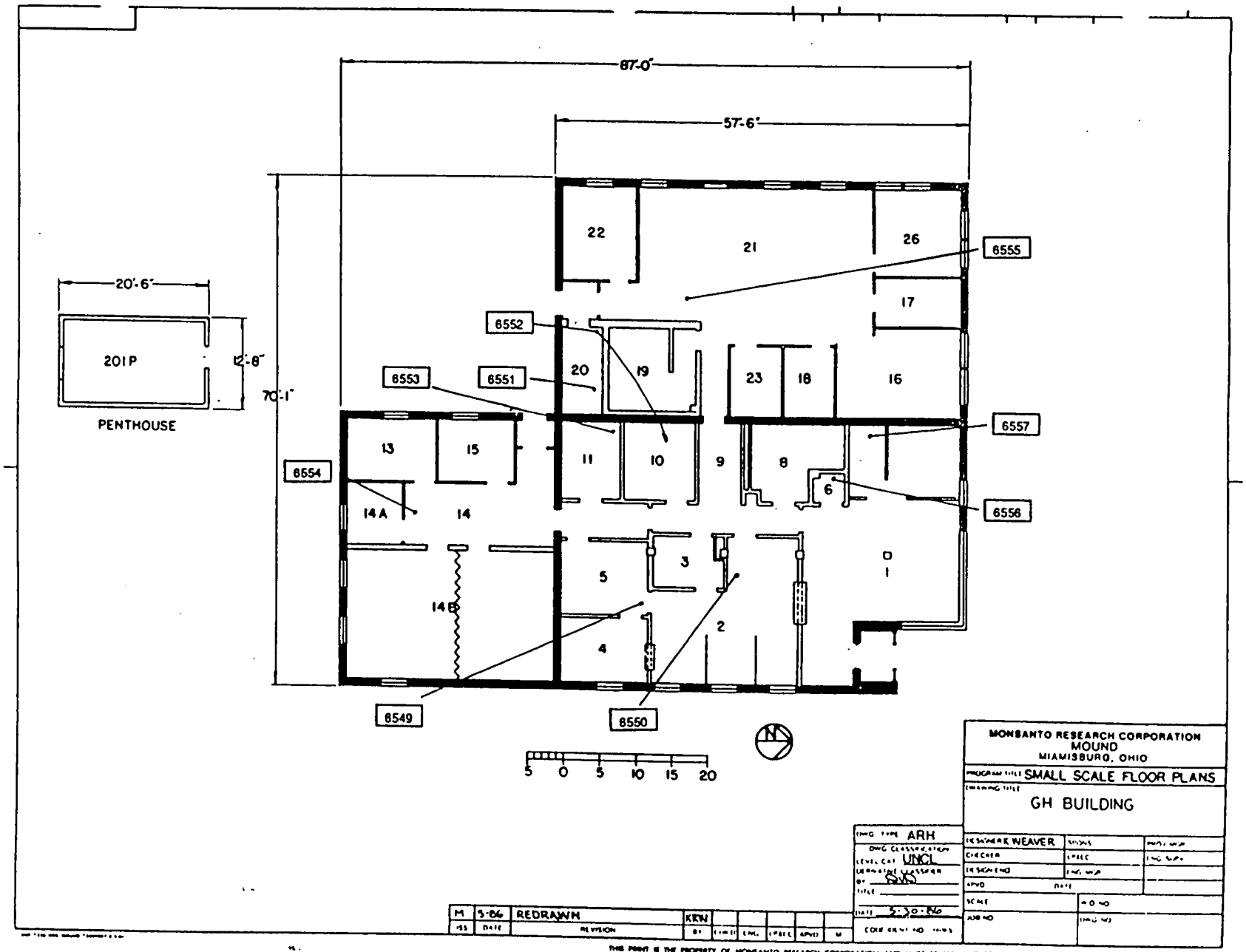
The cementitious fittings are in generally good condition. The results of three bulk samples taken confirmed the presence of asbestos fibers in this material. Control of this material should be addressed in the O&M program, and the material should be periodically reinspected to track changes in its condition.

TABLE 1. HOMOGENEOUS AREAS OF SUSPECT ASBESTOS-CONTAINING MATERIALS IN BUILDING GH, EG&G MOUND APPLIED TECHNOLOGIES, INC. (Inspected October 25, 1988)

Homogeneous area No.	Type of material	Description of homogeneous area	Does homogeneous material contain asbestos? (assumed/sampled)
1	Thermal system insulation	Cementitious fittings on fiberglass steam lines	Yes/sampled
2	Miscellaneous	2-ft by 4-ft slash dot ceiling tile	No/sampled
3	Miscellaneous	2-ft by 2-ft slash dot ceiling tile in Room 1	No/sampled
4	Miscellaneous	1-ft by 1-ft vinyl floor tile	Yes/assumed

TABLE 2. DATA SUMMARY FOR BULK SAMPLES OF SUSPECT ASBESTOS-CONTAINING MATERIALS IN BUILDING GH, EG&G MOUND APPLIED TECHNOLOGIES, INC.

Homo-geneous area No.	Field sample No.	Sample date (1988)	PEI Laboratory requisition No.	Floor/room No.	Sample location	Asbestos fiber content
1	MRC-6551	9/25	T8-10-185-03A	G/Room 20	Steam line to the left of utility sink 6 feet above floor	10% chrysotile 10% amosite
1	MRC-6552	9/25	T8-10-185-04A	G/Room 10	Steam line in front of domestic hot-water tank in northwest corner of room	5% chrysotile 5% amosite
1	MRC-6553	9/25	T8-10-185-05A	G/Room 11	Northwest corner above junction box	5% chrysotile 5% amosite
2	MRC-6554	9/25	T8-10-185-06A	G/Room 14	Above door to Room 14A	None detected
2	MRC-6555	9/25	T8-10-185-07A	G/Room 21	8 feet north of exit to the left of ceiling light	None detected
3	MRC-6556	9/25	T8-10-185-08A	G/Room 6	Directly above telephone	None detected
3	MRC-6557	9/25	T8-10-185-09A	G/Room 1	Southwest corner, 5 feet from west wall	None detected


87'-0"
57'-6"
20'-6"
12'-8"
70'-1"
201P
PENTHOUSE
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MONSANTO RESEARCH CORPORATION
MOUND
MIAMISBURG, OHIO
SMALL SCALE FLOOR PLANS
GH BUILDING
ARH
UNCL
REDRAWN
KRW
5-30-86

Asbestos Inspection and Assessment Summary
EG&G Mound Applied Technologies

Building	Inspector	Inspection date	Homo-geneous area no.	Floor/Room/Location	Material type	Approximate amount of material	Friable ?	Condition of the material	Potential for disturbance	Hazard rank	Response priority	Response action
Building G	D. Ellcessor	03/10/89	3	G/Room 1	Preformed-block pipe insulation	290 ft	Yes	Good	Low	7	4	3
Building G	D. Ellcessor	03/10/89	4	G/Room 1	Air-cell paper pipe insulation	130 ft	Yes	Good	Low	7	4	3
Building G	D. Ellcessor	03/10/89	2	G/Room 2	Cementitious insulation	2 fittings	No	Good	Low	7	7	4
Building G	D. Ellcessor	03/10/89	6	G/Room 4	Floor tile	120 sq ft	No	Good	Low	7	7	4
Building G	D. Ellcessor	03/10/89	6	G/Room 5	Floor tile	120 sq ft	No	Good	Low	7	7	4
Building G	D. Ellcessor	03/10/89	6	G/Room 5A	Floor tile	120 sq ft	No	Good	Low	7	7	4
Building G	D. Ellcessor	03/10/89	6	G/Room 7	Floor tile	25 sq ft	No	Good	Low	7	7	4
Building G	D. Ellcessor	03/10/89	3	G/Room 9	Preformed-block pipe insulation	30 ft	Yes	Fair	Moderate	3	1	3
Building G	D. Ellcessor	03/10/89	4	G/Room 9	Air-cell paper pipe insulation	3 feet	Yes	Good	Low	7	4	3
Building GH	R. Schraft	10/25/88	1	1/Room 10	Cementitious insulation	5 fittings	No	Good	High	5	7	4
Building GH	R. Schraft	10/25/88	1	1/Room 11	Cementitious insulation	6 fittings	No	Good	High	5	7	4
Building GH	R. Schraft	10/25/88	1	1/Room 20	Cementitious insulation	23 fittings	No	Good	High	5	7	4
Building GH	R. Schraft	10/25/88	1	1/Room 20 crawl space	Cementitious insulation	8 fittings	No	Good	High	5	7	4
Building GH	R. Schraft	10/25/88	4	Throughout selected areas of building	Floor tile	169 sq feet	No	Good	High	5	7	4
Building GH44	R. Schraft	10/27/88	1	1/Throughout the building	Floor tile	360 sq feet	No	Good	Low	7	7	4
Building GIS44	R. Schraft	11/07/88	1	1/Room 1	Floor tile	96 sq feet	No	Good	High	5	7	4
Building GP1	D. Ellcessor	09/01/88	6	G/Corridor 1B, above ceiling tile	Preformed-block pipe insulation	9 feet	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	6	G/Corridor 8, above ceiling tile	Preformed-block pipe insulation	8 feet	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	6	G/Room 10, above ceiling tile	Preformed-block pipe insulation	15 feet	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	6	G/Room 11, above ceiling tile	Preformed-block pipe insulation	10 feet	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	4	G/Room 15	Pipe wrapping	10 feet	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	5	G/Room 4	Cementitious insulation	2 fittings	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	5	G/Room 5	Cementitious insulation	10 fittings	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	6	G/Room 5	Preformed-block pipe insulation	30 feet	Yes	Fair	Low	4	1	3
Building GP1	D. Ellcessor	09/01/88	5	G/Room 7, above ceiling tile	Cementitious insulation	5 fittings	No	Good	Low	7	7	4
Building GP1	D. Ellcessor	09/01/88	7	Throughout the building	Floor tile	1800 sq feet	No	Good	Low	7	7	4
Building GP44	R. Schraft	11/07/88	1	1/Room 1	Floor tile	100 sq feet	No	Good	High	5	7	4
Building GW	G. Marshall	09/16/88	6	1/Corridor hallway outside room 23	Floor tile	100 sq feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	3	1/Corridor outside room 23, north wall above door	Pipe wrapping	25 feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	6	1/Room 112	Floor tile	144 sq feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	1	1/Room 112, southeast corner	Cementitious insulation	12 fittings	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	2	1/Room 114, table on south wall	Transite	12 sq feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	3	1/Room 117	Pipe wrapping	15 feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	6	1/Room 117	Floor tile	144 sq feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	1	1/Room 117, northeast corner	Cementitious insulation	17 fittings	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	6	1/Room 222	Floor tile	144 sq feet	No	Good	Low	7	7	4
Building GW	G. Marshall	09/16/88	1	1/Room 23, pipe chase	Cementitious insulation	17 fittings	Yes	Poor	Low	1	1	3
Building H	D. Ellcessor	08/12/88	8	1/Corridor outside laundry & credit union	Preformed-block pipe insulation	86 feet	No	Good	High	5	7	4
Building H	D. Ellcessor	08/12/88	8	1/Corridor outside penthouse entrance, pipe chase	Preformed-block pipe insulation	160 feet	Yes	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	12	1/Crawl Space over rooms 124,125 & 135	Cementitious insulation	2 fittings	No	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	12	1/Crawl space E of room 137 & W of Labs	Cementitious insulation	12 fittings	Yes	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	11	1/Crawl space E of room 137 & W of Labs	Air-cell paper pipe insulation	230 feet	Yes	Fair	Low	4	6	3
Building H	D. Ellcessor	08/12/88	8	1/Crawl space over rooms 124,125 & 135	Preformed-block pipe insulation	25 feet	Yes	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	8	1/Crawl space over rooms 129,132,133 & 134	Preformed-block pipe insulation	50 feet	Yes	Poor	Low	1	5	2
Building H	D. Ellcessor	08/12/88	12	1/Crawl space over rooms 129-134	Cementitious insulation	8 fittings	Yes	Poor	Low	1	5	2
Building H	D. Ellcessor	08/12/88	9	1/Room 103	Transite	100 sq feet	No	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	12	1/Room 103A, above ceiling tile	Cementitious insulation	2 fittings	No	Good	Low	7	7	4
Building H	D. Ellcessor	08/12/88	9	1/Room 104	Transite	60 sq feet	No	Good	Low	7	7	4

USE CATEGORY	
C	This procedure shall be available to workers, though not necessarily at the work location. This procedure may be performed without referring to the procedure; however, the user is still responsible for adhering to the procedure.

ML-9771A

TECHNICAL MANUAL

MD-10391, ISSUE 5
ASBESTOS PROGRAM MANUAL

MOUND

ML-5872(1-89)

PAGE	ISSUE	PAGE	ISSUE
1	5	53	3
2	5	54	3
3	3	55	5
4	3	56	5
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6	3	58	3
7	3	59	5
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50	3		
51	3		
52	3		

T. C. Fort, DOE/MEMP

D. B. Armstrong, A-133
L. R. Bauer, A-206
TR- E. Kirk, OSW-3
M. D. Miller, A-270
J. M. Schneider, BD. 61
A. W. Upshaw, W-209
E- G. Witt, OSW-3
Medical, A-127
Drawing Control, OSW-309
Technical Manuals, OSW-327

This issue has been reviewed and approved for publication by TR, Evan Kirk.

2/23/99
Date

CHANGES INCORPORATED

- [x] Replace Pages 1, 2, 15, 16, 17, 18, 23, 24, 55, 56, 59, 60, 77 and 78
- [ ] Insert (New Pages)
- [ ] Remove
- [ ] Complete Reprint

All appropriate reviews were conducted. This issue is authorized for use by Advance Change Order on file in Technical Manuals.

M. D. Miller, Manager 11-12-98
Industrial Safety & Health

TR - TECHNICAL RESPONSIBILITY E - EDITOR

TABLE 1
BUILDING INFORMATION FOR EG&G MOUND FACILITY

Compiled by: Mound Industrial Hygiene

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM[1] ?
A	1948	55,582	Yes
B	1948	27,735	Yes
C	1948	13,403	Yes
COS	1986	64,654	Suspected[2]
DS	1965	47,810	Yes
E	1948	47,755	Yes
EG1	1973	240	Suspected[2]
EG2	1973	240	Suspected[2]
EG4	1958	148	Suspected[2]
EG6	1975	240	Suspected[2]
EG7	1972	80	Suspected[2]
FH1	1948	400	No
FH2	1948	400	No
G	1948	7,518	Yes
GH	1948	5,347	Yes
GH44	1963	365	Assumed[3]
GIS	1948	166	Yes
GP-1	1949	7,792	Yes
GP44	1971	365	Assumed[3]
GW	1968	9,782	Yes
H	1948	17,334	Yes
HH	1948	15,276	Yes

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM[1] ?
I	1948	25,736	Yes
M	1948	56,018	Yes
OSE	1986	90,072	Assumed[3]
OSW	1974	54,280	Yes
P	1948	15,143	Yes
PH	1948	646	Yes
PS	1963	2,288	Yes
R	1948	55,003	Yes
SD	1948	1,593	Yes
SST	1973	590	Suspected[2]
SW	1951	43,066	Yes
T	1948	172,963	Yes
W	1948	32,484	Yes
WD	1948	16,216	Yes
WDA	1966	5,000	Yes
WH1	1960	374	No
WH2	1960	374	No
WH3	1960	128	No
1	1957	986	Yes
2	1959	6,291	Yes
3	1964	12,391	Yes
5	1948	314	No
6	1948	90	No
7	1986	387	No
8	1986	66	No

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM[1] ?
10	1986	66	No
11	1986	372	No
13	1960	47	Suspected[2]
14	1986	53	Suspected[2]
16	1960	480	Yes
17	1961	1,120	Yes
19	1963	4,480	No
20	1986	303	No
21	1966	4,069	Suspected[2]
22	1966	9,090	No
23	1966	3,422	Yes
24	1966	840	Yes
25	1966	430	Yes
26	1965	800	Assumed[3]
27	1968	5,285	Yes
28	1966	11,329	Yes
29	1964	6,601	Yes
30	1964	740	Yes
31	1966	8,740	Suspected[2]
33	1965	1,344	Yes
34	1965	1,100	No
35	----	2,500	Yes
36	1968	4,255	Yes
37	1968	2,463	Yes
38	1968	44,327	Yes

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM[1] ?
39	1967	3,515	No
40	1968	12,227	Yes
42	1969	2,892	Yes
43	1969	1,516	Yes
44	1969	2,480	Yes
45	1970	2,775	Yes
46	1969	2,439	Yes
47	1969	3,611	Yes
48	1970	7,950	Yes
49	1970	14,929	Yes
50	1971	14,849	Yes
51	1972	3,541	Assumed[3]
52	1973	78	No
53	1986	239	No
54	1986	331	No
55	1973	330	No
56	1973	613	Yes
57	1975	510	Yes
58	1977	6,110	No
59	1978	668	Suspected[2]
60	1980	3,958	Yes
61	1983	45,490	Suspected[2]
62	1980	290	Yes
63	1981	16,461	Assumed[3]
64	----	72	No

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM[1] ?
65	1979	2,400	Assumed[3]
66	1979	600	Suspected[2]
67	1982	3,787	Assumed[3]
68	1979	1,990	Suspected[2]
69	1981	1,620	Suspected[2]
70	1982	3,366	Suspected[2]
71	1983	800	Suspected[2]
72	1983	2,400	No
73	1983	2,200	Suspected[2]
74	1986	400	Suspected[2]
79	1983	1,650	Suspected[2]
80	1986	314	No
81	1986	314	No
82	1986	314	No
83	1986	314	No
84	1986	314	No
85	1988	3,160	No
87	1988	38,882	No
88	1983	7,200	Assumed[3]
89	1984	4,830	Assumed[3]
90	1983	656	Suspected[2]
91	1984	8,065	Suspected[2]
92	1984	1,600	Suspected[2]
93	1984	2,936	Suspected[2]
94	1984	1,240	Assumed[3]

BUILDING NAME	YEAR CONSTRUCTED	SQUARE FOOTAGE	ACBM(1) ?
95	1985	2,000	Suspected(2)
96	----	432	Suspected(2)
98	1988	8,517	Suspected(2)
99	1989	11,412	Suspected(2)
100	1989	6,292	Suspected(2)
101	1986	1,815	Suspected(2)
102	1987	10,982	Suspected(2)
104	----	1,800	Suspected(2)
105	----	38,027	Suspected(2)
106	----	180	Suspected(2)
107	----	70	Suspected(2)
112	----	785	Suspected(2)
113	----	547	Suspected(2)
114	----	432	Suspected(2)
119	----	350	Suspected(2)
120	----	350	Suspected(2)

NOTES: (1) ACBM - Asbestos-containing building materials.

(2) Building is noted to contain "suspect" asbestos-containing building materials. Industrial hygiene building files lack building construction or asbestos survey information.

(3) Building is noted to contain "suspect" asbestos-containing flooring tile or sheet goods.

Appendix J

Lead Summary/Information

Date: November 11, 1998

To: Robert Ransbottom

From: Rob Wilmot

RE: Lead Sampling in GH building room 20 explanation of results

Attached are the results of the lead inspection performed in room 20 of GH building. Please refer to the column marked PbL (mg/cm^2) for the results of room 20. The results range from 0.00 to 0.05 (mg/cm^2). Guidelines from Housing and Urban Development (HUD) say that a lead–based paint hazard exists if X-ray fluoresence (XRF) readings are 1.0 mg/cm^2 or higher. HUD guidelines are used by general industry for lead based paint inspection guidelines.

If you have any question please call x3126

Rob

GH Building Room 20 - Completed by Rob Wilmot
Site: Date: 11/19/98
Ranges (NEG<INC<POS): Device PCS

No	Site	XLNo	Insp	Flr	Room	Side	Strc	Feat	Cnd	Sub	Clr	PbL(mg/cm²)	RES	PbK	Combined	DI	Ssec	Date
1		1			Shutter Cal-1							0.00 ± 0.00	...	0.0 ± 0.0	0.0 ± 0.0	0.0	35.7	11/19/98
2		2			Shutter Cal-1							0.00 ± 0.00	...	0.0 ± 0.0	0.0 ± 0.0	0.0	35.8	11/19/98
3		**3**			**Calibrate**							**1.13 ± 0.14**	**POS**	**0.8 ± 0.8**	**1.1 ± 0.2**	**1.1**	**20.0**	**11/19/98**
4		**4**			**Calibrate**							**1.10 ± 0.25**	**POS**	**0.9 ± 0.8**	**1.1 ± 0.2**	**2.5**	**20.4**	**11/19/98**
5		5			Room 20		Ceiling		Peeling	Plaster	White	0.01 ± 0.10	NEG	-1.4 ± 1.6	0.0 ± 0.2	1.0	6.1	11/19/98
6		6			Room-20		Ceiling		Peeling	Plaster	White	0.00 ± 0.10	NEG	0.1 ± 1.0	0.0 ± 0.2	1.0	13.5	11/19/98
7		7			Room-20		Wall		Good	Brick	Beige	0.02 ± 0.10	NEG	-0.3 ± 1.1	0.0 ± 0.2	1.0	16.0	11/19/98
8		8			Room-20		Wall		Good	Brick	Beige	0.05 ± 0.10	NEG	0.6 ± 0.8	0.0 ± 0.2	1.7	20.8	11/19/98

Appendix K

Chemical Summary/Information

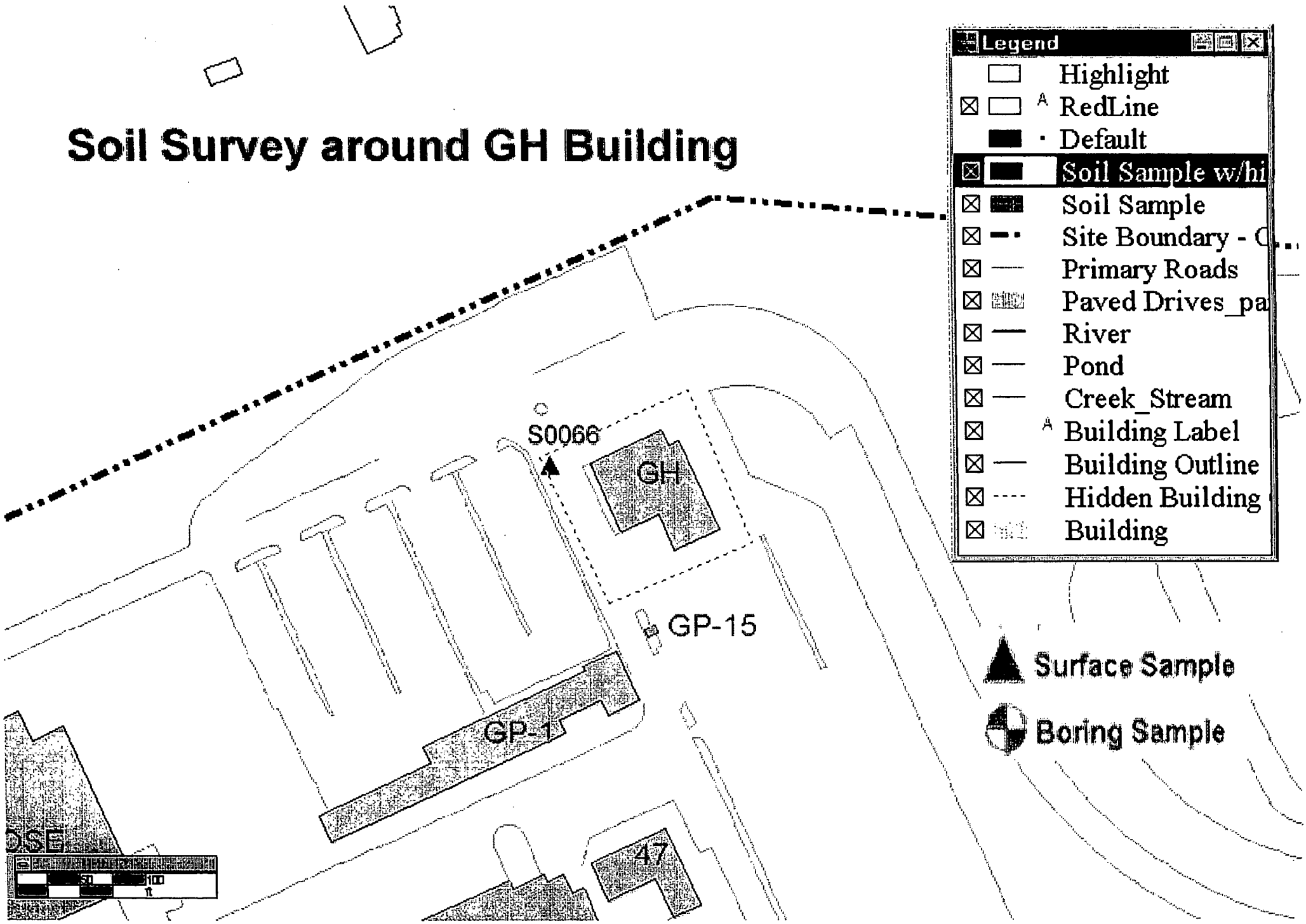
(There is no chemical summary/information available.)

Appendix L

Noted Soil Sampling, Vicinity

Appendix L sampling that exceeds comparison values are so noted on the spreadsheet in the right-most column and with bold numbers in the "Measured Value" column. The constituent of concern can then be addressed in the Parameter Name attachment to the Appendix. This attachment lists comparison values in its right-most column, and reference source in its left-most column.

Soil Survey around GH Building



Location_name	Location_type	Collection_date	Media	Value_name	Measured_va	Value_un	Detection_lim	Chem_cla	Start_dep	End_dep	Depth_u	Cas_number	Lab_qual	Sample_Project_co	Data_qual
S0066	Surface location	19831001	Soil	Plutonium-238	1.07	PCI/G	0.01	RAD	0	0	FT	13981-16-3		4063	RSS

comp_no	par_code	parameter name	comparison value	units
1	7440-41-7	Beryllium	7.00E-01	MG/KG
1	7440-43-9	Cadmium	5.00E+04	MG/KG
1	7440-47-3	Chromium	7.50E+03	MG/KG
1	121-82-4	RDX	2.70E+01	UG/KG
1	72-55-9	4,4'-DDE	9.00E+00	MG/KG
1	50-29-3	4,4'-DDT	9.00E+00	MG/KG
1	12672-29-6	Aroclor-1248	3.85E-01	MG/KG
1	11096-82-5	Aroclor-1260	3.85E-01	MG/KG
1	319-85-7	Beta-BHC	1.65E+00	MG/KG
1	60-57-1	Dieldrin	1.85E-01	MG/KG
1	56-55-3	Benzo(a)anthracene	4.10E+00	MG/KG
1	50-32-8	Benzo(a)pyrene	4.10E-01	MG/KG
1	205-99-2	Benzo(b)fluoranthene	4.10E+00	MG/KG
1	207-08-9	Benzo(k)fluoranthene	4.10E+01	MG/KG
1	117-81-7	Bis(2-ethylhexyl)phthalate	2.15E+02	MG/KG
1	218-01-9	Chrysene	4.10E+02	MG/KG
1	53-70-3	Dibenz(a,h)anthracene	4.10E-01	MG/KG
1	193-39-5	Indeno(1,2,3-cd)pyrene	4.10E+00	MG/KG
1	78-59-1	Isophorone	3.15E+03	MG/KG
1	86-30-6	N-Nitrosodiphenylamine	6.00E+02	MG/KG
1	87-86-5	Pentachlorophenol	2.50E+01	MG/KG
1	107-06-2	1,2-Dichloroethane	1.10E+01	MG/KG
1	71-43-2	Benzene	3.20E+01	MG/KG
1	75-27-4	Bromodichloromethane	4.80E+01	MG/KG
1	75-25-2	Bromoform	3.75E+02	MG/KG
1	56-23-5	Carbon Tetrachloride	1.20E+01	MG/KG
1	67-66-3	Chloroform	1.55E+01	MG/KG
1	124-48-1	Dibromochloromethane	3.55E+01	MG/KG
1	75-09-2	Dichloromethane	3.95E+02	MG/KG
1	79-01-6	Trichloroethene	1.25E+02	MG/KG
1	AC-227	Actinium-227	1.00E+00	PCI/G
1	14596-10-2	Americium-241	4.95E+00	PCI/G
1	13982-38-2	Bismuth-207	1.75E-01	PCI/G
1	BI-207	Bismuth-207	1.75E-01	PCI/G
1	10045-97-3	Cesium-137	4.60E-01	PCI/G
1	10198-40-0	Cobalt-60	1.00E-01	PCI/G
1	13981-16-3	Plutonium-238	5.50E+00	PCI/G
1	15117-48-3	Plutonium-239	5.50E+00	PCI/G
1	PU239/240	Plutonium-240	5.50E+00	PCI/G
1	13982-63-3	Radium-226	1.40E-01	PCI/G
1	10098-97-2	Strontium-90	3.00E+00	PCI/G
1	14274-82-9	Thorium-228	8.50E-01	PCI/G
1	14269-63-7	Thorium-230	4.40E+01	PCI/G
1	7440-29-1	Thorium-232	5.00E+01	PCI/G
1	10028-17-8	Tritium	2.35E+04	PCI/G
1	U-233	Uranium-233	3.70E+01	PCI/G
1	13966-29-5	Uranium-234	3.75E+01	PCI/G
1	15117-96-1	Uranium-235	3.35E+00	PCI/G
1	24678-82-8	Uranium-238	1.10E+01	PCI/G
2	7429-90-5	Aluminum	19000	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	7440-38-2	Arsenic	8.6	MG/KG
2	7440-39-3	Barium	180	MG/KG
2	7440-69-9	Bismuth	ND	MG/KG
2	7440-41-7	Beryllium	1.3	MG/KG
2	7440-43-9	Cadmium	2.1	MG/KG
2	7440-70-2	Calcium	310000	MG/KG
2	7440-47-3	Chromium	20	MG/KG
2	7440-48-4	Cobalt	19	MG/KG
2	7440-50-8	Copper	26	MG/KG
2	57-12-5	Cyanide	ND	MG/KG
2	7439-89-6	Iron	35000	MG/KG
2	7439-92-1	Lead	48	MG/KG
2	7439-93-2	Lithium	26	MG/KG
2	7439-95-4	Magnesium	40000	MG/KG
2	7439-96-5	Manganese	1400	MG/KG
2	7439-97-6	Mercury	ND	MG/KG
2	7439-98-7	Molybdenum	27	MG/KG
2	7440-02-0	Nickel	32	MG/KG
2	7440-09-7	Potassium	1900	MG/KG
2	7440-22-4	Silver	1.7	MG/KG
2	7782-49-2	Selenium	ND	MG/KG
2	7440-23-5	Sodium	240	MG/KG
2	7440-28-0	Thallium	0.46	MG/KG
2	7440-31-5	Tin	20	MG/KG
2	7440-62-2	Vanadium	25	MG/KG
2	7440-66-6	Zinc	140	MG/KG
2	72-54-8	4,4'-DDD	4.2	MG/KG
2	72-55-9	4,4'-DDE	4.3	MG/KG
2	50-29-3	4,4'-DDT	13	MG/KG
2	309-00-2	Aldrin	ND	MG/KG
2	5103-71-9	Alpha Chlordane	ND	MG/KG
2	319-84-6	Alpha-BHC	ND	MG/KG
2	12672-29-6	Aroclor-1248	ND	MG/KG
2	11097-69-1	Aroclor-1254	58	MG/KG
2	11096-82-5	Aroclor-1260	ND	MG/KG
2	319-85-7	Beta-BHC	ND	MG/KG
2	60-57-1	Dieldrin	ND	MG/KG
2	959-98-8	Endosulfan I	ND	MG/KG
2	1031-07-8	Endosulfan Sulfate	ND	MG/KG
2	72-20-8	Endrin	ND	MG/KG
2	7421-93-4	Endrin Aldehyde	ND	MG/KG
2	53494-70-5	Endrin Ketone	ND	MG/KG
2	5103-74-2	Gamma Chlordane	ND	MG/KG
2	58-89-9	Gamma-BHC (Lindane)	ND	MG/KG
2	76-44-8	Heptachlor	ND	MG/KG
2	1024-57-3	Heptachlor Epoxide	ND	MG/KG
2	72-43-5	Methoxychlor	30	MG/KG
2	77-47-4	Hexachlorocyclopentadiene	ND	MG/KG
2	14596-10-2	Americium-241	ND	MG/KG
2	13982-38-2	Bismuth-207	ND	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	BI-207	Bismuth-207	ND	MG/KG
2	BI-210M	Bismuth-210m	ND	MG/KG
2	10045-97-3	Cesium-137	0.42	PCI/G
2	13981-16-3	Plutonium-238	0.13	PCI/G
2	13966-00-2	Potassium-40	37	PCI/G
2	13982-63-3	Radium-226	2	PCI/G
2	10098-97-2	Strontium-90	0.72	PCI/G
2	14274-82-9	Thorium-228	1.5	PCI/G
2	14269-63-7	Thorium-230	1.9	PCI/G
2	7440-29-1	Thorium-232	1.4	PCI/G
2	10028-17-8	Tritium	1.6	PCI/G
2	13966-29-5	Uranium-234	1.1	PCI/G
2	15117-96-1	Uranium-235	0.11	PCI/G
2	24678-82-8	Uranium-238	1.2	PCI/G
3	7439-92-1	Lead	400	MG/KG
3	13982-63-3	Radium-226	5	PCI/G
3	13981-16-3	Plutonium-238	25	PCI/G
3	7440-29-1	Thorium-232	5	PCI/G
5	7440-36-0	Antimony	0.0006	MG/L
5	7440-38-2	Arsenic	0.05	MG/L
5	7440-39-3	Barium	2	MG/L
5	7440-41-7	Beryllium	0.004	MG/L
5	7440-43-9	Cadmium	0.005	MG/L
5	7440-47-3	Chromium	0.1	MG/L
5	7440-50-8	Copper	1.3	MG/L
5	57-12-5	Cyanide	0.2	MG/L
5	7439-92-1	Lead	0.015	MG/L
5	7439-97-6	Mercury	0.002	MG/L
5	7440-02-0	Nickel	0.1	MG/L
5	7782-49-2	Selenium	0.05	MG/L
5	7440-28-0	Thallium	0.002	MG/L
5	16984-48-8	Flouride	4	MG/L
5	NO3	Nitrate	10	MG/L
5	NO2	Nitrite	1	MG/L
5	57-74-9	Chlordane	0.002	MG/L
5	72-20-8	Endrin	0.002	MG/L
5	76-44-8	Heptachlor	0.0004	MG/L
5	1024-57-3	Heptachlor Epoxide	0.0002	MG/L
5	72-43-5	Methoxychlor	0.04	MG/L
5	8001-35-2	Toxaphene	0.003	MG/L
5	120-82-1	1,2,4-Trichlorobenzene	0.07	MG/L
5	95-95-4	2,4,5-Trichlorophenol	0.05	MG/L
5	50-32-8	Benzo(a)pyrene	0.002	MG/L
5	118-74-1	Hexachlorobenzene	0.001	MG/L
5	77-47-4	Hexachlorocyclopentadiene	0.05	MG/L
5	87-86-5	Pentachlorophenol	0.001	MG/L
5	71-55-6	1,1,1-Trichloroethane	0.2	MG/L
5	79-00-5	1,1,2-Trichloroethane	0.005	MG/L
5	75-35-4	1,1-Dichloroethene	0.007	MG/L
5	156-59-2	1,2-cis-Dichloroethene	0.07	MG/L

comp_no	par_code	parameter name	comparison value	units
5	107-06-2	1,2-Dichloroethane	0.005	MG/L
5	78-87-5	1,2-Dichloropropane	0.005	MG/L
5	106-46-7	1,4-Dichlorobenzene	0.075	MG/L
5	108-90-7	Chlorobenzene	0.1	MG/L
5	96-12-8	Dibromochloropropane	0.0002	MG/L
5	106-93-4	1,2-Dibromoethane	0.00005	MG/L
5	95-50-1	1,2-Dichlorobenzene	0.6	MG/L
5	75-09-2	Dichloromethane (Methylene Chloride)	0.005	MG/L
5	88-85-7	Dinoseb	0.007	MG/L
5	1746-01-6	Dioxin	0.00000003	MG/L
5	94-75-7	2,4-D	0.07	MG/L
5	156-60-5	1,2-trans-Dichloroethene	0.01	MG/L
5	71-43-2	Benzene	0.005	MG/L
5	75-27-4	Bromodichloromethane	0.008	MG/L
5	75-25-2	Bromoform	0.008	MG/L
5	56-23-5	Carbon Tetrachloride	0.005	MG/L
5	67-66-3	Chloroform	0.008	MG/L
5	100-41-4	Ethylbenzene	0.07	MG/L
5	58-89-9	Gamma-BHC (Lindane)	0.0002	MG/L
5	117-81-7	bis(2-ethylhexyl)phthalate	0.006	MG/L
5	100-42-5	Styrene	0.1	MG/L
5	127-18-4	Tetrachloroethene	0.005	MG/L
5	108-88-3	Toluene	1	MG/L
5	79-01-6	Trichloroethene	0.005	MG/L
5	75-01-4	Vinyl Chloride	0.002	MG/L
5	1330-20-7	Xylenes, Total	10	MG/L
5	AC-227	Actinium-227	0.4	PCI/L
5	14596-10-2	Americium-241	1.2	PCI/L
5	13982-38-2	Bismuth-207	1200	PCI/L
5	10045-97-3	Cesium-137	120	PCI/L
5	10198-40-0	Cobalt-60	400	PCI/L
5	13981-16-3	Plutonium-238	1.6	PCI/L
5	13982-63-3	Radium-226	4	PCI/L
5	10098-97-2	Strontium-90	40	PCI/L
5	14274-82-9	Thorium-228	16	PCI/L
5	14269-63-7	Thorium-230	12	PCI/L
5	7440-29-1	Thorium-232	2	PCI/L
5	10028-17-8	Tritium	20000	PCI/L
5	U-233	Uranium-233	20	PCI/L
5	13966-29-5	Uranium-234	20	PCI/L
5	15117-96-1	Uranium-235	24	PCI/L
5	24678-82-8	Uranium-238	24	PCI/L
6	7440-47-3	Chromium	1.10E+03	MG/KG
6	7440-36-0	Antimony	8.50E+01	MG/KG
6	7440-38-2	Arsenic	6.40E+01	MG/KG
6	7440-39-3	Barium	1.50E+04	MG/KG
6	7440-41-7	Beryllium	1.10E+03	MG/KG
6	7440-43-9	Cadmium	2.10E+02	MG/KG
6	57-12-5	Cyanide	4.30E+03	MG/KG
6	7439-96-5	Manganese	2.70E+04	MG/KG

comp_no	par_code	parameter name	comparison value	units
6	7439-97-6	Mercury	6.40E+01	MG/KG
6	7440-02-0	Nickel	4.30E+03	MG/KG
6	7440-22-4	Silver	1.10E+03	MG/KG
6	7440-62-2	Vanadium	1.50E+03	MG/KG
6	7440-66-6	Zinc	6.40E+04	MG/KG
6	2691-41-0	HMX	1.10E+04	UG/KG
6	121-82-4	RDX	6.40E+04	UG/KG
6	50-29-3	4,4'-DDT	1.10E+02	MG/KG
6	11097-69-1	Aroclor-1254	4.30E+00	MG/KG
6	60-57-1	Dieldrin	1.10E+01	MG/KG
6	106-44-5	4-Methylphenol	1.10E+03	MG/KG
6	120-12-7	Anthracene	6.40E+04	MG/KG
6	65-85-0	Benzoic Acid	8.50E+05	MG/KG
6	117-81-7	Bis(2-ethylhexyl)phthalate	4.30E+03	MG/KG
6	85-68-7	Butyl Benzyl Phthalate	4.30E+04	MG/KG
6	84-74-2	Di-n-butyl Phthalate	2.10E+04	MG/KG
6	117-84-0	Di-n-octyl Phthalate	4.30E+03	MG/KG
6	206-44-0	Fluoranthene	8.50E+03	MG/KG
6	78-59-1	Isophorone	4.30E+04	MG/KG
6	87-86-5	Pentachlorophenol	6.40E+03	MG/KG
6	108-95-2	Phenol	1.30E+05	MG/KG
6	129-00-0	Pyrene	6.40E+03	MG/KG
6	75-34-3	1,1-Dichloroethane	7.80E+00	MG/KG
6	156-60-5	1,2-trans-Dichloroethene	4.30E+03	MG/KG
6	108-10-1	2-Methyl-4-pentanone	7.00E+02	MG/KG
6	67-64-1	Acetone	2.10E+04	MG/KG
6	75-27-4	Bromodichloromethane	4.30E+03	MG/KG
6	75-25-2	Bromoform	4.30E+03	MG/KG
6	75-15-0	Carbon Disulfide	2.80E+02	MG/KG
6	56-23-5	Carbon Tetrachloride	1.50E+02	MG/KG
6	75-00-3	Chloroethane	1.60E+02	MG/KG
6	67-66-3	Chloroform	2.10E+03	MG/KG
6	124-48-1	Dibromochloromethane	4.30E+03	MG/KG
6	75-09-2	Dichloromethane	1.00E+03	MG/KG
6	100-41-4	Ethylbenzene	4.80E-01	MG/KG
6	110-54-3	Hexane	9.10E+01	MG/KG
6	127-18-4	Tetrachloroethene	2.10E+03	MG/KG
6	108-88-3	Toluene	2.50E+02	MG/KG
6	75-69-4	Trichlorofluoromethane	7.30E+02	MG/KG
6	1330-20-7	Xylenes, Total	4.30E+05	MG/KG
6	78-93-3	2-Butanone	9.30E+03	MG/KG

1 Value is 10-6 Risk-Based Guide Value
2 Value is OU9 Soil Background Value
3 Value is other criteria, I.e. 5 pCi/g for certain radionuclides
25 pCi/g plutonium
5 Value is MCL
6 Value is the Guide Value based on the hazard index

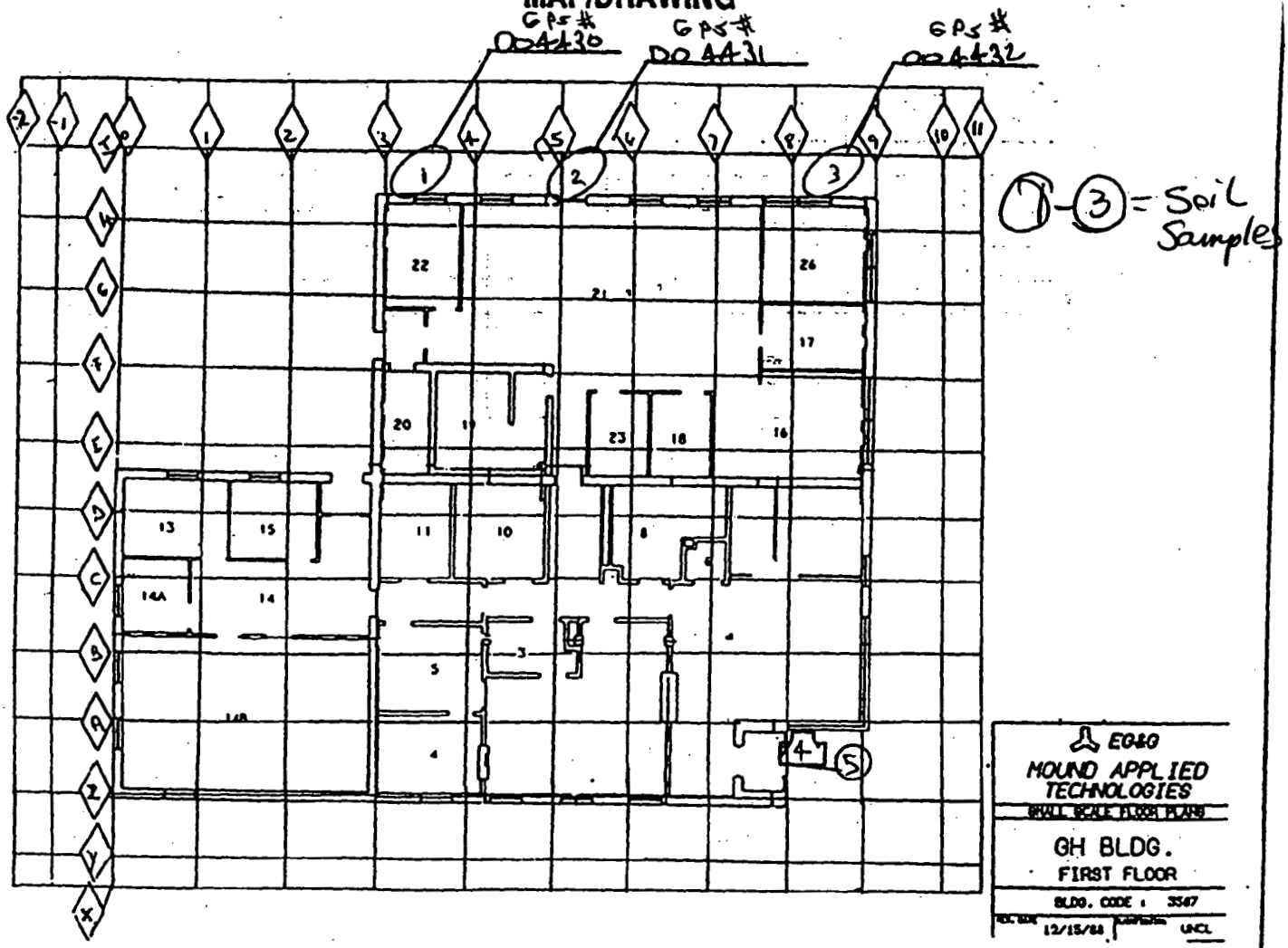
Radiological Soil Sampling Data

RADIOLOGICAL SURVEY DATA SHEET

D1 30-12

LOCATION: (BLDG./AREA/ROOM) GH	SURVEY NO. 98-GH-08
PURPOSE: Remove small amount (≈ 8-10 grams) of fixed or contaminant to verify isotopic ratio in Samples from Gravel Pit Area.	RWP NO. GH-001-98
	DATE: 12/2/98
	TIME: 0830

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
(#) => Soil Sample
[ ] => Sample of Floor
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or /β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE Electra	5340/5343	2-6-99

[redacted]

HPs#	Date:
7889	12/2/98
5681	12/7/98
5996	12-9-98

T 2I1

ML-9620 (2-98)

Survey No. 98-6U-08

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				Soil
2				↓
3				↓
4				Concrete
5				Sewer

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 A (4-98)

3 of 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004430
LAB SAMPLE ID: ML800204
FILE ID: MG100186.SO
PRIORITY: N

Description\Location:
98-gh-08, #1
(gravel pit area)

Collector: [redacted] 7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.07	45,000
Cs-137	*	0.04	0.07	45,000
Pb-210	*	0.00	0.70	45,000
Ra-226		2.06	0.56	800
Ac-227 (D)	*	0.00	0.26	40
Th-230	*	0.17	6.88	800
Th-232 (D)		0.36	0.28	130
Pu-238	*	0.00	16.13	500
Am-241		0.09	0.07	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.03 nCi/g

Σ Respirator 0.05

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

A06 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004430
LAB SAMPLE ID: ML800207
FILE ID: MG100189.SO
PRIORITY: N

Description\Location:
98-GH-08, #1
Long Count (10hr)

Collector: [redacted]7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.02	45,000
Cs-137		0.05	0.01	45,000
Pb-210		0.49	0.13	45,000
Ra-226		1.33	0.19	800
Ac-227 (D)	•	0.02	0.05	40
Th-230	•	0.42	1.47	800
Th-232 (D)		0.44	0.04	130
Pu-238	*	0.00	3.44	500
Am-241		0.02	0.01	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

5 of 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004431
LAB SAMPLE ID: ML800209
FILE ID: MG100191.SO
PRIORITY: N

Description\Location:
98-GH-08, #2
Long Count

Collector: [redacted] 7839

Date Received: 12/3/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.02	45,000
Cs-137	•	0.02	0.02	45,000
Pb-210		0.43	0.20	45,000
Ra-226		0.76	0.26	800
Ac-227 (D)	*	0.00	0.08	40
Th-230	•	0.00	2.19	800
Th-232 (D)		0.25	0.07	130
Pu-238	•	0.00	5.57	500
Am-241	•	0.00	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted]

6611

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004431
LAB SAMPLE ID: ML800205
FILE ID: MG100187.SO
PRIORITY: N

Description\Location:
98-GH-08, #2
(gravel pit area)

Collector: [redacted] 7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.05	45,000
Cs-137	*	0.02	0.04	45,000
Pb-210	*	0.31	0.52	45,000
Ra-226	*	0.70	0.76	800
Ac-227 (D)	*	0.12	0.16	40
Th-230	*	0.00	5.90	800
Th-232 (D)		0.28	0.18	130
Pu-238	*	6.71	11.49	500
Am-241	*	0.00	0.07	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.02 nCi/g

Σ Respirator 0.04

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

7 of 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004432
LAB SAMPLE ID: ML800206
FILE ID: MG100188.SO
PRIORITY: N

Description\Location:
98-GH-08, #3
(gravel pit area)

Collector: [redacted]7839

Date Received: 12/2/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.07	45,000
Cs-137	•	0.06	0.07	45,000
Pb-210	•	0.52	0.70	45,000
Ra-226		1.56	0.78	800
Ac-227 (D)	•	0.11	0.25	40
Th-230	•	1.72	7.25	800
Th-232 (D)		0.61	0.24	130
Pu-238	•	0.00	18.99	500
Am-241	•	0.00	0.08	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.03 nCi/g

Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/2/98 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted]

8.6 11

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004432
LAB SAMPLE ID: ML800210
FILE ID: MG100192.SO
PRIORITY: N

Description\Location:
98-GH-08, #3
Long Count

Collector: [redacted] 7839

Date Received: 12/3/98 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.01	0.03	45,000
Cs-137		0.08	0.03	45,000
Pb-210		0.51	0.31	45,000
Ra-226		1.42	0.36	800
Ac-227 (D)	*	0.10	0.10	40
Th-230	•	0.62	2.99	800
Th-232 (D)		0.56	0.08	130
Pu-238	*	5.26	6.64	500
Am-241	•	0.02	0.03	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ DOT 0.01 nCi/g

Σ Respirator 0.03

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

Comments:

Date: 12/3/98 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted]

Page 11

Project: Radiological Concentrations; GH Survey
Submitted: Dec. 2, 1998
Sampling Event: Dec. 2, 1998
Submitted by: B. Childers, K. Kent

12" x 5" Surface sample: 387.1 cm^2 Sample Mass: 20 grams

Initial field reading: 220 dpm/100 cm^2

Plutonium Concentrations

Sample ID	Pu-238, pCi/g	+/- pCi/g	MDA, pCi/g	Pu-239, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.342	0.066	0.050	<LLD		0.041

Uranium Concentrations

Sample ID	-233/234, pCi/	+/- pCi/g	MDA, pCi/g	U-235, pCi/g	+/- pCi/g	MDA, pCi/g	U-238, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.251	0.075	0.0523	<LDL		0.0734	0.327	0.087	0.0734

Thorium Concentrations

Sample ID	Th-227, pCi/g	+/- pCi/g	MDA, pCi/g	Th-228, pCi/g	+/- pCi/g	MDA, pCi/g	Th-230, pCi/g	+/- pCi/g	MDA, pCi/g	Th-232, pCi/g	+/- pCi/g	MDA, pCi/g
9809853 98-GH-08-#4	0.207	0.048	0.026	0.461	0.077	0.036	0.367	0.067	0.026	0.235	0.051	0.036

Data Verification: S. L. Howard Date: 12/3/98
S. L. Howard

Environmental Monitoring

Health Physics Counting Lab -- Wipe Analysis

Date: 12/7/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2I001.csv
Batch Ended: 12/7/98 13:07
Crosstalk Correction: Applied
Cal. Due Date: 11/24/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: T 98-GH-08 CHILDERS GR.I (1)+$19:$19CYR

		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
37	1	0.000	1.93	<MDA	3.68	3.39	<MDA	1.50	12/7/98 13:07

10 of 11

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	5.80
Region B:	2.0 -	18.6	0	0.0	5.50
Region C:	40.0 -	2000	0	0.0	10.90

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GH-08 CHILDERS GH.-BLDG. (30-12 D1) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT4.DAT
Count Data Filename: C:\DATA\SDATA4.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.80	5.50	10.90	598.20	2	B		0.00
0	2.00	1289.70	1232.00	1.10	606.70	0		2902.81	241.43
1	2.00	5.70	6.00	1.60	560.91	0		13.55	12.00

Appendix M

Occurrence Reports

(There are no occurrence reports.)

Appendix N

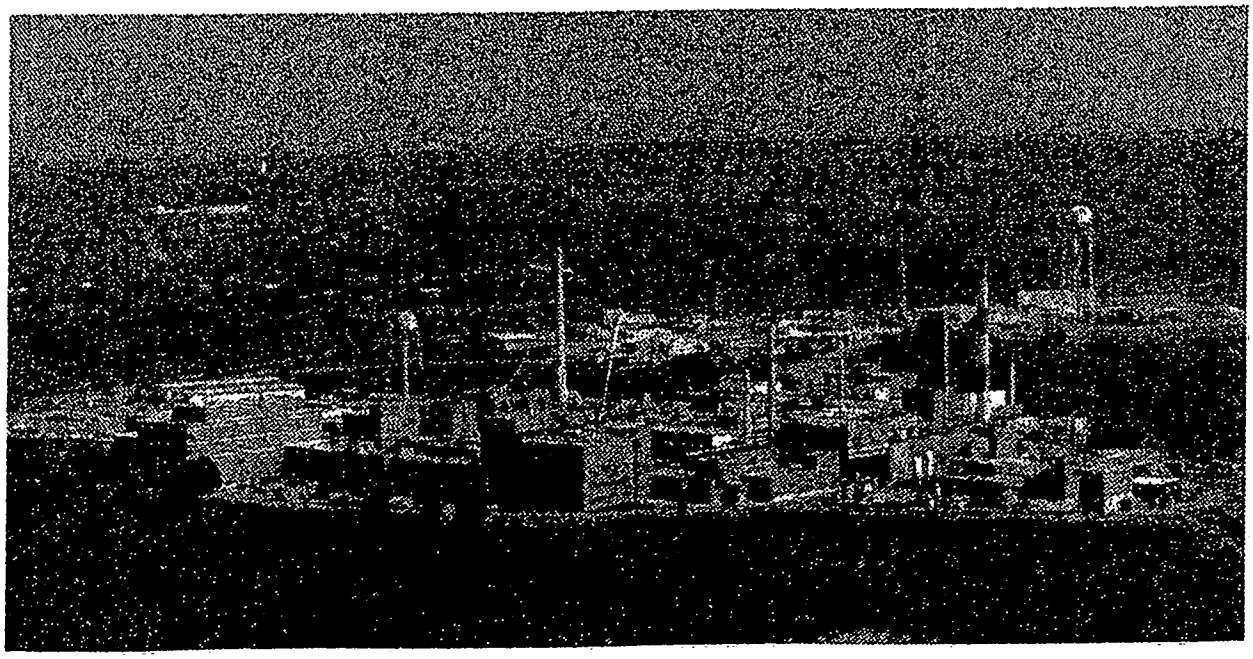
PRS Information

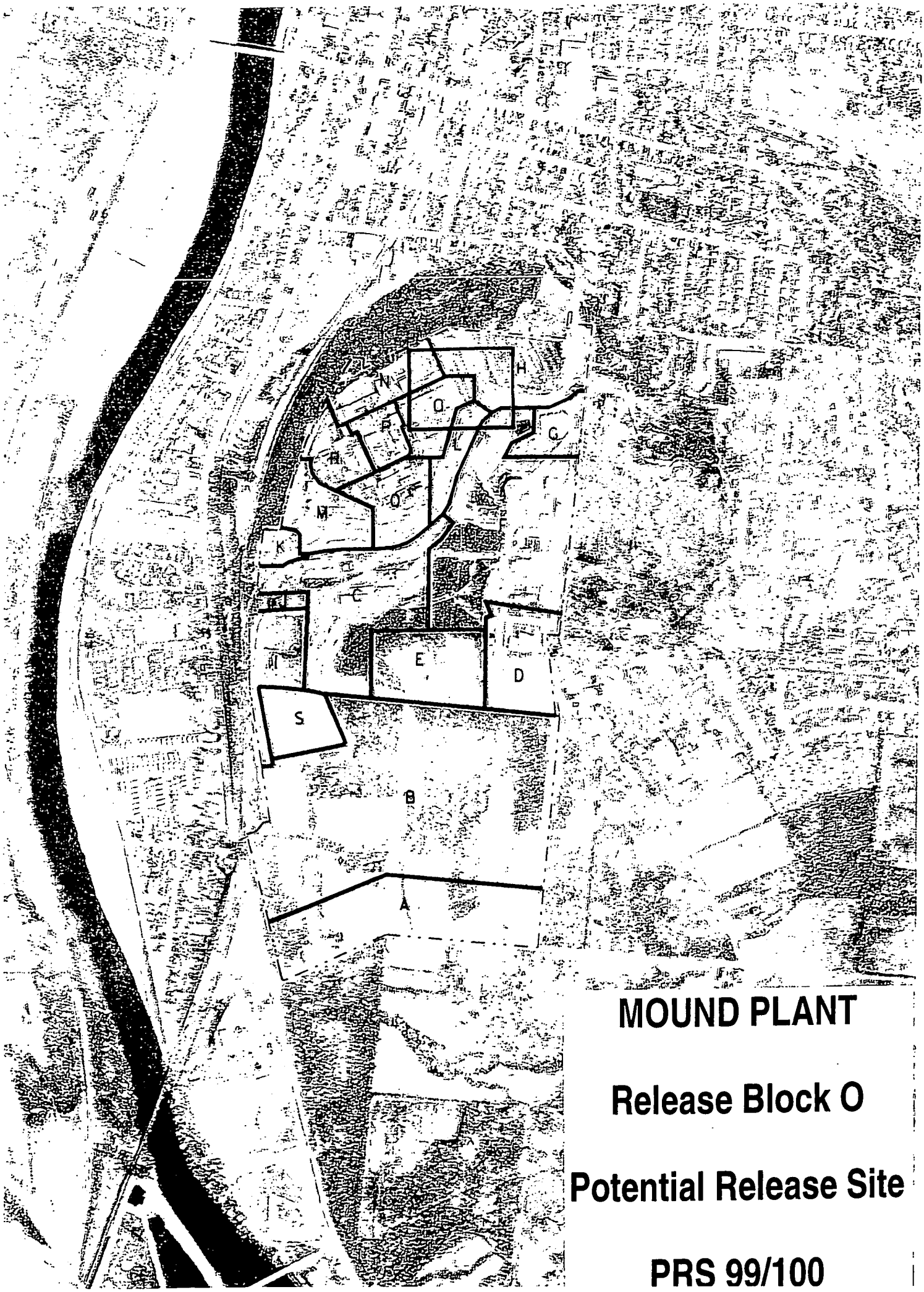
MOUND

Environmental
Restoration
Program

MOUND PLANT

Potential Release Site Package
PRS # 99/100



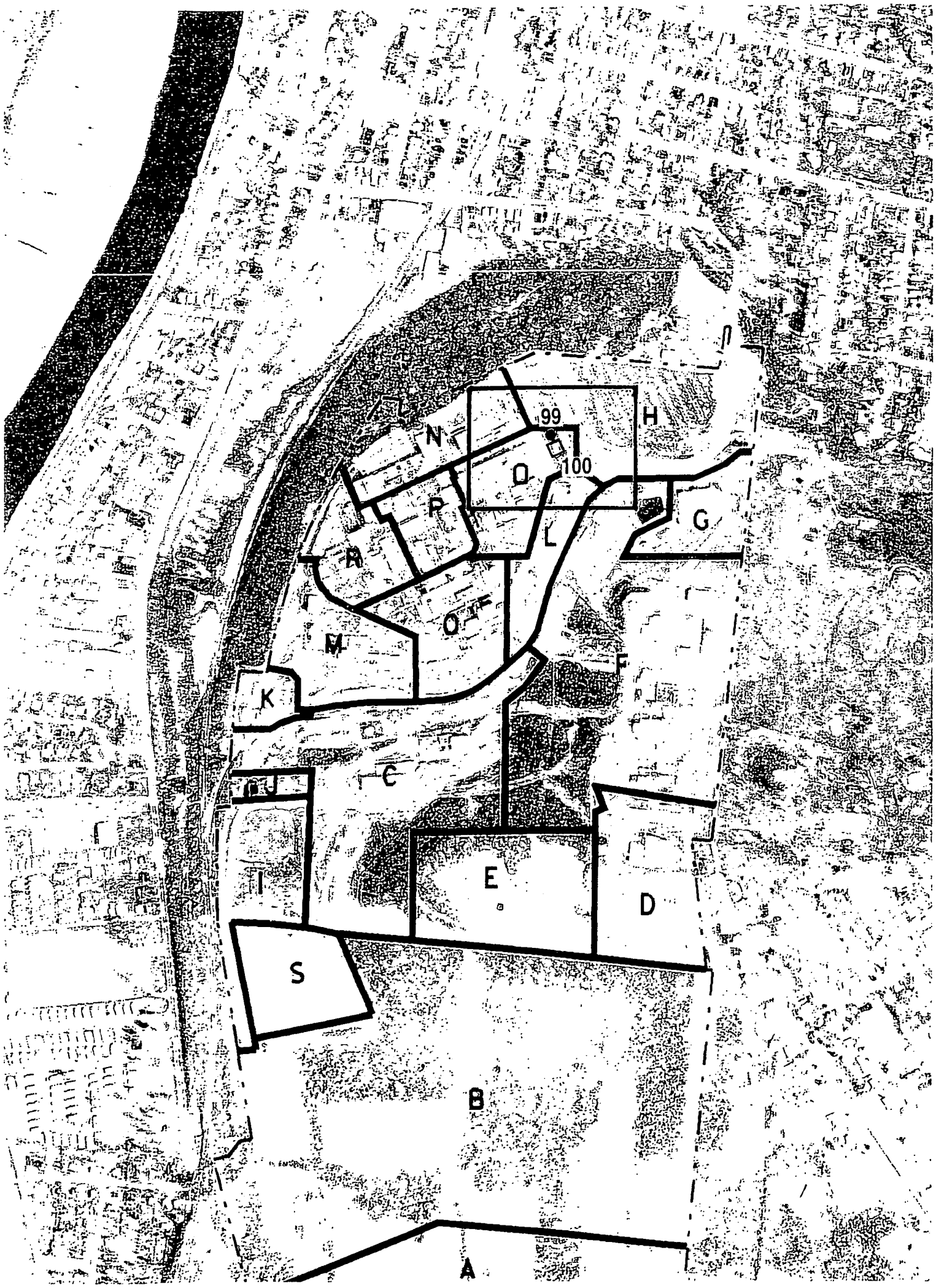


MOUND PLANT

Release Block O

Potential Release Site

PRS 99/100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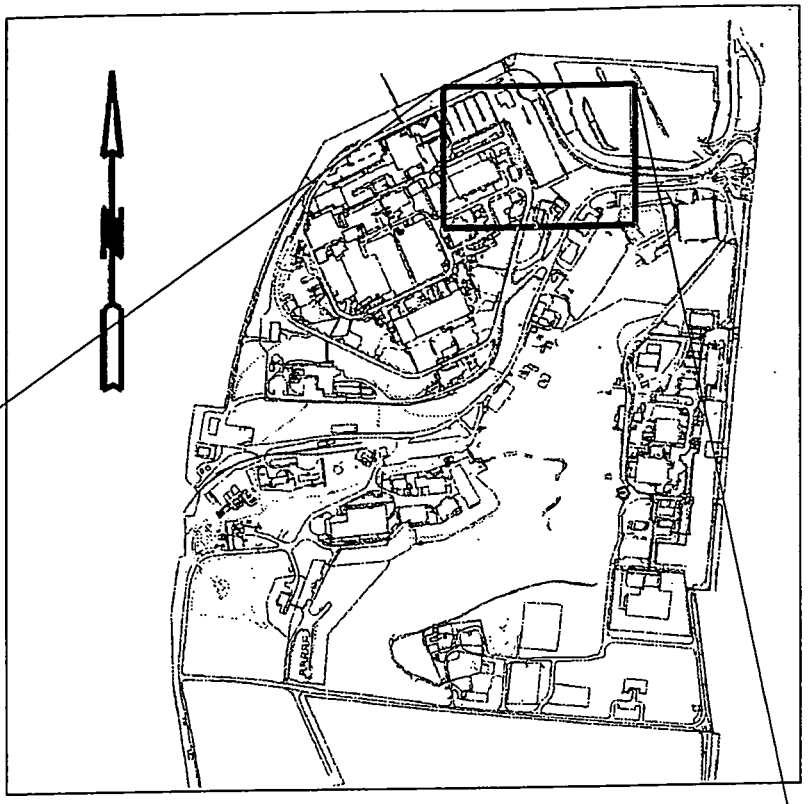
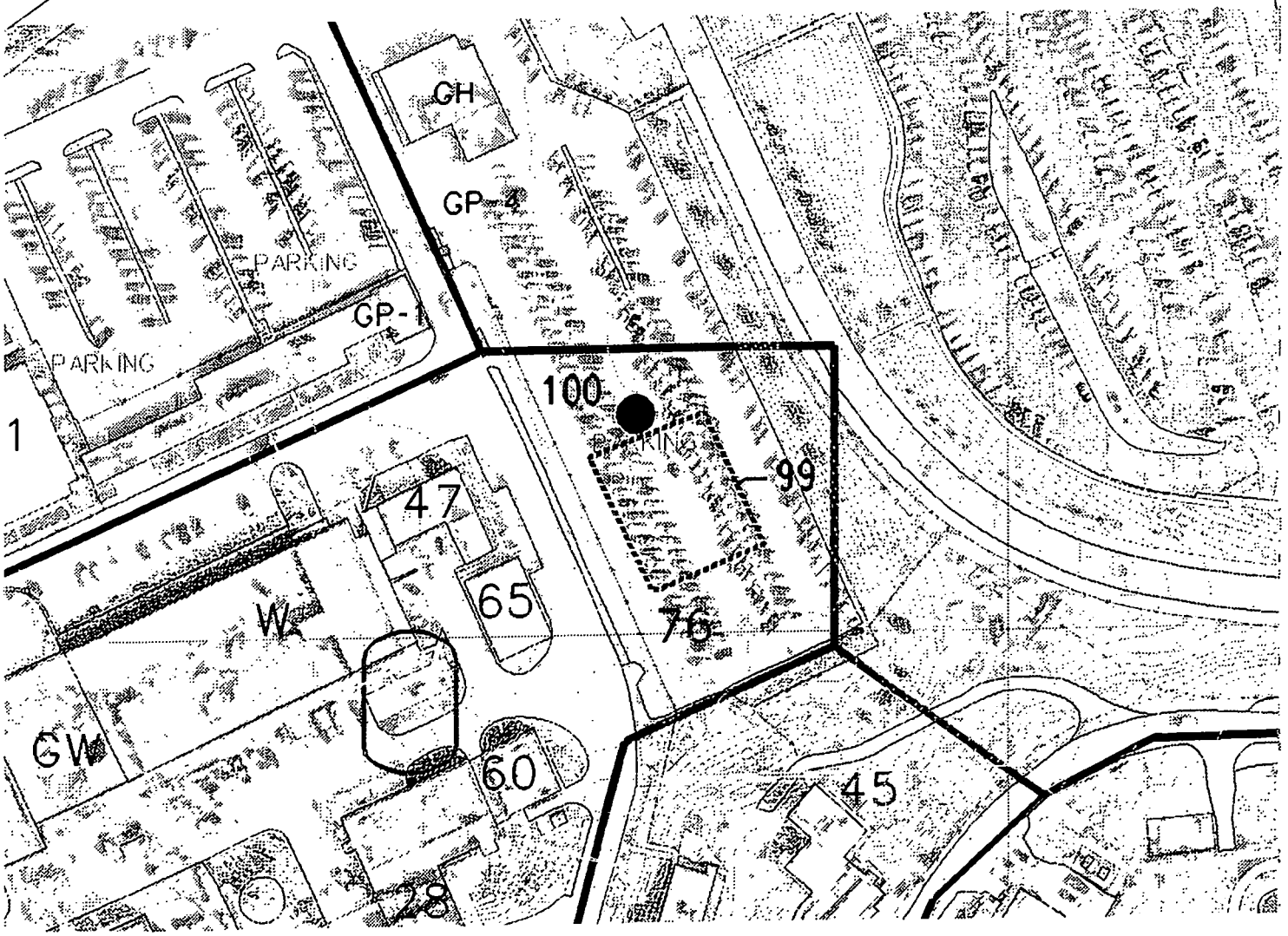
Mound Plant

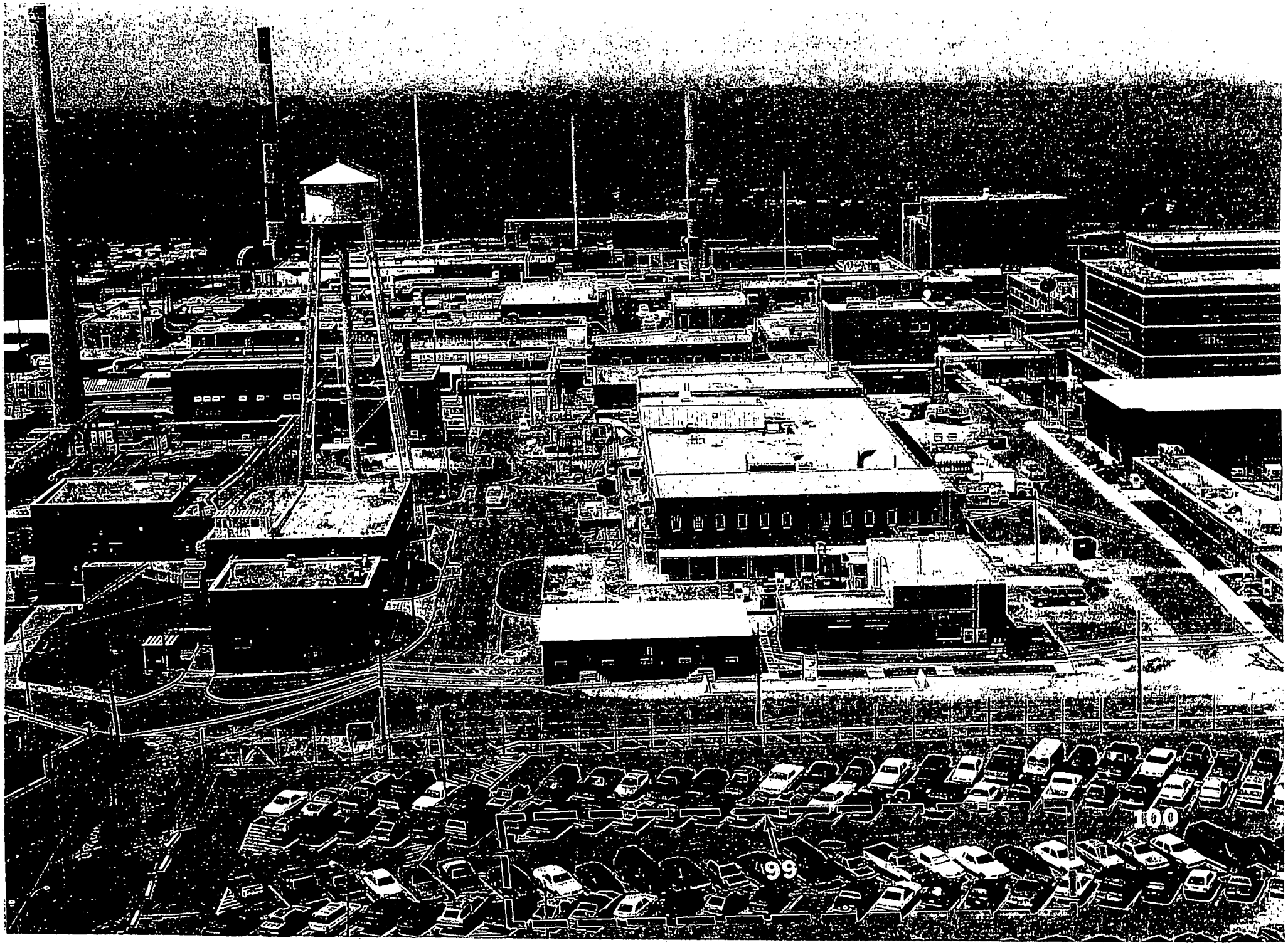
Release Block O

Potential Release Site

PRS 99/100






99
100

PRS 99/100

PRS HISTORY:

Potential Release Site (PRS) 99/100 is located under the parking lot just south of GH Building. PRS 100 is also referred to as Area F or the Chromium Trench. PRS 99, which is located within the PRS 100 boundaries is also referred to as Area 6.[1,3,4,5]

PRS 100 was a trench that was used as a burial site in 1963.[4] From the original plating shop dismantled in 1962, approximately 110 gallons of chromium plating bath solution were treated with sodium bisulfite, resulting in reduction, and disposed of in the PRS 100 trench in 1963.[3] It is unknown if the chromium solution was placed in the trench while still in drums or if it was poured from the drums into the trench.[5] It is reported that the old tanks from the original plating shop were also buried at this location, as part of the expansion of the parking lot.[3] This trench, reported to be approximately 100 feet long by 40 feet wide, was backfilled 15 to 30 feet deep with clean fill when the parking lot was built.[5]

PRS 99 is a trench that resides near the center of PRS 100. In 1964, at least three 55-gallon drums of polonium-210 contaminated sand were placed in this area.[2,3] The sand resulted from the cleaning (sandblasting) of the metal framework of the WD Building sand filters.[2,3] The sand was originally contained in drums that were crushed and placed in the disposal area/trench.[4] The sand may have also been contaminated with cobalt-60 and cesium-137.[5] A report indicates the trench may also contain a plutonium contaminated washing machine.[2,4] This trench, along with Area F, was backfilled 15 to 30 feet in depth with clean fill when the parking lot was built.[5]

CONTAMINATION:

1). In 1985, the Radiological Site Survey[2] investigated radionuclides via Mound Soil Screening, radiochemistry and gamma spectroscopy. One surface soil sample in the vicinity of PRS 99/100 (location S0078) was analyzed for plutonium, thorium and tritium. Ten core samples in the vicinity of PRS 99/100 (location C0003) were analyzed for cobalt-60, radium-226, americium-241 and cesium-137. Results of the investigation showed all radionuclide detections in the soil were below their applicable guideline criteria.[6,8]

2). Polonium-210 has a half-life of 138.4 days and should no longer be present due to radioactive decay.[2,3,5]

3). In 1990, a magnetic survey of the area detected one large and seven smaller anomalies.[7]

READING ROOM REFERENCES:

1) Operable Unit 9, Site Scoping Report: Volume 12 - Site Summary Report, December 1994. (pages 6-9)
2) Operable Unit 9, Site Scoping Report: Volume 3 - Radiological Site Survey, June 1993. (pages 10- 15)
3) Operable Unit 9, Site Scoping Report: Volume 7 - Waste Management, July 1992. (pages 16-18)
4) Operable Unit 2, Technical Memorandum #1, Preinvestigation Evaluation of Remedial Action Technologies (PERAT), Draft (Revision 0), August 1991. (pages 19-24)
5) Operable Unit 2, Chromium Trench Removal Site Evaluation, Draft (Revision 0), February 1995. (pages 25-35)
6) Risk Based Guideline Values, Final, (Revision 0), December 1995.

OTHER REFERENCES:

7) Letter Report: Preliminary Results of Reconnaissance Magnetic Survey, Mound Plant Areas 2, 6, 7, and C, Working Draft, November 1990. (pages 36-42)
8) Code of Federal Regulations, 40 CFR 192.41 and 40 CFR 192.12.

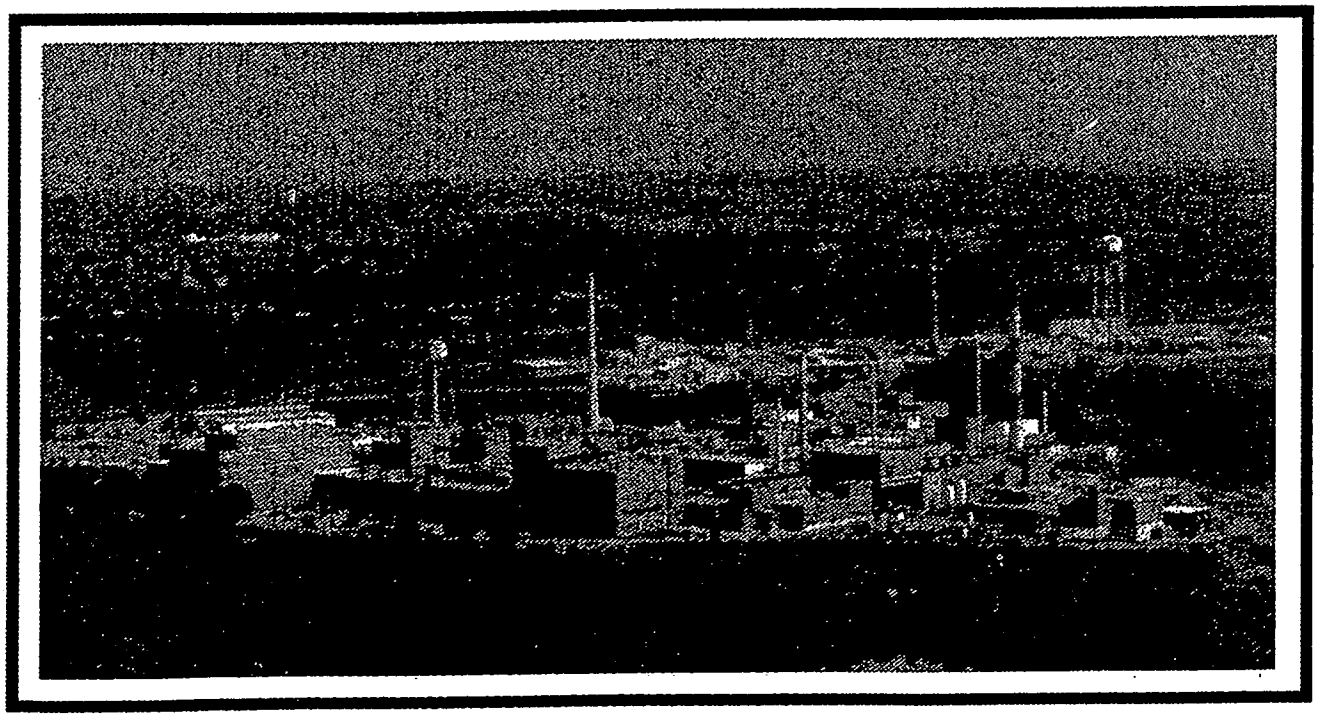
PREPARED BY:

Irwin D. Dumtschin, Member of EG&G Technical Staff

MOUND

Environmental
Restoration
Program

MOUND PLANT
Potential Release Site Package
PRS # 241



MOUND PLANT
PRS 241
Soil Contamination-Main Hill Parking Lot Area

RECOMMENDATION:

PRS 241 consists of the northwest parking lots, including the parking lots east of OSE building, south of GH building and the parking lot north of A Building. This PRS was created due to the Soil Gas Survey and Geophysical Investigation - Reconnaissance Sampling Report, Feb.1993 because of several positive soil gas detections. These areas have always been and still are parking lots. No operations are known to have been performed in the parking lots east of OSE Building and north of A Building that would generate hazardous or radioactive wastes.

In 1992, reconnaissance soil gas sampling detected 8 ppb of trichloroethene (TCE) and 255 ppb toluene. These results were below calculated acceptable soil gas values. In addition, all radionuclides are at or below guideline criteria.

Therefore, NO FURTHER ASSESSMENT is recommended for PRS 241.

CONCURRENCE:

DOE/MEMP: Arthur W. Kleinrath 5/13/97
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 5/13/97
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 5/14/97
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 6/17/97 to 7/18/97

☐ No comments were received during the comment period.

☒ Comment responses can be found on page 1-2 of this package.

Appendix O

Section 7.1 of Phase I Environmental Site Assessment of DOE Mound Building GH

7.0 FINDINGS AND CONCLUSIONS

7.1 HOK/K Industrial, Inc. has performed a Phase I Environmental Site Assessment of the DOE Mound, Building GH located at DOE Mound in Miamisburg, Ohio. Any exceptions to, or deletions from, our standard procedures are described in Section 2.3 of this report.

This assessment has revealed the following evidence of Recognized Environmental Conditions:

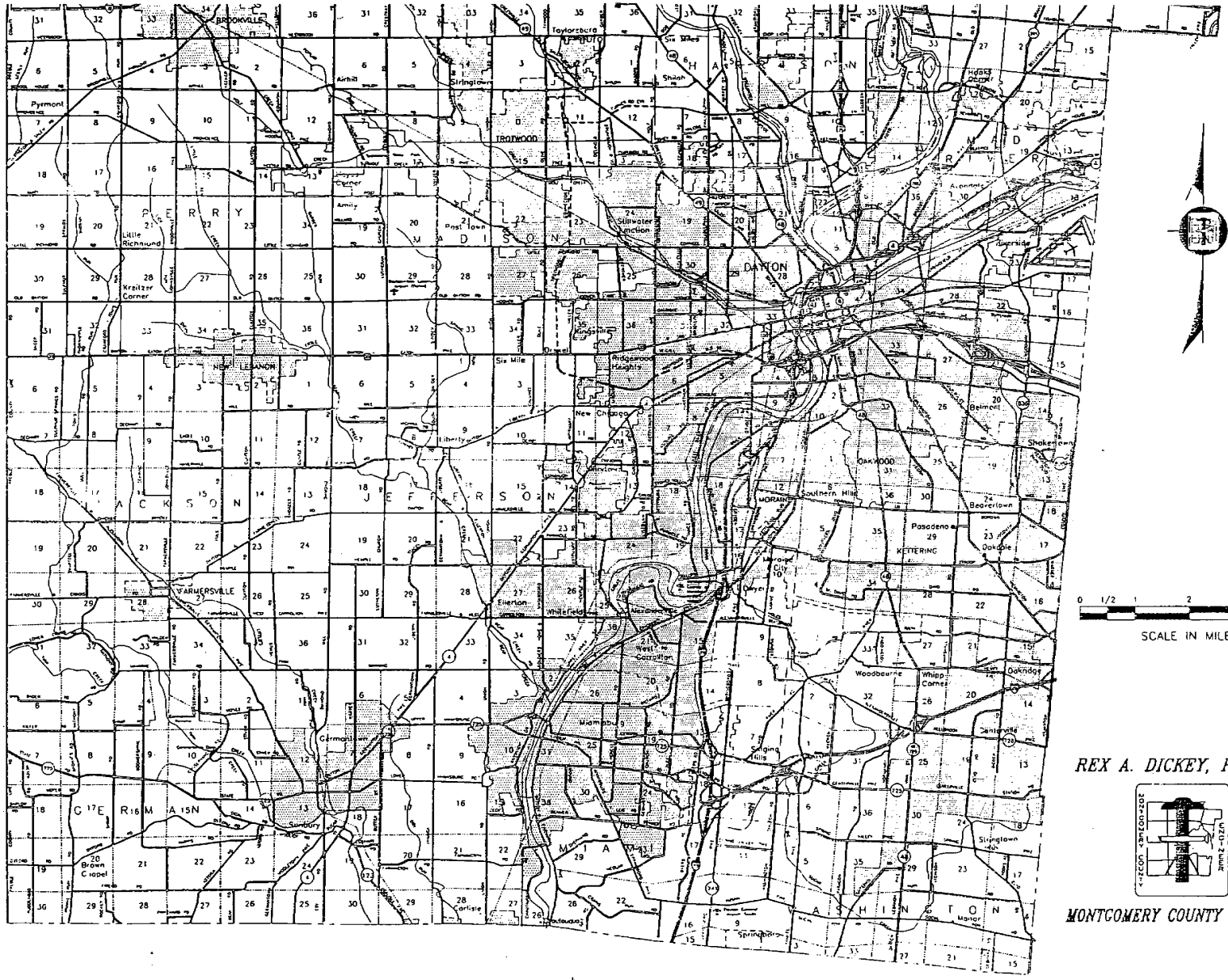
- A concrete pad with steel manhole cover is located at the southwest corner of Building GH. The building's steam and chiller brine supply pipes also exit from this concrete pad. The possibility exists that a subgrade vault, probably a utility vault, exists beneath the pad. Neither our key site managers nor available building prints provided information regarding the connections, equipment, purpose, or discharge points of the features below the concrete pad and manhole cover. Since any subgrade vault is a potential avenue for the release of hazardous chemicals used in its vicinity, the dimensions, purpose, construction, and integrity of the suspected utility vault should be investigated.

- Adjacent to the concrete pad described above is located a relatively newer asphalt patch measuring approximately 3-feet by 4-feet. On its east central side we observed a flat steel screw-on cap, approximately 6 inches in diameter. Our key site managers had no information regarding the steel cap or asphalt patch, nor did the available building prints provide data on these features (although the prints indicate that a number of buried utilities do enter this side of the building). The steel cap does not have the appearance of a typical monitor well road box cover or UST vent or fill port; nonetheless, the possibility exists that some subgrade sump or vessel is located here. Additional research or interviews should be conducted to determine the purpose and connections of the steel cap.

- An oil stain beneath the condensate return equipment in the mechanical room (Room 10) is located within about one foot of the floor drain in that room. Although not highly toxic, the oil stain should be cleaned to reduce unnecessary releases to the sanitary sewer.

Page Redacted

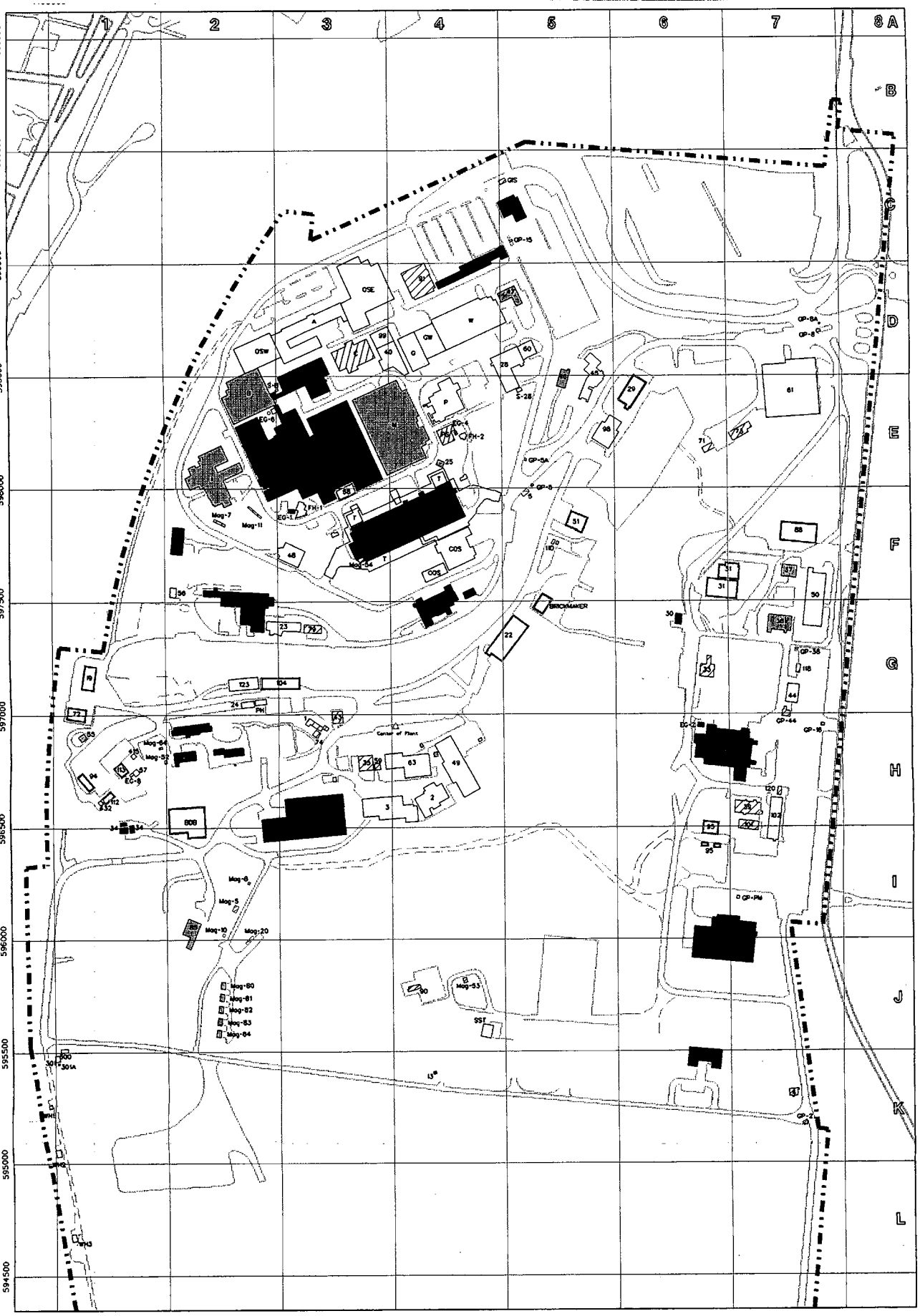
Contains Proprietary Information



REX A. DICKEY, P.E.,P.S.

MONTGOMERY COUNTY ENGINEER

FEBRUARY, 199



Legend

- To Be Demolished (CERCLA)
- To Be Demolished (Construction)
- Personal Property
- Hatch: Removed/Demolished
- Transfer (Waiting Evaluation)
- Transfer (NFA)
- Transfer (FA)
- Transfer (RA)

TN
GM
MN

0 100 200 400 600 800 1000
Scale in Feet

ISS	DATE	REVISION	BY	CHKR	ENG	M
	05/25/99	UPDATE	MR			

MOUND
Environmental Restoration Geographic Information System

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE																					
SHEET	1	2	3	4	5	6															
ISSUE																					

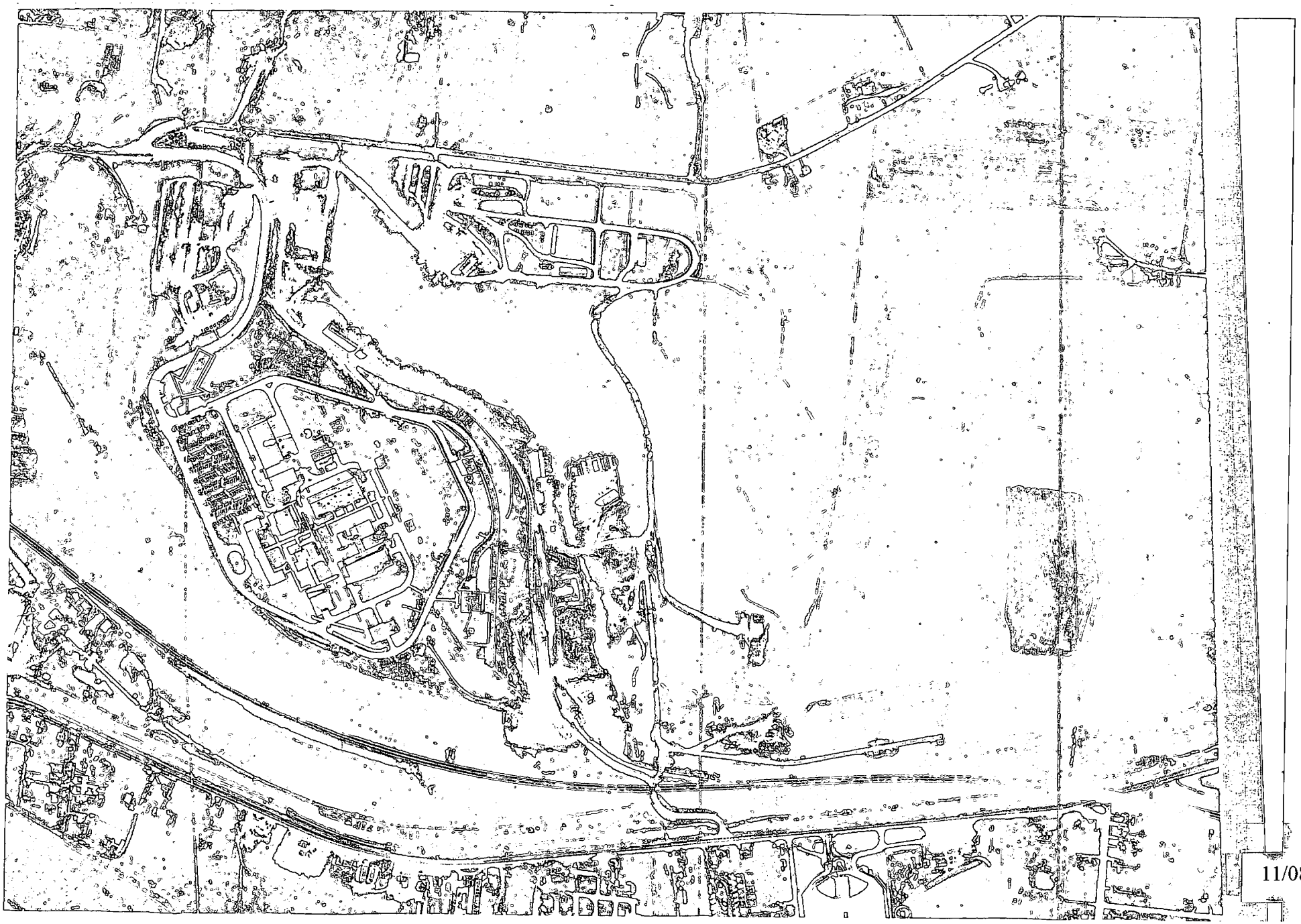
PART CLASSIFICATION

(U) TITLE CLASSIFICATION
Building Disposition
Core Team
05/25/99

DRAWING CLASSIFICATION	SIZE	DRAWING NUMBER	JOB NUMBER
UNCLASSIFIED	D	bldg_disp.dgn	

DWG TYPE	PRMG	CADEC	SCALE	SHEET 1 OF
STATUS		ORIGIN	MSTATION 5.0	

A B C D

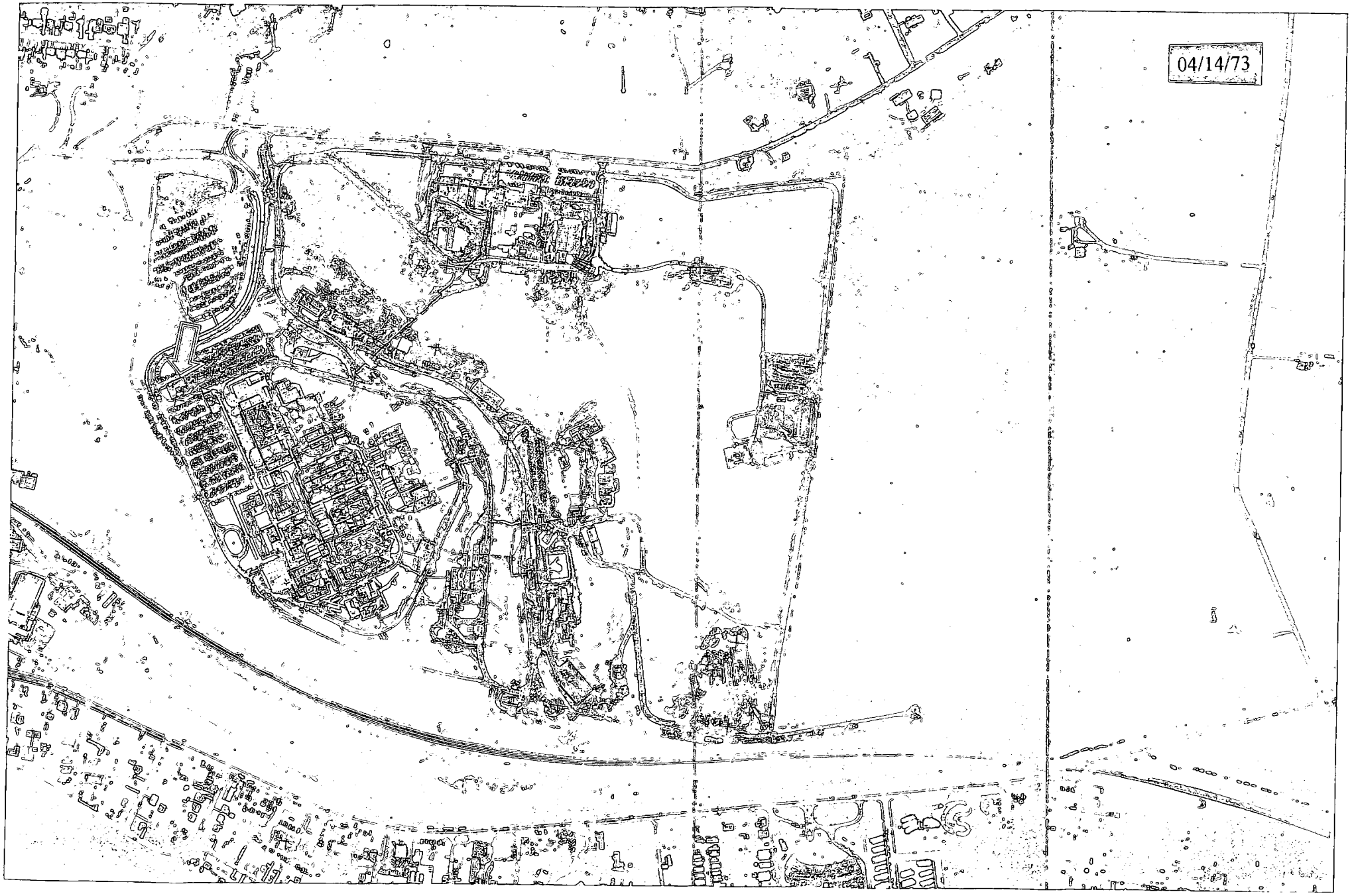


11/08/49

11/19/59

04/07/65

03/30/68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06/83

04/04/94