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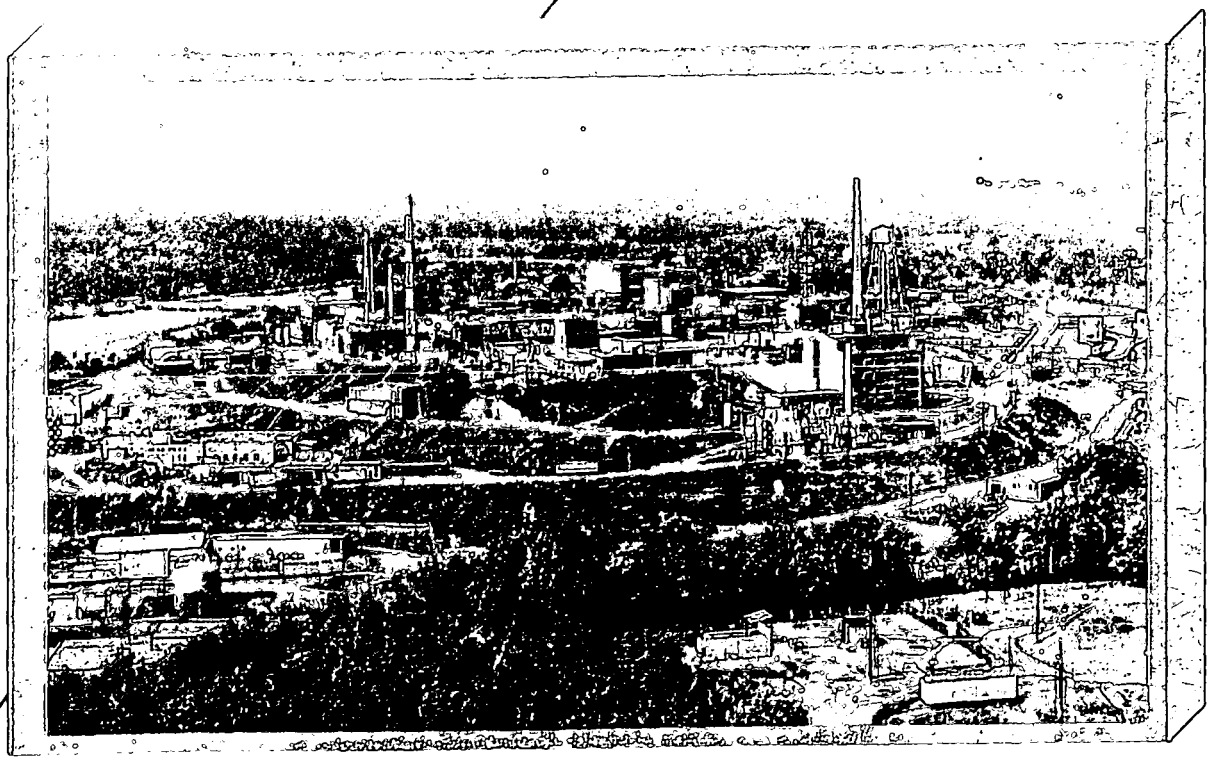
MOUND

Environmental Restoration Program

MOUND PLANT
Building Data Package
GP-1
Guard Post 1, Firing Range
Located within Release Block N



BDP Guard Post 1 (FILE)

REV	DESCRIPTION	DATE
WORKING DRAFT		Nov. 5, 1998
DRAFT 1		Nov. 13, 1998
DRAFT 2	Updated/changed information incorporated.	Jan. 27, 1999
DRAFT PROPOSED FINAL	Binning adjustments incorporated. Appendix G narrative modified and soil data moved to Appendix L. New lead data for Appendix J. Appendix D underground line diagram colors adjusted. Main narrative Para. 4.2.2.7 added.	Feb. 23, 1999
PUBLIC REVIEW DRAFT		Mar. 17, 1999
FINAL		

MOUND PLANT RECOMMENDATION

GP-1 BUILDING

Background:

Building GP-1 is an 8,000 square foot single story concrete block structure with a metal built-up membrane coal tar, asphalt, and carboline roof. It has a brick facing. Construction began in 1950 with additions occurring into the 1980s. Since construction, it has been used as a security personnel training and office facility. It housed the Mound Plant security firing range. Until 1995, it also housed the Mound Plant Communications Center.

Recommendation:

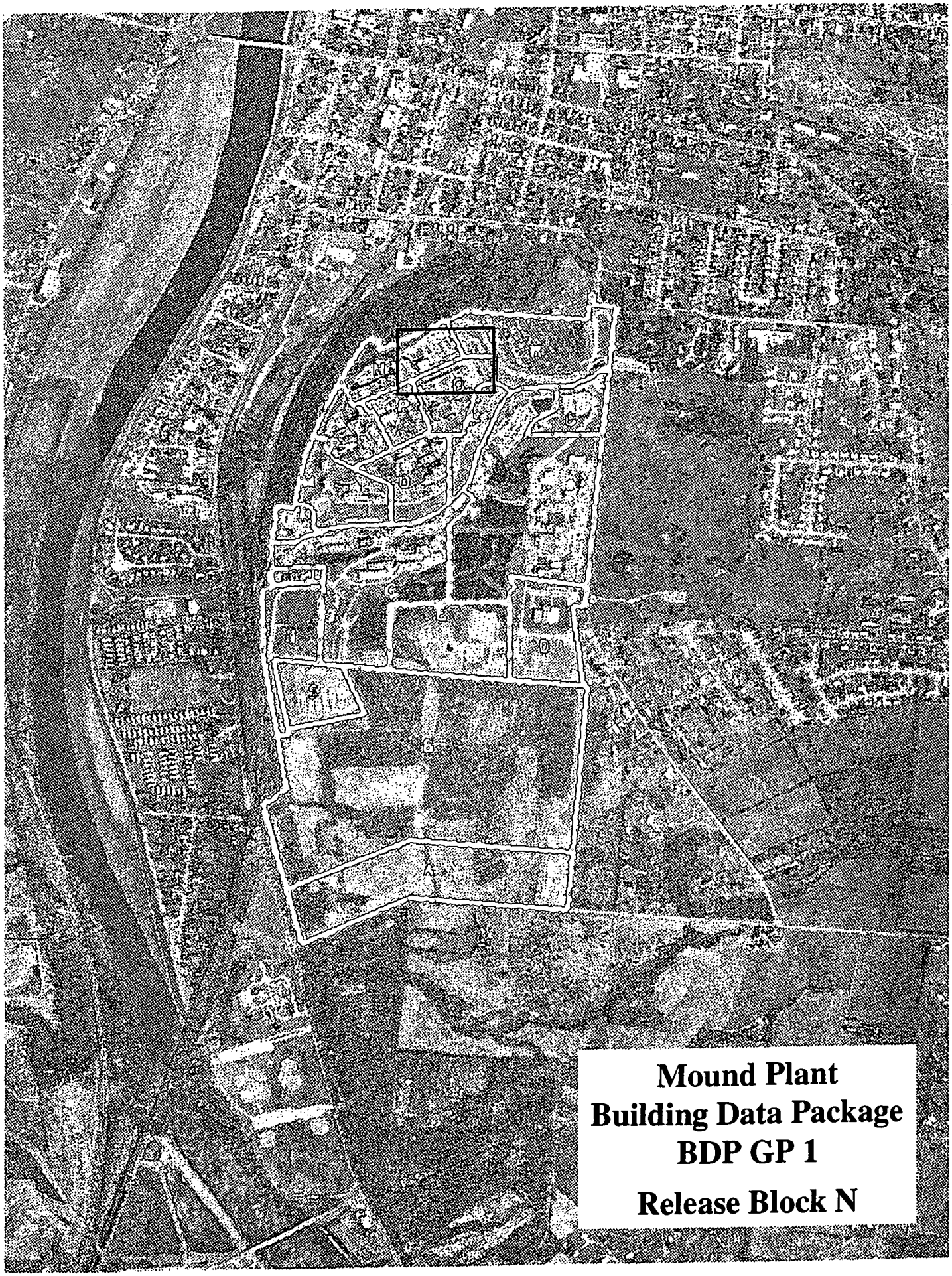
After thorough review of the environmental data and the Building Data Package, the Core Team agrees that all existing environmental issues associated with GP-1 Building have been resolved. Future use of GP-1 Building will be restricted to commercial/industrial use. The Core Team hereby recommends that 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)

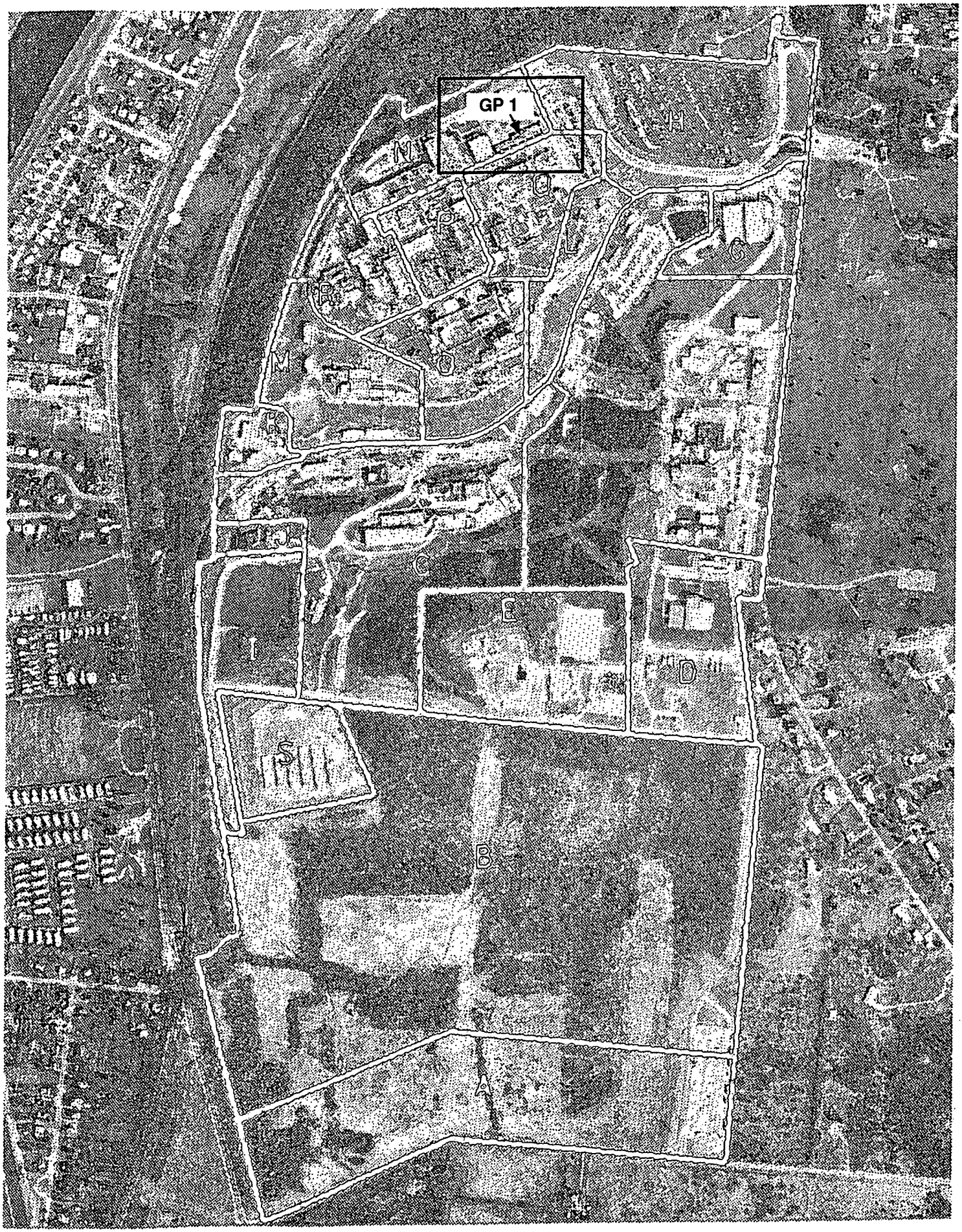
USEPA: Timothy J. Fischer — 2/9/99
Timothy J. Fischer, Remedial Project Manager (date)

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



Mound Plant
Building Data Package
BDP GP 1

Release Block N


GP 1
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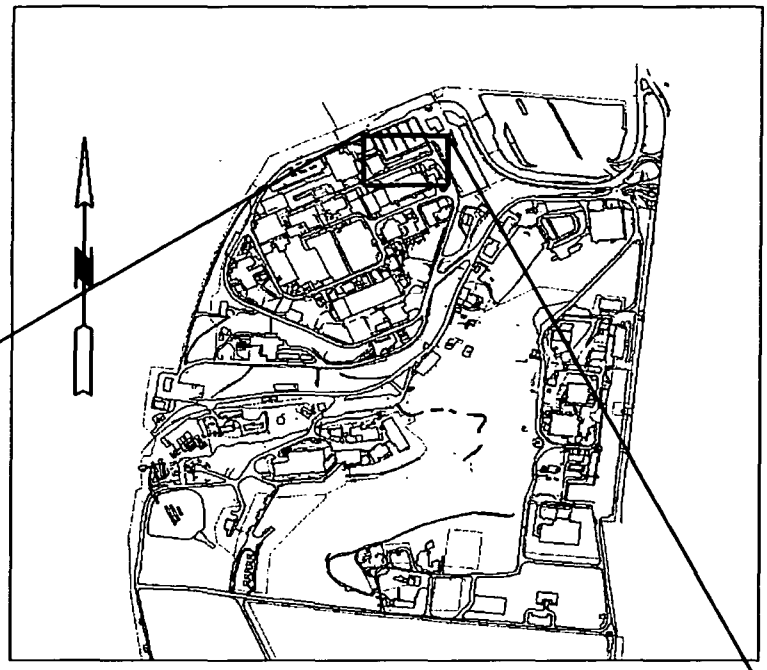
Mound Plant
Building GP-1
Guard Post 1,
Firing Range
Release Block N

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



GP-1 Building

BUILDING DATA PACKAGE (BDP)

GUARD POST 1

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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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 Building GP-1 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 1527-97).

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 Building GP-1 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 during the month of October, 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 Report of the Mound Plant, March 1996
- 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 Building GP-1 footprint and an arbitrary 15-foot wide perimeter around the building. Original construction in 1950 included only the basic guard post or most easternly located building segment. Over the succeeding years, the building was expanded to its current configuration. The firing range or last segment was constructed in 1981. A Satellite Accumulation Area existed in the building. Waste consisted of solvent contaminated rags that were regularly collected by Waste Management.

2.1 Current Uses of Building GP-1

Since construction, the building has been used as a security personnel training and office facility. It also houses the Mound Plant security personnel firing range.

2.2 Past Uses of Building GP-1

Until 1995, the Mound Plant Communications Center was housed in the building.

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.	Cracking/peeling paint has been removed. Damaged paint did not contain lead.	Para. 4.2.2.4 Appendix J
Lead	Associated with firing range activities.	Procedural maintenance/clean-up procedures in place to control contamination. Decontamination clean-up accomplished. Interior building painted to encapsulate contamination.	Para 5.1.1 Appendix J
Radiological	Isolated Pu-238 detection below the building.	Confirmation sampling accomplished Results below comparison criteria.	Para. 4.2.2.1 Appendix G/L

2.4 Radiological Characterization Summary For GP-1 Structure

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm2)	Surface Contamination Guideline (dpm/100cm^2) (Note 2)	COMMENTS
Highest Alpha Smearable Activity	99-GP-1-03	Room 1B	7.65	20	
Highest Alpha Fixed Activity	Note 1	Note 1	<100	100	
Highest Beta Smearable Activity	98-GP-1-03	Room 16	9.07	1,000	
Highest Beta Fixed Activity	Note 1	Note 1	<5000	5,000	
Highest Tritium Smearable Activity	99-GP-1-08	Roof Exhaust Vent	73.21	10,000	

Note 1: All RSDS' associated with the confirmatory survey were <100 dpm/100 cm2 alpha and <5000 dpm/100 cm2 beta. RSDS' include: 98-GP-1-01, 98-GP-1-02, 98-GP-01-03, 98-GP-1-04, 99-GP-1-01, 99-GP-1-02, 99-GP-1-03, 99-GP-1-04, 99-GP-1-05, 99-GP-1-06, 99-GP-1-07, and 99-GP-1-08.

Note 2: Core Team Determined Values

RSDS: Data Sheet that provides radiological field monitoring survey results.

2.5 Associated PRS Table for GP-1

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 241	CERCLA	NFA	See Appendix N.

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

Building GP-1 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 diminishing 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. Building GP-1 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 Building GP-1

Building GP-1 is an 8,000 square foot concrete block structure with a metal built-up membrane coal tar, asphalt, and carboline roof. It has a brick facing. The building has HVAC for cooling, as well as central steam and chilled water. 240 volt electrical service is also included.

Potable water and sanitary services at Building GP-1 are provided by the Mound Plant. The 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 waste water pursuant to a National Pollutant Discharge Elimination System (NPDES) permit issued by OEPA.

3.3 Current and Past Uses of Buildings Adjacent To GP-1

Proximity to GP-1	Building Area (Sq. Ft.)	Current Use	Past Use	Direction From Building
GH Building	5,347	Inactive	Offices/ personnel/ security	Northeast
W Building	32,484	Maintenance	Maintenance	South
Building 47	3,610	Inactive	Fire Station/ Security	South
Building 91 (formerly)	8,065	Removed	Office/ administration	West

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 area. 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 more detailed description, 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 Building GP-1 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

None.

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 Building GP-1. PRS 241, binned "No Further Assessment" and identified as Soil Contamination - Main Hill Parking Area, is related by geographic proximity. See Appendix N.

4.2.2 Sampling Data

4.2.2.1 Radiation Surveys

Building GP-1 radiological surveys were accomplished. Refer to paragraph 2.4 for further information. (See Appendix G and Appendix L.)

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 in Building GP-1.

4.2.2.4 Lead Paint

Congress established maximum lead concentrations in residential paint in 1978. Construction of the building began in 1950. Lead paint is assumed to be in the building. All damaged paint has been repaired. Investigation showed that damaged paint did not contain lead. See Appendix J.

4.2.2.5 Asbestos

Mound's technical manual, *Asbestos Program Manual, MD-10391*, indicates (known, assumed, or suspected) asbestos is found in Building GP-1. All asbestos observed was not friable.

4.2.2.6 Radon

The results of a 1989-90 Mound Indoor Radon study indicated an average radon concentration of 0.05 picocuries/liter in Building GP-1. The EPA recommended standard for radon is 4.0 picocuries/liter. (See Appendix H.)

4.2.2.7 Lead

Lead contamination present from firing range activities was cleaned using a combination of HEPA vacuuming and wet wiping all firing range surfaces. See Appendix J for sampling results. Interior of building painted to encapsulate contamination.

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 photograph shows the completed initial phase of construction on the Mound Plant Main Hill. Approximately fourteen 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.

The 1959 photo close-up shows the completed initial guard post segment. Other photo close-ups follow the building construction progress.

5.0 Site Reconnaissance/Inspections: Findings, Observations

See Appendix F. Findings have been addressed and verified by teleconference with the Building Manager on October 28, 1998.

5.1 Hazardous Substances in Connection with Identified Uses

5.1.1 Space

None.

5.1.2 Heating/Cooling

A HVAC unit provides the building's air conditioning. Central steam and chilled water are also provided. The building has fire sprinkler service. These systems will continue in operation.

5.1.3 Stains or Corrosion

None.

5.1.4 Drains and Sumps

The building is serviced by sanitary and storm drain systems according to the underground utility diagram.

5.1.5 Wastewater

Potable water and sanitary service is provided for Building GP-1. 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 Building GP-1.

5.1.7 Suspected Asbestos Containing Material

ACM in buildings can be found in five 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); and other products such as ceiling and floor tiles and wall boards (miscellaneous materials).

Records indicate that asbestos is found in the building. All asbestos observed was not friable.

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 has been repaired and did not contain lead.

5.2 Hazardous Substance Containers and Unidentified Substance Containers

No unidentified substances were found in or near Building GP-1.

5.3 Storage Tanks

No storage tanks are associated with Building GP-1.

5.4 Indications of PCBs

Fluorescent lighting is used in this building. It is assumed that the lighting contains PCBs. The lighting will be replaced with normal maintenance. The building transformer does not contain PCBs.

5.5 Indications of Solid Waste Disposal

Hazardous wastes were generated in Building GP-1 due to firing range activities. A Satellite Accumulation Area did exist in the building. Spent shell casings from the firing range were sold for recycling.

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 Building GP-1, Mr. Gary Weidenbach, was interviewed on October 28, 1998. Mr. Weidenbach has been employed at the plant for 22 years and has been Building Manager of Building GP-1 for one year.

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

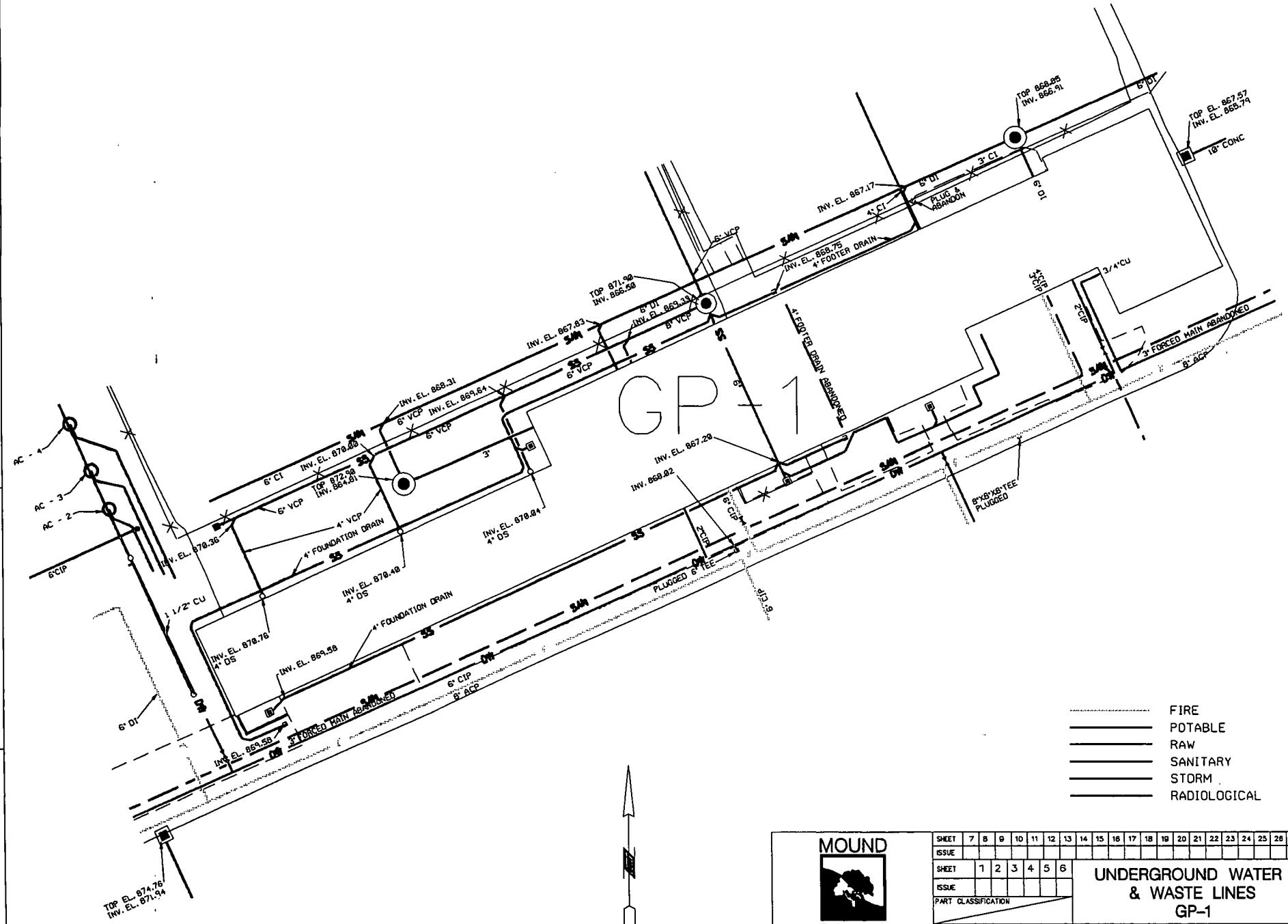
Map of Montgomery County

Appendix C

Site Plan

Appendix D

Building Drawings



ISS	DATE	REVISION	BY	CHK'R	ENG	LP&EC	APVD	M
	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 GP-1

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE

DRAWING NUMBER: gp_1plan.dgn

JOB NUMBER

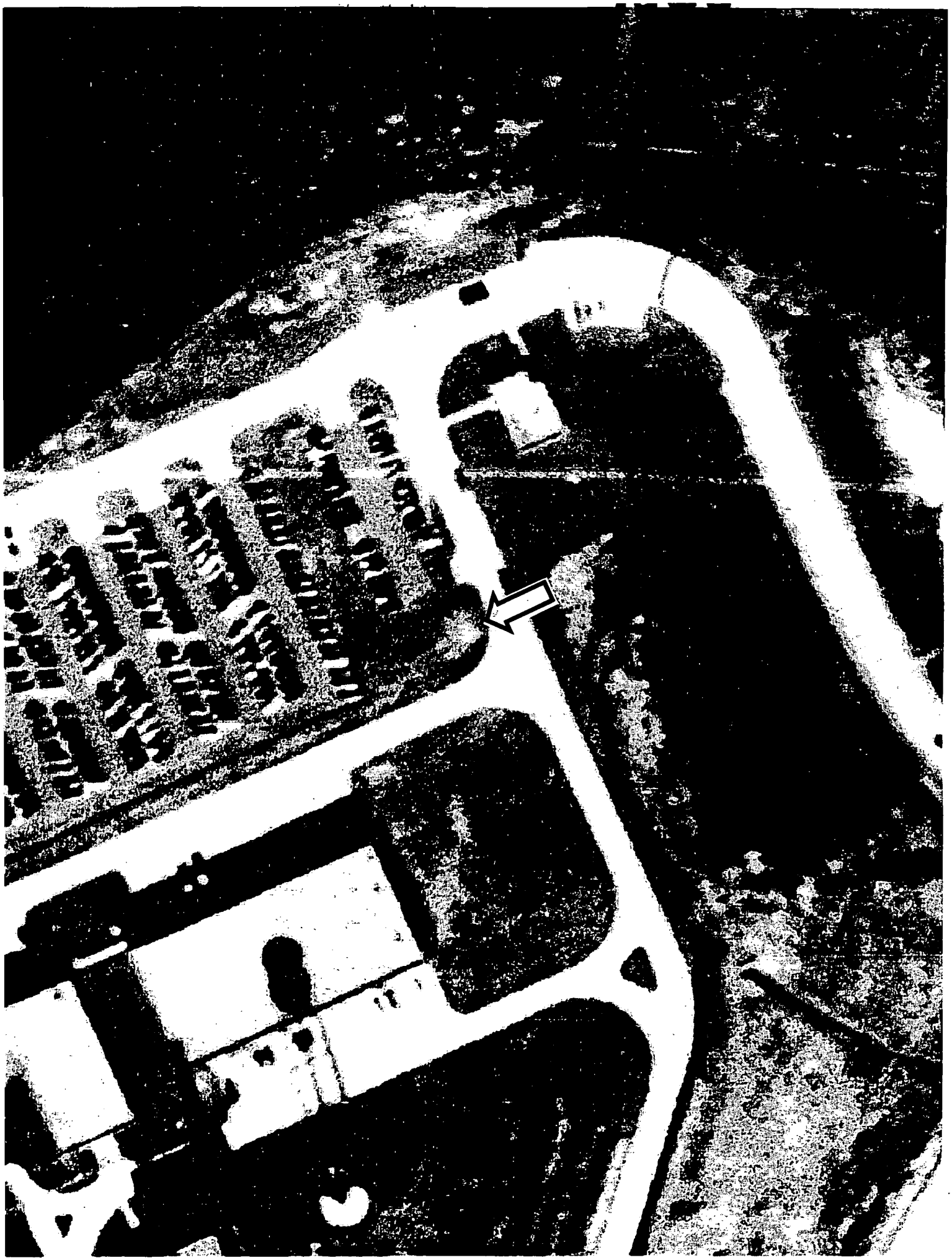
DWG TYPE: STE | PRJC | CAGEC | SCALE: NONE | SHEET

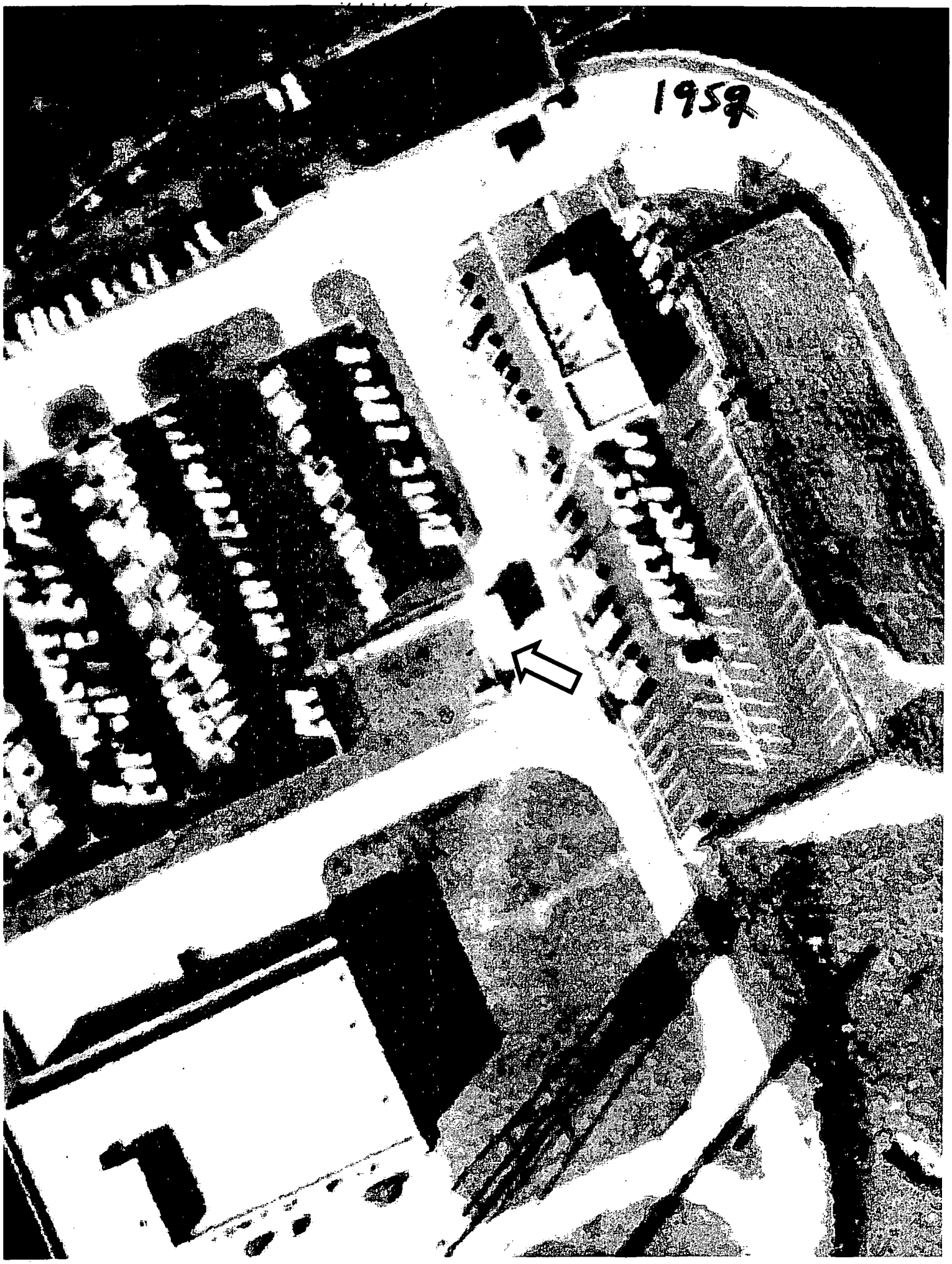
STATUS: MD-REL-02/22/99 | ORIGIN: MSTATION 5.0

Appendix E

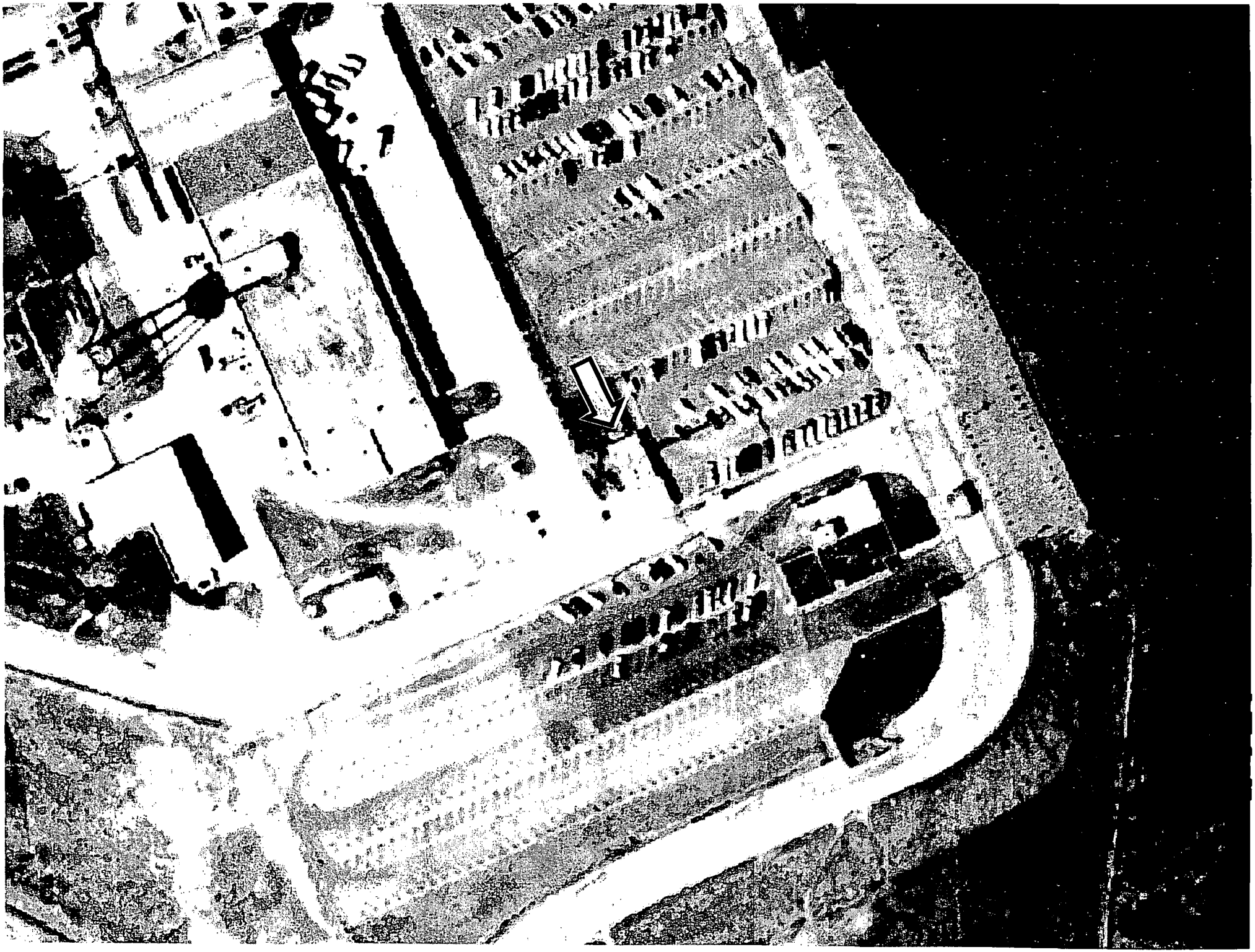
Aerial Photographs

Close-ups




1959

1965



1973

1983

Appendix F

Environmental Appraisal Report of the Mound Plant (Extract)

9.10 BUILDING GP-1

9.10.1 Scope of Building GP-1 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 GP-1 on the morning of February 7, 1996. The Environmental Appraisal Checklist (EAC) (Attachment 1—Section 9.10.6.1) was used to record findings. The appraisers were accompanied by the process manager. The building manager was not present. Other information was supplied by the building manager and recorded on the Building Manager's Questionnaire (BMQ), included as Attachment 2 (Section 9.10.6.2).

9.10.2 Description of Building GP-1

Building GP-1 is used for training of security personnel and for office space. It is located on the main hill, with Building 91 to the west and Building GH to the north. Its location is shown in Attachment 3 (Section 9.10.6.3).

The building is a one-story, 8,000-square-foot structure of reinforced concrete with brick facing. It has a built-up membrane roof of coal tar, asphalt, and carboline. It was constructed in 1950. There is electrical service of 240V. Other systems include central steam, chilled water, and package heating/air conditioning units.

The building has been used for the same general purpose since it was constructed. In addition to training facilites, a firing range, and offices, the communications center was also housed in Building GP-1. The communications center was moved to another building in 1995.

9.10.3 Summary of Findings

Building GP-1 was a very well-maintained building. There were several potential issues of environmental concern, based on activities in the building. Each one had been considered and properly addressed by the process manager. While there were some suggestions for improvements, environmental controls in the building and its process manager serve as models at Mound.

9.10.4 Observations

9.10.4.1 Air Emissions

There are no fuel-burning aciivities in the building. A permit application was submitted to the Ohio Environmental Protection Agency (OEPA) in 1992 for emissions from the firing range. No permit was issued. EG&G MAT Environmental Monitoring Group professionals consider the source emissions negligible, but no documentation exists to confirm the determination. The building is included in the Mound Air Emissions Database (11-30-95) showing two sources, the firing range, and a gas dispensing facility. The appraisal team toured the firing range, but no gas dispensing facility was in evidence. There is no fugitive dust.

9.10.4.2 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.

9.10.4.2.1 Sanitary Wastewater

According to a diagram of underground utility lines, presented as Attachment 5 (Section 9.10.6.5), the building is serviced by a sanitary wastewater collection line. Sanitary effluent is conveyed to the onsite tertiary wastewater treatment facility, and subsequently discharged to the Great Miami River. There is no monitoring of building effluent. Based on operations data, supplied by the process owner, effluent from Building GP-1 does not deviate from that expected by the sanitary treatment plant manager.

9.10.4.2.2 Storm Wastewater

The building is serviced by storm drains according to drawings presented in Attachment 5 (Section 9.10.6.5). There are several floor drains. Due to the age of the building and practices at the time of construction, it is assumed that floor drains enter the storm system. It was outside the scope of this appraisal to perform tests to confirm drainage patterns.

Downspouts from the roof lead through hard pipes into the ground; it is assumed drainage flows into the storm collection system. No exterior grates and drains were observed in the area immediately around the building.

There is a sump located beneath the firing range, according to the process manager. It is important to note that the firing range, which has lead contamination, is not washed down; drainage is not allowed to enter the sump. Instead, the firing range is routinely swept using a vacuum with a high-efficiency particulate absorber filter. The dust is contained and disposed of as hazardous waste. The process manager is aware of the potential for lead contamination of mop water and other water sources, and has developed procedures to assure that lead does not enter wastewater systems.

9.10.4.2.3 Chemicals

Other than the potential for lead contamination, discussed in the previous section, there were no liquid or solid chemicals containing Clean Water Act (CWA) pollutants in evidence in Building GP-1. There was no visual evidence that chemicals had entered the drainage system.

9.10.4.3 Potable and Service Water

Potable water is supplied to the building, according to information presented in the underground utility lines drawing (Attachment 5—Section 9.10.6.5). Service water is also supplied. Sources are posted. Backflow preventers were in evidence, except for one connection in Room 19. The valve may have included a backflow preventer, but the appraisal team requested that it be confirmed. The process manager volunteered to contact Maintenance for an inspection.

There are two water fountains. It is not known if they are of the type which may cause lead contamination. A program is underway at Mound to check all fountains.

9.10.4.4 Chemical Storage and Hazardous Materials

Janitorial supplies were stored in the building. The MSDS's for the supplies were maintained by the janitorial supervisor in a central location. It was recommended that they be moved to Building GP-1 as well.

Other chemicals were stored in the building as well. MSDS sheets were available and in a well-marked folder. A brightly colored sign was posted above them. Flammables were stored in a cabinet in conformance with 20 CFR 1910.106.

Ordnance was stored in locked vaults. The vaults did not conform to 29 CFR 1910.106(d)(4). The process manager should request that an ordnance safety specialist inspect the storage vault to determine if such storage is necessary and appropriate. Current storage may be adequate.

The building is equipped with emergency response equipment such as a portable eyewash and a fire extinguisher in, conformance with 29 CFR 1910. There is no evidence of information about

an Emergency Evacuation Plan, and no signs were posted in work areas as required in 29 CFR 1910. The process manager noted that since the building is a site emergency control center, all personnel should be aware of precedures. However, he agreed to post signs.

There are no sumps, separators, or catch basins in the building, other than a sump located under the firing range. It is discussed in Section 9.10.4.2.2 of this report. There are no underground storage tanks associated with Building GP-1.

According to information provided in the BMQ, there is a transformer in the building. It does not contain polychlorinated biphenyls (PCB's). Inspection records were not reviewed. It should be confirmed that if the transformed contains oils, that it bears an appropriate sticker as described in 40 CFR 761. According to the 1995 PCB Annual Document Log, the building does not contain PCB's.

The building contains asbestos, based on screening recorded in MD-10391, *Asbestos Program Manual* (9-14-95). There was no visual evidence of friable asbestos. Insulation and pipe lagging was well-maintained. Piping was well-marked.

9.10.4.5 Solid, Hazardous, and Radioactive Wastes

According to information provided in the BMQ, hazardous wastes are generated in Building GP-1. A Satellite Accumulation Area (SAA) is designated in the building. It conforms to requirements set forth in OAC 3745-52-11. The process manager is in charge of the SAA, and notes that Waste Management professionals have been very responsive to requests for assistance and information. Waste is picked up within three days.

The process manager is well aware of potential lead contamination issues. A contractor recently cleaned the firing range by sweeping. The dust bag was deposited in the SAA.

Waste characterization records conform to requirements of OAC 3745-52-11. Characterization is by process kowledge, and is documented. Records have been maintained for over three years. The generator/process manager has completed waste generator's training, and recognizes his responsibility for "cradle to grave" handling of hazardous wastes.

Solvent-contaminated rags are deposited in a well-labelled red can. Contents of the can are collected by Waste Management. For other buildings at Mound, solvent-contaminated rags are collected and sent to an offsite contractor for cleaning. The process manager was advised that if the rags from Building GP-1 were handled as such, it was important to notify the vendor of potential lead contamination. The team also advised the process manager to meet with the contracting officer to assure that the contractor's procedures were reviewed and appropriate relative to cleaning solvent rags and handling lead by-products.

Spent shell casings from the firing range are sold for recycling. At Mound, solid waste is removed by janitorial personnel to a site collection point, then shipped offsite to a local landfill by a contractor. Aluminum cans, glass, and cardboard are removed by janitorial personnel to

specific collection points, then are sent offsite to be recycled by the same contractor. White paper is collected and sent offsite to be recycled by a service contractor.

9.10.4.6 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. An example is the recycling of spent shells from the firing range.

9.10.4.5 Findings and Recommendations

Findings related to the environmental appraisal of Building GP-1 indicates that the following action items, in priority order, should be planned and scheduled.

GP-1-1 Ordnance was stored in locked vaults. The vaults did not conform to 29 CFR 1910.106(d)(4). The process manager should request an ordnance safety specialist to inspect the storage vault to determine if such storage is necessary and appropriate. Current storage may be adequate.

GP-1-2 The sign posted in Building GP-1 above the folder holding MSDS's was not observed by the appraisal team elsewhere at Mound. It would be an excellent standard sign.

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9.10.6.1 Environmental Appraisal Checklist

ENVIRONMENTAL APPRAISAL CHECKLIST

Building Name GP-1 (Print used to be GS1)

Appraisers:

Name	Discipline
Nancy Vizzo	
John Hausfeld	
Mike Merker	

Building Manager: Cathy

Process Manager: Alton Brown

Ron Parr

Date: 2-7-96 am

ENVIRONMENTAL APPRAISAL CHECKLIST

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Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vyro 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	see note below

floor drains drainage not marked on drawing

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	sanitary supplies — not included in list
	Is the building in operation? What are the processes and where do they discharge to?	Y / N _____ _____	firing range
	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	
	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	Sump under range? NOT KNOWN -- ck.
	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 Y / N Y / N	sump (mentioned above)

9.10-11 Check prints for sump under range under room 2 & outside.

firing range has lead contamination. Not washed down. Sweep using HEPA filter vacuum. Bullet collected & disposed as hazwaste.

9.10-12

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vogel Hallfeld Meier Date: 2/7/96am

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	firing range
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 N/A	No permit Rm 23/24
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)	

App made 92 for permit — Head emu
agency rep; considered negl ? No

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Voss / Hatsfeld / Merker Date: 2/7/96

NOT completed

CAA Checklist

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: _____

9.10-13

9.10-14

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vigo / Hamfeld / Merker Date: 2/7/96 am

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.

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)	Acid janitor supplies to MSDS book
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	Extremely ordered.
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	
29 CFR 1910.106(d)(7)	Incompatible chemicals are not stored together.	Y / (N)	
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 NA	

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Jyga Hallsfeld Merter Date: 2/7/96 am

HM Checklist

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	
29 CFR 1910.151	Eyewashes/showers shall be provided within the work area. Ensure unit is operational.	Y / N	
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	
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 N/A	
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 N/A	
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	
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 N/A	
29 CFR 1910.104	Bulk oxygen storage shall be permanently placarded "OXYGEN - NO SMOKING - NO OPEN FLAMES".	Y / N N/A	
	Is there a sign posted in each work area regarding emergency egress and emergency response action?	Y / N	This is emergency control
	Is there an emergency response plan available?	Y / N	

9.10-15

9.10-16

Environmental Appraisal Checklist

Building Name: GP 1 Appraisers: Vyas/Burspeed Moder Date: 2/7/96 am

HM Checklist

Regulatory Guideline	Question	Response	Comments
	Is there a process area?	Y / N	firing range
	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
				Y / N	Y / N	Y / N	Y / N
	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

Source: _____

Environmental Appraisal Checklist

Building Name: GP 1 Appraisers: Muker Hanafed Vigo 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 Not known	check to confirm that valve in Rm 19 has backflow
	Are sources of service water (janitorial and laboratory faucets, or outdoor spigots) posted as non-potable water sources?	Y / N	preventer at boiler
	Does the facility contain any water coolers or fountains that are not lead free? Complete Table C.	Y / N	

TABLE C—Water Fountain Survey

Building	Location	Model #	Comments / Date of Analysis for Lead
GP1	15	nolabel	illegible B-941592 —
		OASIS?	
GP1	16	OASIS	9308051263

Source: Service Water — ck backflow prev.

9.10-17

9.10-18

Environmental Appraisal Checklist

Building Name: GPL

Appraisers: Hansfeld Hyes Merkar Date: 2/7/96am

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	

red can - rags, cloth, solvents & lead cart deposited in bin.

All batteries collected & go to WM.

King picks up hospital rags & burns.

Filing range material ~~etc~~ clean
— MK Moore Waste mang handles disp

training checked - OK

Environmental Appraisal Checklist

Building Name: GPI Appraisers: Hassfeld Merker Uyso Date: 2/7/96 am

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?	Y / N	
	Is it treated as such?	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	

takes up several months to fill can in Sat'l Acc Area.

Waste mang. is very responsive picking up waste

SAA equipment properly labeled / locked.

records maintained 3 yrs.

9.10-19

Environmental Appraisal Checklist

Building Name: 6P1 Appraisers: [illegible] Date: 2/7/96 am

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:	NA	
	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 NA	
	If no go to next section.		
	If yes, note.		
	For Building 23, Building 72 & Burn Area use special checklist.		

Environmental Appraisal Checklist

Building Name: GPI

Appraisers: Hatcefield Vogel Meiler

Date: 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?	Y / N	
	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	

9.10-21

9.10-22

Environmental Appraisal Checklist

Building Name: GPI

Appraisers: Vyas Hansfeld Maker

Date: 2-7-96am

Not completed

RCRA Checklist

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: OP 1 Appraisers: Vogelhausfeld Merker Date: 2/7/96 am

9.10-23

Asbestos Screening Checklist

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

Asbestos Checklist

Per asbestos management plan

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 NA	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	

Environmental Appraisal Checklist

Building Name: 6P1 Appraisers: Vyas Hansfeld Merker Date: 2/7/96am

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	
	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	
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	

9.10-24

Environmental Appraisal Checklist

Building Name: GP 1 Appraisers: Hansfield/Hayes/Merker Date: 2/7/96 am

TSCA Checklist

Not completed

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	

9.10-25

9.10-26

Environmental Appraisal Checklist

Building Name: GP I

Appraisers: Vigo/Hausfeld/Merker

Date: 2/7/96 am

TSCA Checklist

not completed

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: GP1 Appraisers: Vyas Bansfield Merkel Date: 2/7/96

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	

9.10-27

9.10-28

Environmental Appraisal Checklist

Building Name: GPI Appraisers: Vyas Hausfeld Meeker Date: 2/7/96

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: GP1 Appraisers: Vyas Hausfeld Meiner Date: 2/7/96

not completed

Low-Level Waste and Transuranic Waste Checklist

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	

9.10-29

9.10-30

Environmental Appraisal Checklist

Building Name: BP 1 Appraisers: Vigo Hauesfeld Neiker Date: 2/7/96am

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: GP1 Appraisers: Vigo Hausfeld Maker Date: 2/7/96

Low-Level Waste and Transuranic Waste Checklist

not Completed

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:

9.10-31

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vyge Hatfield Merker Date: 2/7/96am

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	
	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	

Empty cans recycled.
Sign to clean up cleaning rags (see Smel

Environmental Appraisal Checklist

Building Name: GPI Appraisers: Vyge Hausfeld Meier Date: 2/7/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
HALOGENATED ORGANIC (NONSOLVENT) WASTES			
	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			
	Are any technologies for the recovering of metals from waste rinsewater used?	Y / N	recover metals—
	Evaporation of waste rinsewater?	Y / N	sell spent shells
	Reverse osmosis?	Y / N	
	Ion exchange?	Y / N	
	Electrolysis?	Y / N	
	Agglomeration?	Y / N	
CORROSIVE WASTES			
	Are acidic or basic cleaning solutions used as treatment for pH adjustment chemicals?	Y / N	

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9.10-34

Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vyas/Hausfeld Merker Date: 2/7/96am

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: GP 1 Appraisers: Vyas Hansfeld Nelson Date: 2/7/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	Are cleaned parts drained on the sink to minimize solvent spills?	Y / N	N/A
	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			N/A
	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	

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Environmental Appraisal Checklist

Building Name: GP1 Appraisers: Vyas Hausfeld Merker Date: 2/7/96

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			
	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 NA	
	is a method used to minimize the use of new materials such as a countercurrent process?	Y / N NA	

Environmental Appraisal Checklist

Building Name: GP 1 Appraisers: Hans Haussfeld Marker Date: 2/7/96

Waste Minimization/Pollution Prevention Activities Checklist

Regulatory Guideline	Question	Response	Comments
	If there is a recycling program, what technique is used?	Y / N	To be investigated by process manager
	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? NA		
	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?	_____	red can - rags

solvent rags to labeled red can

9.10-37

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9.10.6.2 Building Manager's Questionnaire

3958 ~~[illegible]~~ **Building Manager's Questionnaire**

Building Name: GP-1 Building Manager: K.G. Koehler Phone: _____ Date: 12-07-95
Alternate: _____ Phone: _____

THE FOLLOWING QUESTIONS HAVE BEEN ANSWERED TO THE BEST OF MY KNOWLEDGE. PLEASE VERIFY PERTINENT STATEMENTS. KGK

1. What are the access requirements (training, clearance, etc.)?
NONE – GENERAL OFFICE AREA
FIRING RANGE AREA – SAFETY GLASSES & CONTACT ALTON BROWN 5207

2. What protective equipment is required to enter the building?
FIRING RANGE / HALL / AMMUNITIONS VAULT – REQUIRES SAFETY GLASSES – DO NOT ENTER IF FIRING RANGE IS IN USE – CONTACT ALTON BROWN FOR TIME WHEN RANGE IS NOT IN USE & TO SCHEDULE ACCESS TO THIS AREAS.

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

4. Provide a physical description of the building.

This one-story structure is of reinforced concrete with brick facing. Total area is 8,000 ft². It has a BUM roof (coal tar, asphalt, and carboline); HVAC systems include central steam, chilled water and package HVAC units. Building has an indoor firing range, PT rooms, ~~alternate communications center,~~ and locker rooms. Building is not contaminated with any radioactive or energetic materials. Lead from firing range is routinely cleaned quarterly.

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

5. Provide a drawing of the building.

Attached

6. What is the current building use?

Building is used for security training. and office space.

Source: Mound Buildings, 5-9-95

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

COMMUNICATIONS CENTER WAS RELOCATED TO BUILDING 99 IN NOV 1995.

Source: Mound Buildings, 5-9-95

Building Name: GP-1 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: Guard post, firing range, storage of weapons and ammunition

How Wastes Are Generated:

Some types of tear gas grenades have a limited shelf life. If they are not used before the end of that shelf life, they begin to deteriorate and need to be disposed of. Security has some of these grenades and is working with Waste Management to find a way to discard them. To date, the problem has not been solved. Later designs of tear gas containers (which are now being purchased) do not present the same disposal problem.

In the firing range, both lead dust and pieces of lead (spent bullets) need to be cleaned up. The lead dust is collected with a vacuum cleaner, and trays near the targets catch the bullets that fall to the ground. ~~Industrial Hygiene~~ CONTRACTORS WITH IH OVERSITE) vacuums the area, ~~empties the trays of bullets, and handles disposal of the waste.~~ MOUND WM DISPOSES OF THE WASTE.

Two gun-cleaning solvents are used in GP-1: Hoppe's No. 9 and Breakfree. Solvents are generally poured on rags which are used to clean the guns. The rags are put in a container where they are kept until they are washed. No liquid solvent is generated.

Contact:
Phone #:

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

Building Manager's Questionnaire

Building Name: GP-1 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? Yes

Process Source	Room Number	Hood Number	Active	Chemicals Used	Quantity Used	Quantity to Waste Management	Lbs./Yr. Operation	Air Emissions
Firing Range (Projections)		EHR-2	Y	lead	0.0006		0.9048	
Gas dispensing Facility			Y	VOC	20		683.8	
Firing Range (Projections)		EHR-2	Y	nitrogen oxides carbon monoxide	0.07 0.028		7.791 31.164	
			Y / N					
			Y / N					

Source: Mound Air Emissions Database 11/30/95

Building Name: GP-1 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
Where?

15. Does the building discharge to the sanitary sewer? Yes No
Where?

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

ASE
RIFY
ILITY
RAWINGS
OUT
FIRIZE
HEY
E NOT
AS-
UILT
ONDITION

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

9.10-44

Building Manager's Questionnaire

Building Name: GP-1 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 CONTAINING,

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)
CLP BREAKFREE	L	7843/G
560 CS TEAR GAS GRENADE	L	588/G
M518 RIOT CS TEAR GAS GRENADE	L	328/G
M519 CS TEAR GAS HAN-BALL GRENADE	L	414/G
MODEL SGA-300 1.50" TEAR GAS	L	68.4/G
~~ORTHOCHLOROBENZAL MALONONITRILE~~	L	138/OZ

Source: Chemical Inventory 1994

JANITORIAL CLEANING SUPPLIES

9.10-45

Building Name: GP-1 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?

Chemical	Amount	Clean-up Measures

Source: NONE THAT I AM AWARE OF

21. Where do waste chemicals go?

WASTE MANAGEMEN

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

NURMAL JANITORIAL SUPPLIES

23. Where do excess janitorial supplies go?

ASK JEANIE BLEVINS

Source: _____

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

Chemical	Amount	Chemical	Amount

Source: _____

9.10-46

Building Manager's Questionnaire

Building Name: GP-1 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

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? How many days per year is it filled?
Is there an emergency overflow tank? Have there been previous overflows?

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

Source: _____

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

Materials	Amount
Attached	

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

G RANGE	FIRING RANGE RAGS, DEBRIS	D008 F002	72.2
G RANGE	FIRING RANGE SOLVENT RAGS, DEBRIS	D008 F002	82.0
ANGE	LEAD CLEANUP DEBRIS	D008	8.0
G RANGE	LEAD CLEANUP, DEBRIS	D008	58.4
G RANGE	LEAD CONTAMINATED DEBRIS	D008	383.3
G RANGE	LEAD CONTAMINATED DEBRIS	D008	387.5
G RANGE	LEAD CONTAMINATED DEBRIS	D008	357.7
G RANGE	LEAD CONTAMINATED DEBRIS	D008	399.8
G RANGE	LEAD CONTAMINATED DEBRIS	D008	392.0
G RANGE	LEAD CONTAMINATED DEBRIS	D008	411.4
G RANGE	LEAD CONTAMINATED DEBRIS	D008	312.4
G RANGE	LEAD CONTAMINATED DEBRIS	D008	386.6
G RANGE	LEAD CONTAMINATED DEBRIS	D008	372.1
G RANGE	LEAD CONTAMINATED DEBRIS	D008	350.8
G RANGE	LEAD CONTAMINATED DEBRIS	D008	330.7
G RANGE	LEAD CONTAMINATED DEBRIS	D008	405.8
G RANGE	LEAD CONTAMINATED DEBRIS	D008	400.9
G RANGE	LEAD CONTAMINATED DEBRIS	D008	406.4
G RANGE	LEAD CONTAMINATED DEBRIS	D008	284.3
G RANGE	LEAD CONTAMINATED DEBRIS	D008	250.1
G RANGE	LEAD CONTAMINATED DEBRIS	D008	270.8
G RANGE	LEAD CONTAMINATED DEBRIS	D008	406.4
G RANGE	LEAD CONTAMINATED DEBRIS	D008	303.2
G RANGE	LEAD CONTAMINATED DEBRIS	D008	281.6
G RANGE	LEAD CONTAMINATED DEBRIS	D008	298.7
G RANGE	LEAD CONTAMINATED DEBRIS	D008	167.5
RANGE	LEAD CONTAMINATED DEBRIS	D008	316.5
RANGE	LEAD CONTAMINATED STEEL, DEBRIS	D008	3453.0
G RANGE	LEAD CONTAMINATED STEEL, DEBRIS	D008	1194.0
G RANGE	LEAD CONTAMINATED STEEL, DEBRIS	D008	2067.0
G RANGE	LEAD CONTAMINATED STEEL, DEBRIS	D008	3141.0
G RANGE	LEAD DEBRIS	D008	84.4
G RANGE	LEAD DEBRIS	D008	165.0
G RANGE	LEAD DEBRIS	D008	23.2
G RANGE	LEAD DEBRIS	D008	92.9

ING RANGE	LEAD DEBRIS	D008	76.4
ING RANGE	LEAD DEBRIS	D008	74.8
ING RANGE	LEAD DEBRIS	D008	247.4
JG RANGE	LEAD DEBRIS	D008	73.5
ING RANGE	LEAD DEBRIS	D008	72.2
ING RANGE	LEAD DEBRIS	D008	228.0
ING RANGE	LEAD DEBRIS	D008	102.0
ING RANGE	LEAD DEBRIS	D008	107.2
ING RANGE	LEAD DEBRIS	D008	133.2
ING RANGE	LEAD DEBRIS	D008	196.4
ING RANGE	LEAD DEBRIS	D008	313.4
ING RANGE	LEAD DEBRIS	D008	301.0
ING RANGE	LEAD DEBRIS	D008	116.9
ING RANGE	LEAD DEBRIS, CLEANUP MATERIALS	D008	350.0
ING RANGE	LEAD FILTERS	D008	5.1
ING RANGE	LEAD SHOT	D008	709.0
ING RANGE	LEAD SHOT	D008	538.0
ING RANGE	LEAD SHOT	D008	378.0
ING RANGE	LEAD SHOT	D008	601.0
ING RANGE	LEAD SHOT	D008	452.0
ING RANGE	LEAD SHOT	D008	339.0
ING RANGE	LEAD SHOT	D008	459.0
RANGE	LEAD SHOT	D008	524.0
RANGE	LEAD WATER	D008	281.8
ING RANGE	LEAD WATER	D008	270.0
ING RANGE	LEAD WATER	D008	272.2
ING RANGE	LEAD WATER	D008	256.0
ING RANGE	LEAD WATER	D008	282.2
NG RANGE	RAGS, SOLVENT DEBRIS	D008 F005	92.7
ING RANGE	TEAR GAS CANISTERS (CS AGENT)	NONE	22.0
ING RANGE	TEAR GAS CANISTERS (CS AGENT)	NONE	22.0

Building Name: GP-1 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 MAYBE: CHECK RCRA PART PERMIT APPLICATION

31. Has any area in the building been identified as a satellite accumulation area?
Yes No MAYBE: CHECK RCRA PART B PERMIT APPLICAT

32. Is mixed waste generated, stored, or disposed of from the building? Yes No
Where are logs found? WASTE MGMT (MIKE ISPER) / SECURITY (ALTON BROWN/JEFF LENTZ/RON PAR

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: _____

Building Name: GP-1 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: _____

Building Name: GP-1 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.

NONE

Building Manager's Questionnaire

Building Name: GP-1 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.

UNKNOWN

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

UNKNOWN - CONTACT WASTE MGMT (JIM ZAHORA & CO.)

NOTE: Expenditure of labor & materials on a waste minimization OR POLLUTION PREVENTION program would not be an effective use of funds. The firing range will be shut down upon C.

9.10-53

Appendix G

Radiological Summary/Information

RADIOLOGICAL SURVEY PLAN

FOR THE

TRANSITION OF GP-1 BUILDING

AND

SURROUNDING SOILS

January 25, 1999 (Rev. 1)

1.0 Introduction

This document defines the radiological sampling and analysis requirements for the survey plan for the release of GP-1 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. Exterior building surveys were performed on the roof area of the vents and drains only. Radiation dose rate measurements were performed as well.

3.0 Building Description

GP-1 Building was constructed in 1950 and is a one-story, 7792 square-foot structure of reinforced concrete with a brick face. It has a built-up-membrane roof of coal, tar, asphalt and carboline. It is physically located on the main hill of the Mound site, with GH Building to the north. The building was used for the same general purpose since it was constructed, which included training of security personnel, and office space. GP-1 also includes a firing range. A communication center was previously housed within GP-1, but was moved to another building in 1995.

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 GP-1 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. Exterior building surveys included direct and removable contamination surveys of vents and drains on the roof. 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).

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.

The need for a rigorous sampling assessment in the case of GP-1 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 GP-1 Building was gridded off into 10 x 10-foot areas. Since the building is 7792 square feet, the plan identified that approximately 78 grid cells would be produced. Rooms within the building which were smaller than a 10 x 10-foot area were treated as one grid.

Approximately five swipes were taken per gridded area and analyzed for alpha, beta and tritium removable contamination. This number of swipes taken per 100 ft^2 gridded area equates to approximately 6.5 swipes per 10 m^2, which is similar to the general 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. One swipe was taken on each air intake vent and counted for alpha, beta and tritium removable contamination.

Radiation dose rate measurements were taken throughout the building.

5.2 Exterior Sample Gridding and Sample Location

Biased surveys were performed on the roof of the building at drain and exhaust vent locations only. The survey consisted of taking a swipe at each of the locations and performing a direct measurement using a NE Electra. Measurements were taken at six drains and eight exhaust vents.

Seven soil samples were taken on the south side of GP-1 Building. Radiation dose rate measurements were taken within the 15-foot perimeter of the exterior of the building.

6.0 Discussion of Results

The results of the radiological survey efforts support the "radiological release" of GP-1 Building. The surface contamination release criteria agreed upon by the Radiological Decision Tools Team has been met. All of the direct and removable contamination surveys were below DOE 5400.5 criteria and Mound's Radiological Control Program criteria. 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.

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

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.

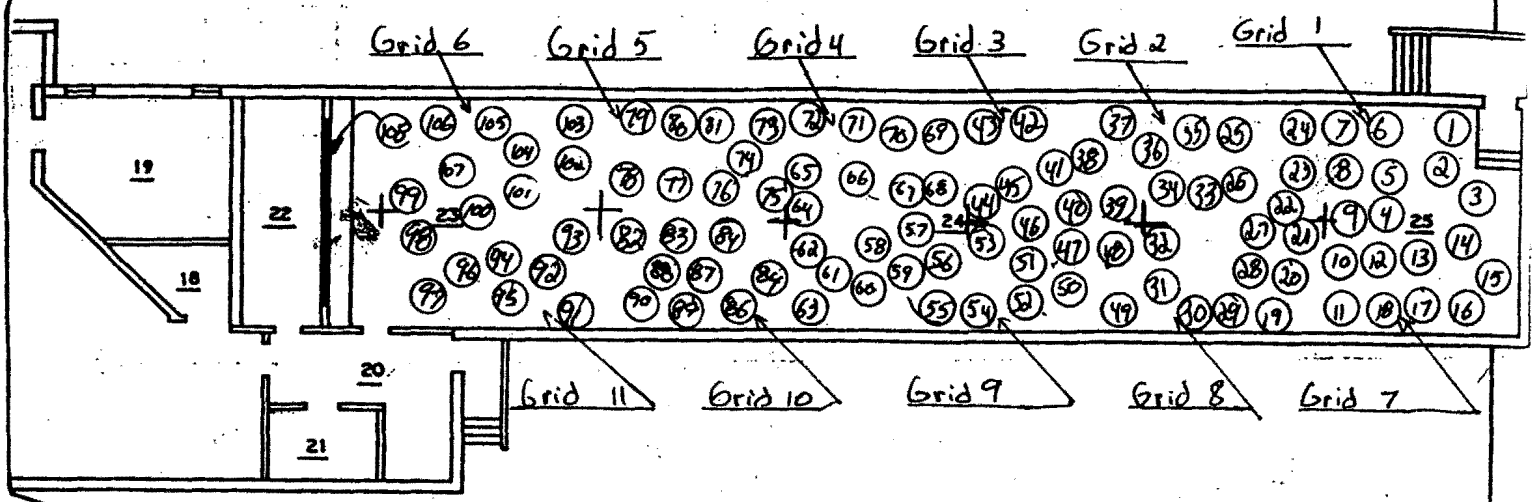
5) Work Plan for Environmental Restoration of the DOE Mound Site, Public Review Draft, Rev. 0.

RADIOLOGICAL SURVEY DATA SHEET

J-1 / J-108 Page 1 of 9 P-1

LOCATION: (BLDG./AREA/ROOM) GS-1 or GP-1	SURVEY NO. 98-GP-1-01
PURPOSE: Release	RWP NO. N/A
	DATE: 11-24-98
	TIME: 1400

MAP/DRAWING



* NOTE: (1) GRID ≈ 10 FT X 10 FT

~~Rooms Smaller Than 10m X 10m will be treated as a Grid~~ MRM 011999

GP-1 BLDG.
FIRST FLOOR

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= Room Number
△# = 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
NEelectra	5382/5365	5-11-99
	N	
	A	

[redacted]	HP# 2257	Date: 11-24-98
Completed by: (Print Name) [redacted]		
[redacted]	HP# 3950	Date: 11/30/98
Counted by: (Print Name) [redacted]		
[redacted]	HP# 3996	Date: 12-8-98
Reviewed by: [redacted]		

ML-9620 (2-98)

1

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	see Attached			Floor
↓				↓
108				

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

COMMENTS: Please see Attached for Smear Results

~~All Smear locations < 100 DPM/100cm² α & < 5000 DPM/100cm² β/γ~~ Direct

Direct Survey not performed 01/6/99 KH

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: SMEAR031
Batch Ended: 11/30/98 7:27

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 98-GP-1-01 BELCHER [108] 11-24-98 JM

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	1.94	2.13	<AL	0.00	1.50	<MDA
A3	3	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	4	0.00	1.97	<MDA	1.48	2.56	<MDA
B1	5	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	6	3.73	2.82	<AL	0.00	1.88	<MDA
B3	7	0.00	1.89	<MDA	1.53	2.28	<MDA
B4	8	1.68	1.91	<AL	0.27	2.20	<MDA
C1	9	0.00	2.24	<MDA	1.77	2.24	<MDA
C2	10	2.03	2.26	<AL	0.00	1.49	<MDA
C3	11	0.00	1.96	<MDA	0.00	1.20	<MDA
C4	12	3.59	2.77	<AL	2.24	2.24	<MDA
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	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	16	0.00	2.05	<MDA	2.81	3.00	<MDA
A1	17	0.00	2.25	<MDA	3.47	2.86	<AL
A2	18	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	19	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	20	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	21	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	22	0.00	2.00	<MDA	0.00	1.41	<MDA
B3	23	0.00	1.89	<MDA	1.53	2.28	<MDA
B4	24	0.00	1.91	<MDA	0.38	2.20	<MDA
C1	25	0.00	2.23	<MDA	0.53	1.86	<MDA
C2	26	0.00	2.31	<MDA	5.35	3.35	<AL
C3	27	0.00	1.99	<MDA	2.42	2.23	<MDA
C4	28	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	29	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	30	0.00	2.55	<MDA	1.03	2.49	<MDA
D3	31	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	32	0.00	2.01	<MDA	0.00	1.53	<MDA
A1	33	0.00	2.22	<MDA	0.98	2.26	<MDA

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98-GP1-01

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR031
Batch Ended: 11/30/98 7:27

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 98-GP-1-01 BELCHER [108] 11-24-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	34	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	35	0.00	1.94	<MDA	0.00	1.33	<MDA
A4	36	0.00	1.97	<MDA	0.40	2.33	<MDA
B1	37	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	38	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	39	0.00	1.88	<MDA	0.44	2.01	<MDA
B4	40	0.00	1.92	<MDA	1.42	2.43	<MDA
C1	41	2.10	2.22	<AL	0.00	1.39	<MDA
C2	42	0.00	2.30	<MDA	4.01	3.07	<AL
C3	43	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	44	0.00	1.98	<MDA	1.35	1.96	<MDA
D1	45	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	46	0.00	2.52	<MDA	0.00	2.08	<MDA
D3	47	1.69	1.99	<AL	0.00	1.96	<MDA
D4	48	0.00	2.01	<MDA	0.00	1.53	<MDA
A1	49	1.88	2.23	<AL	2.07	2.58	<MDA
A2	50	0.00	2.19	<MDA	5.70	3.55	<AL
A3	51	0.00	1.94	<MDA	0.00	1.33	<MDA
A4	52	0.00	1.97	<MDA	0.40	2.33	<MDA
B1	53	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	54	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	55	0.00	1.86	<MDA	0.00	1.29	<MDA
B4	56	0.00	1.93	<MDA	2.45	2.64	<MDA
C1	57	0.00	2.24	<MDA	1.77	2.24	<MDA
C2	58	0.00	2.30	<MDA	4.01	3.07	<AL
C3	59	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	60	0.00	1.98	<MDA	1.35	1.96	<MDA
D1	61	0.00	2.17	<MDA	1.37	2.43	<MDA
D2	62	0.00	2.49	<MDA	0.00	1.56	<MDA
D3	63	0.00	2.00	<MDA	1.22	2.34	<MDA
D4	64	1.63	2.02	<AL	0.00	2.00	<MDA
A1	65	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	66	0.00	2.14	<MDA	0.00	1.99	<MDA
A3	67	0.00	1.94	<MDA	0.00	1.33	<MDA
A4	68	1.71	1.97	<AL	1.37	2.56	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR031
Batch Ended: 11/30/98 7:27

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 98-GP-1-01 BELCHER [108] 11-24-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	69	0.00	2.06	<MDA	0.72	2.10	<MDA
B2	70	0.00	2.03	<MDA	0.91	2.25	<MDA
B3	71	0.00	1.89	<MDA	1.53	2.28	<MDA
B4	72	0.00	1.93	<MDA	3.49	2.84	<AL
C1	73	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	74	0.00	2.26	<MDA	0.00	1.49	<MDA
C3	75	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	76	0.00	1.97	<MDA	0.26	1.63	<MDA
D1	77	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	78	0.00	2.58	<MDA	2.39	2.84	<MDA
D3	79	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	80	0.00	2.03	<MDA	0.23	2.38	<MDA
A1	81	0.00	2.29	<MDA	7.21	3.58	<AL
A2	82	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	83	0.00	1.97	<MDA	1.44	2.35	<MDA
A4	84	0.00	1.96	<MDA	0.00	2.06	<MDA
B1	85	1.77	2.06	<AL	0.57	2.10	<MDA
B2	86	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	87	1.64	1.89	<AL	1.41	2.28	<MDA
B4	88	0.00	1.88	<MDA	0.00	1.28	<MDA
C1	89	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	90	0.00	2.26	<MDA	0.00	1.49	<MDA
C3	91	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	92	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	93	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	94	0.00	2.52	<MDA	0.00	2.08	<MDA
D3	95	0.00	1.99	<MDA	0.00	1.96	<MDA
D4	96	0.00	2.04	<MDA	1.52	2.71	<MDA
A1	97	1.88	2.22	<AL	0.83	2.26	<MDA
A2	98	1.94	2.13	<AL	0.00	1.50	<MDA
A3	99	1.64	1.99	<AL	3.55	2.83	<AL
A4	100	0.00	1.97	<MDA	0.40	2.33	<MDA
B1	101	0.00	2.06	<MDA	0.72	2.10	<MDA
B2	102	0.00	2.03	<MDA	0.91	2.25	<MDA
B3	103	0.00	1.87	<MDA	0.00	1.69	<MDA

12-1-98

12-1-98

12-1-98

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR031
Batch Ended: 11/30/98 7:27

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 98-GP-1-01 BELCHER [108] 11-24-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B4	104	0.00	1.88	<MDA	0.00	1.28	<MDA
C1	105	0.00	2.24	<MDA	1.77	2.24	<MDA
C2	106	0.00	2.26	<MDA	0.00	1.49	<MDA
C3	107	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	108	1.66	1.98	<AL	1.25	1.96	<MDA

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98-GP1-01
~~Page #1~~

30 Nov 98 08:45 ALPHA/BETA - 1.01
Protocol #: 1 PW-H3-403728 User : 5379

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	9.10
Region B:	2.0 -	18.6	0	0.0	8.80
Region C:	40.0 -	2000	0	0.0	9.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
T 98-GP-1-01 BELCHER [J1-J108] 11-29-98 TAS
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	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	9.10	1	B	609.32		0.00	9.50
0	2.00	381.90	0		586.55	776.66	73.63	5.00
1	2.00	0.00	0		564.05	0.00	0.00	0.00
2	2.00	0.00	0		398.49	0.00	0.00	0.00
3	2.00	0.00	0		498.28	0.00	0.00	0.00
4	2.00	0.00	0		608.80	0.00	0.00	2.50
5	2.00	0.00	0		552.74	0.00	0.00	0.00
6	2.00	0.00	0		513.04	0.00	0.00	0.00
7	2.00	0.00	0		527.19	0.00	0.00	1.50
8	2.00	0.00	0		471.78	0.00	0.00	1.50
9	2.00	0.00	0		462.73	0.00	0.00	0.50
10	2.00	0.00	0		523.71	0.00	0.00	0.00
11	2.00	0.00	0		466.50	0.00	0.00	5.00
12	2.00	3.40	0		584.80	6.92	10.91	0.50
13	2.00	0.00	0		473.78	0.00	0.00	0.00
14	2.00	0.00	0		391.98	0.00	0.00	2.50
15	2.00	0.00	0		400.30	0.00	0.00	0.00
16	2.00	0.00	0		565.51	0.00	0.00	0.00
17	2.00	0.00	0		394.37	0.00	0.00	0.00
18	2.00	0.00	0		433.58	0.00	0.00	0.00
19	2.00	0.00	0		432.92	0.00	0.00	1.50
20	2.00	0.00	0		396.72	0.00	0.00	2.00
21	2.00	0.00	0		424.93	0.00	0.00	0.00
22	2.00	1.40	0		520.11	3.02	10.70	0.00
23	2.00	0.00	0		471.15	0.00	0.00	0.00
24	2.00	0.00	0		403.77	0.00	0.00	0.00
25	2.00	0.00	0		446.03	0.00	0.00	2.00
26	2.00	0.00	0		430.85	0.00	0.00	1.50
27	2.00	0.00	0		450.91	0.00	0.00	0.50
28	2.00	0.00	0		463.65	0.00	0.00	0.50
29	2.00	0.00	0		453.27	0.00	0.00	0.00
30	2.00	0.00	0		473.12	0.00	0.00	0.00
31	2.00	0.40	0		525.70	0.86	10.20	5.00
32	2.00	0.00	0		499.84	0.00	0.00	0.00
33	2.00	0.00	0		446.62	0.00	0.00	0.00
34	2.00	0.00	0		566.59	0.00	0.00	0.00

8 of 7
98-GP-1-01
~~Page #2~~
12-1-98

30 Nov 98 10:31 ALPHA/BETA - 1.01
Protocol #: 1 PW-H3-403728 User : 5379

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.00	0		382.52	0.00	0.00	0.00
36	2.00	0.00	0		417.66	0.00	0.00	0.00
37	2.00	0.00	0		527.12	0.00	0.00	1.00
38	2.00	0.00	0		530.39	0.00	0.00	0.00
39	2.00	0.00	0		447.35	0.00	0.00	0.00
40	2.00	0.00	0		441.51	0.00	0.00	3.50
41	2.00	0.00	0		451.12	0.00	0.00	0.00
42	2.00	0.00	0		410.41	0.00	0.00	0.00
43	2.00	0.00	0		449.92	0.00	0.00	1.50
44	2.00	0.00	0		415.55	0.00	0.00	0.00
45	2.00	0.00	0		578.23	0.00	0.00	1.00
46	2.00	0.00	0		473.29	0.00	0.00	0.00
47	2.00	0.00	0		389.46	0.00	0.00	0.00
48	2.00	0.00	0		432.72	0.00	0.00	3.50
49	2.00	0.00	0		475.95	0.00	0.00	0.50
50	2.00	0.00	0		471.13	0.00	0.00	0.00
51	2.00	0.00	0		404.92	0.00	0.00	2.00
52	2.00	0.00	0		427.79	0.00	0.00	0.00
53	2.00	0.00	29		444.61	0.00	0.00	6.00
54	2.00	0.00	0		370.33	0.00	0.00	1.00
55	2.00	0.00	0		481.53	0.00	0.00	0.00
56	2.00	0.00	0		422.27	0.00	0.00	0.00
57	2.00	0.00	0		484.96	0.00	0.00	0.00
58	2.00	0.00	0		524.51	0.00	0.00	0.00
59	2.00	0.00	0		600.76	0.00	0.00	1.00
60	2.00	0.00	0		606.74	0.00	0.00	0.00
61	2.00	0.00	0		433.04	0.00	0.00	4.50
62	2.00	0.00	0		508.89	0.00	0.00	0.00
63	2.00	0.00	0		432.70	0.00	0.00	0.00
64	2.00	0.00	0		474.23	0.00	0.00	0.00
65	2.00	0.00	0		462.82	0.00	0.00	2.00
66	2.00	0.00	0		504.50	0.00	0.00	1.00
67	2.00	0.00	0		466.86	0.00	0.00	0.00
68	2.00	0.00	0		454.58	0.00	0.00	0.00
69	2.00	0.00	0		420.11	0.00	0.00	0.50
70	2.00	0.00	0		384.95	0.00	0.00	1.00
71	2.00	0.00	0		433.80	0.00	0.00	1.50
72	2.00	0.00	0		436.21	0.00	0.00	0.50
73	2.00	0.00	0		487.52	0.00	0.00	1.00
74	2.00	0.00	0		450.21	0.00	0.00	0.50
75	2.00	0.00	0		434.41	0.00	0.00	0.00
76	2.00	0.00	0		476.06	0.00	0.00	0.00
77	2.00	0.00	0		491.71	0.00	0.00	0.00
78	2.00	0.00	0		472.32	0.00	0.00	1.50
79	2.00	0.00	0		418.21	0.00	0.00	0.00
80	2.00	0.00	0		567.21	0.00	0.00	2.00
81	2.00	0.00	0		504.15	0.00	0.00	0.00
82	2.00	0.00	0		494.19	0.00	0.00	0.00
83	2.00	0.00	0		417.01	0.00	0.00	0.50
84	2.00	0.00	0		436.45	0.00	0.00	0.00
85	2.00	0.00	0		465.65	0.00	0.00	1.00
86	2.00	0.00	0		508.33	0.00	0.00	0.00
87	2.00	0.00	0		506.32	0.00	0.00	0.00
88	2.00	0.00	0		523.37	0.00	0.00	0.00
89	2.00	0.00	0		327.89	0.00	0.00	0.00
90	2.00	0.00	0		594.80	0.00	0.00	0.00

98-6P-1-01

30 Nov 98 13:16 ALPHA/BETA - 1.01 Page #3

Protocol #: 1 PW-H3-403728 User : 5379

12-1-98

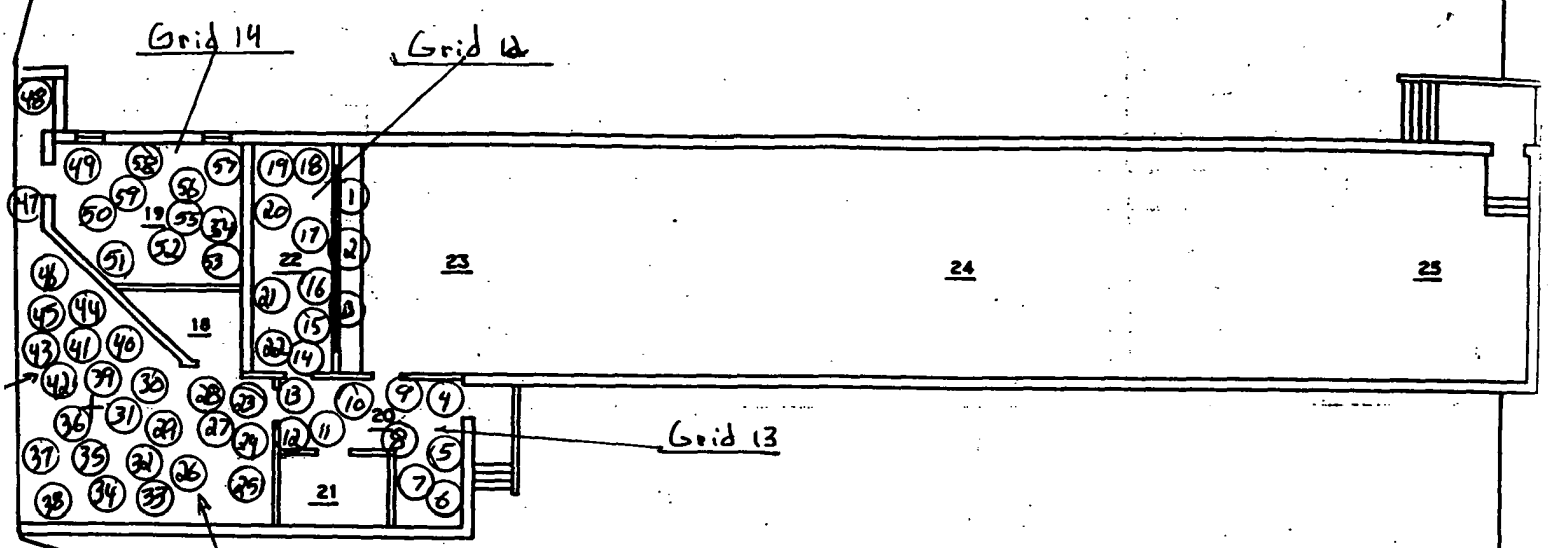
S#	TIME	CPMA	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
91	2.00	0.00	0	337.83	0.00	0.00	1.50
92	2.00	0.00	0	477.10	0.00	0.00	0.00
93	2.00	0.00	0	535.98	0.00	0.00	0.00
94	2.00	0.00	0	446.39	0.00	0.00	0.00
95	2.00	0.00	0	458.45	0.00	0.00	0.00
96	2.00	0.00	0	455.43	0.00	0.00	0.00
97	2.00	0.00	0	471.70	0.00	0.00	0.00
98	2.00	0.00	0	591.05	0.00	0.00	0.00
99	2.00	0.00	0	555.50	0.00	0.00	0.00
100	2.00	0.00	0	416.28	0.00	0.00	0.00
101	2.00	0.00	0	482.88	0.00	0.00	0.50
102	2.00	0.00	0	440.38	0.00	0.00	0.00
103	2.00	0.00	0	600.50	0.00	0.00	0.00
104	2.00	0.00	0	403.47	0.00	0.00	0.00
105	2.00	0.00	0	405.51	0.00	0.00	1.50
106	2.00	0.00	0	472.23	0.00	0.00	0.00
107	2.00	0.00	0	475.94	0.00	0.00	0.00
108	2.00	0.00	0	442.66	0.00	0.00	0.00

RADIOLOGICAL SURVEY DATA SHEET

E-1/E-138 Page 1 of 12 P3 02

LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 98-GP-1-~~93~~ 11-30
PURPOSE: Free Release	RWP NO. N/A
	DATE: 11-24-98
	TIME: 1600

MAP/DRAWING



* NOTE: (1) GRID ≈ 10FT X 10FT

GP-1 BLDG.
FIRST FLOOR

* Direct Surveys not performed 01/06/99 KSR

~~All Smear Locations: <100 dpm/100cm² α + <5000 DPM/100cm² β/γ Direct~~

LEGEND: # = mrem/hr (γ) whole body; # E = mrem/hr (β+η+γ) extremity on contact; # = Room Number; # = 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
NEelectra	5382/5365	5-11-99
	N	
	A	

[redacted]

HPS	Date:
2257	11-30-98
3950	11/30/98
3996	12-8-98

ML-9620 (2-98)

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

Please see Attached Results for sample

N/A

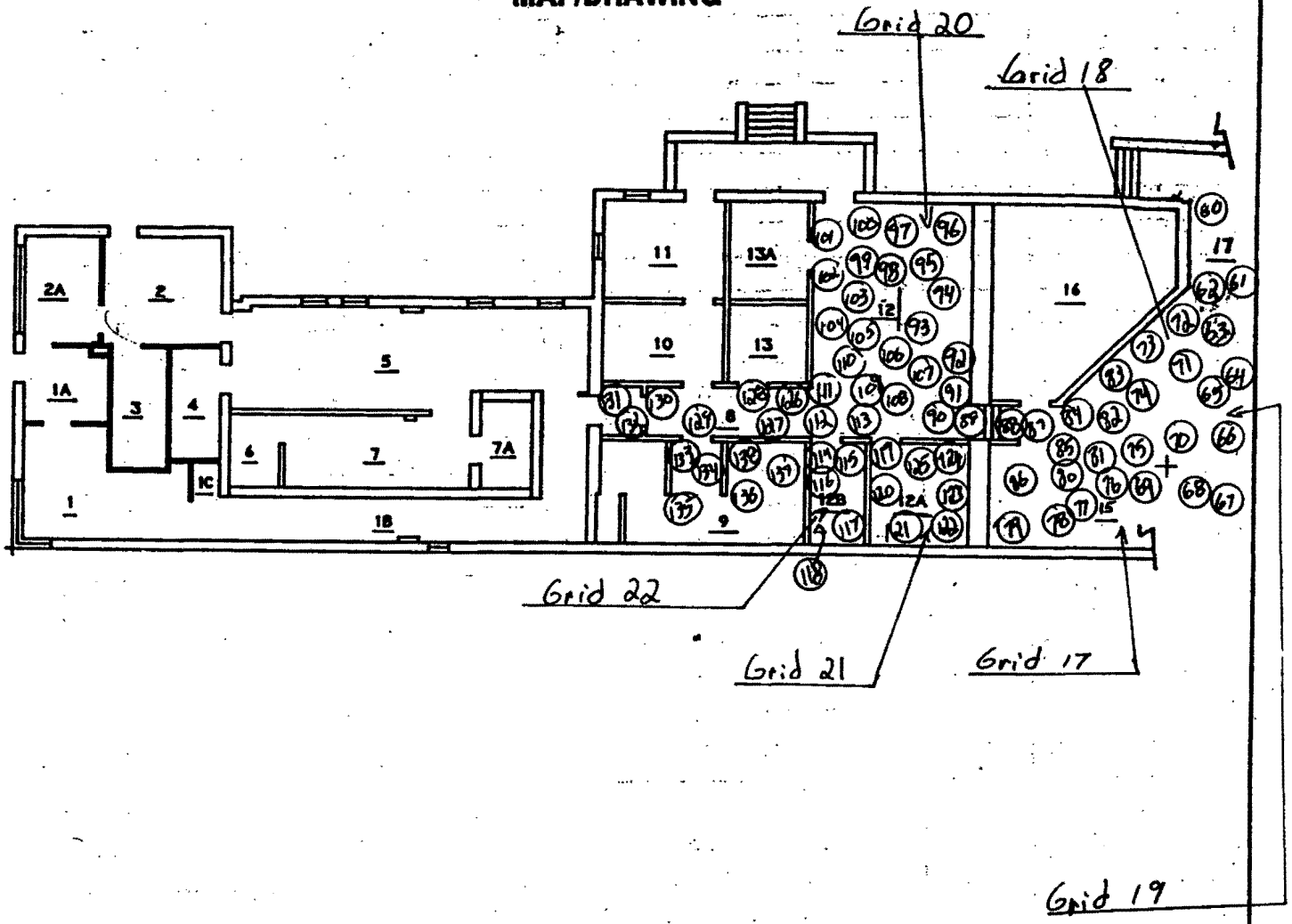
COMMENTS: N/A

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.

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 6P-1	SURVEY NO. 98-6P-1-02
PURPOSE: Free Release	RWP NO. N/A
	DATE: 11-24-98
	TIME: 1600

MAP/DRAWING



LEGEND:
- # = mrem/hr (γ) whole body
- # E = mrem/hr (β+η+γ) extremity on contact
- # = Room Number
- # = 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
electra	5382/5365	5-11-99
	N	
	A	

Completed by: (Signature) [redacted]	HP# 4257	Date: 12-1-98
Completed by: (Print Name) [redacted]		
Counted by: (Signature) [redacted]	HP# 3950	Date: 11/30/98
Counted by: (Print Name) [redacted]		
[redacted]	HP# 5996	Date: 12-8-98
Revi[redacted]		

ML-9620 (2-98)

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.

ML-9620 (2-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR035
Batch Ended: 11/30/98 9:57

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 98-GP-1-02 BELCHER [138] 11-30-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	2	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	3	0.00	1.94	<MDA	0.00	1.33	<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
B2	6	1.74	2.05	<AL	3.24	2.85	<MDA
B3	7	0.00	1.86	<MDA	0.00	1.29	<MDA
B4	8	0.00	1.91	<MDA	0.38	2.20	<MDA
C1	9	0.00	2.24	<MDA	1.77	2.24	<MDA
C2	10	0.00	2.27	<MDA	0.00	2.01	<MDA
C3	11	0.00	1.97	<MDA	0.25	1.62	<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	2.12	2.58	<AL	2.14	2.84	<MDA
D3	15	0.00	2.01	<MDA	2.49	2.66	<MDA
D4	16	0.00	2.02	<MDA	0.00	2.00	<MDA
A1	17	0.00	2.19	<MDA	0.00	1.41	<MDA
A2	18	1.92	2.17	<AL	2.93	3.02	<MDA
A3	19	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	20	0.00	1.98	<MDA	2.56	2.78	<MDA
B1	21	1.77	2.06	<AL	0.57	2.10	<MDA
B2	22	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	23	1.64	1.89	<AL	1.41	2.28	<MDA
B4	24	0.00	1.91	<MDA	0.38	2.20	<MDA
C1	25	0.00	2.26	<MDA	4.24	2.84	<AL
C2	26	0.00	2.29	<MDA	2.67	2.76	<MDA
C3	27	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	28	0.00	2.00	<MDA	4.61	2.72	<AL
D1	29	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	30	0.00	2.52	<MDA	0.00	2.08	<MDA
D3	31	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	32	0.00	2.02	<MDA	0.00	2.00	<MDA
A1	33	0.00	2.23	<MDA	2.23	2.58	<MDA

98-GP-1-02

5 of 12

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR035
Batch Ended: 11/30/98 9:57

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 98-GP-1-02 BELCHER [138] 11-30-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	34	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	35	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	36	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	37	0.00	2.06	<MDA	0.72	2.10	<MDA
B2	38	0.00	2.00	<MDA	0.00	1.41	<MDA
B3	39	0.00	1.91	<MDA	3.69	2.75	<AL
B4	40	0.00	1.89	<MDA	0.00	1.65	<MDA
C1	41	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	42	0.00	2.27	<MDA	0.00	2.01	<MDA
C3	43	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	44	0.00	1.99	<MDA	2.44	2.24	<MDA
D1	45	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	46	0.00	2.58	<MDA	2.39	2.84	<MDA
D3	47	0.00	1.99	<MDA	0.00	1.49	<MDA
~~D4~~	~~48~~	~~0.00~~	~~2.01~~	~~<MDA~~	~~0.00~~	~~1.53~~	~~<MDA~~
A1	49	0.00	2.19	<MDA	0.00	1.41	<MDA
A2	50	0.00	2.14	<MDA	0.00	1.99	<MDA
A3	51	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	52	0.00	1.99	<MDA	3.63	2.98	<MDA
B1	53	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	54	0.00	2.00	<MDA	0.00	1.41	<MDA
B3	55	0.00	1.90	<MDA	2.61	2.52	<MDA
B4	56	0.00	1.90	<MDA	0.00	1.94	<MDA
C1	57	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	58	0.00	2.29	<MDA	2.67	2.76	<MDA
C3	59	0.00	1.96	<MDA	0.00	1.20	<MDA
C4	60	0.00	1.99	<MDA	2.44	2.24	<MDA
D1	61	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	62	0.00	2.55	<MDA	1.03	2.49	<MDA
D3	63	0.00	1.99	<MDA	0.00	1.96	<MDA
D4	64	1.62	2.06	<MDA	5.26	3.51	<AL
A1	65	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	66	0.00	2.18	<MDA	4.39	3.30	<AL
A3	67	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	68	0.00	1.99	<MDA	3.63	2.98	<MDA

DELETE
JM McQueen
11/30/98

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR035
Batch Ended: 11/30/98 9:57

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 98-GP-1-02 BELCHER [138] 11-30-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	69	0.00	2.05	<MDA	0.00	1.77	<MDA
B2	70	0.00	2.05	<MDA	3.39	2.85	<AL
B3	71	0.00	1.87	<MDA	0.00	1.69	<MDA
B4	72	1.68	1.91	<AL	0.27	2.20	<MDA
C1	73	2.10	2.22	<AL	0.00	1.39	<MDA
C2	74	0.00	2.30	<MDA	4.01	3.07	<AL
C3	75	1.74	1.97	<AL	0.14	1.62	<MDA
C4	76	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	77	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	78	0.00	2.55	<MDA	1.03	2.49	<MDA
D3	79	1.69	1.99	<AL	0.00	1.49	<MDA
D4	80	0.00	2.06	<MDA	4.11	3.27	<AL
A1	81	0.00	2.22	<MDA	0.98	2.26	<MDA
A2	82	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	83	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	84	0.00	1.98	<MDA	2.56	2.78	<MDA
B1	85	0.00	2.08	<MDA	1.85	2.39	<MDA
B2	86	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	87	0.00	1.88	<MDA	0.44	2.01	<MDA
B4	88	0.00	1.93	<MDA	3.49	2.84	<AL
C1	89	0.00	2.23	<MDA	0.53	1.86	<MDA
C2	90	0.00	2.27	<MDA	0.00	2.01	<MDA
C3	91	0.00	1.97	<MDA	0.25	1.62	<MDA
C4	92	0.00	1.97	<MDA	0.26	1.63	<MDA
D1	93	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	94	0.00	2.49	<MDA	0.00	1.56	<MDA
D3	95	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	96	1.62	2.04	<AL	1.38	2.71	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR037
Batch Ended: 11/30/98 10:51

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 98-GP-1-02 BELCHER [138] 11-30-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	97	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	98	0.00	2.14	<MDA	0.00	1.99	<MDA
A3	99	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	100	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	101	0.00	2.08	<MDA	1.85	2.39	<MDA
B2	102	3.74	2.81	<AL	0.00	1.41	<MDA
B3	103	0.00	1.91	<MDA	3.69	2.75	<AL
B4	104	0.00	1.93	<MDA	2.45	2.64	<MDA
C1	105	2.10	2.25	<AL	2.86	2.56	<AL
C2	106	0.00	2.29	<MDA	2.67	2.76	<MDA
C3	107	0.00	1.98	<MDA	1.34	1.95	<MDA
C4	108	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	109	0.00	2.17	<MDA	1.37	2.43	<MDA
D2	110	0.00	2.55	<MDA	1.03	2.49	<MDA
D3	111	0.00	2.01	<MDA	2.49	2.66	<MDA
D4	112	0.00	2.05	<MDA	2.81	3.00	<MDA
A1	113	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	114	0.00	2.17	<MDA	3.08	3.02	<MDA
A3	115	1.66	1.94	<AL	0.00	1.33	<MDA
A4	116	0.00	1.99	<MDA	3.63	2.98	<MDA
B1	117	0.00	2.09	<MDA	2.99	2.64	<MDA
B2	118	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	119	1.65	1.86	<AL	0.00	1.29	<MDA
B4	120	0.00	1.90	<MDA	0.00	1.94	<MDA
C1	121	0.00	2.26	<MDA	4.24	2.84	<AL
C2	122	0.00	2.26	<MDA	0.00	1.49	<MDA
C3	123	1.74	1.97	<AL	0.14	1.62	<MDA
C4	124	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	125	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	126	0.00	2.58	<MDA	2.39	2.84	<MDA
D3	127	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	128	0.00	2.01	<MDA	0.00	1.53	<MDA
A1	129	1.87	2.26	<AL	4.56	3.12	<AL

98-GP-1-02

8 of 12

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR037
Batch Ended: 11/30/98 10:51

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 98-GP-1-02 BELCHER [138] 11-30-98 JM

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	130	0.00	2.15	<MDA	0.45	2.39	<MDA
A3	131	0.00	1.95	<MDA	0.00	1.73	<MDA
A4	132	0.00	2.00	<MDA	4.71	3.17	<AL
B1	133	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	134	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	135	0.00	1.88	<MDA	0.44	2.01	<MDA
B4	136	0.00	1.90	<MDA	0.00	1.94	<MDA
C1	137	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	138	2.03	2.27	<AL	0.00	2.01	<MDA

12-1-98

98-GP-1-02

30 Nov 98 19:51 ALPHA/BETA - 1.01
Protocol #: 3 PW H3 403728 User : 5379

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	7.30
Region B:	2.0 -	18.6	0	0.0	6.60
Region C:	40.0 -	2000	0	0.0	10.30

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-GP-1-02 BELCHER [E1-E138] 11-30-98 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.30	16	B	595.67		0.00	10.30
0	2.00	1369.70	0		612.41	2725.70	194.08	0.00
1	2.00	0.00	0		289.22	0.00	0.00	0.00
2	2.00	0.00	0		309.31	0.00	0.00	0.00
3	2.00	0.00	0		359.11	0.00	0.00	1.20
4	2.00	0.00	0		378.64	0.00	0.00	0.20
5	2.00	0.00	0		445.23	0.00	0.00	0.00
6	2.00	0.20	0		487.65	0.45	9.56	0.00
7	2.00	0.00	0		434.38	0.00	0.00	0.00
8	2.00	0.00	0		424.56	0.00	0.00	0.00
9	2.00	0.00	0		537.40	0.00	0.00	0.00
10	2.00	0.00	0		344.01	0.00	0.00	0.20
11	2.00	0.20	0		558.32	0.42	8.94	0.00
12	2.00	0.00	0		491.50	0.00	0.00	0.70
13	2.00	0.20	0		513.97	0.43	9.30	0.20
14	2.00	0.00	0		388.29	0.00	0.00	0.00
15	2.00	0.00	0		470.45	0.00	0.00	0.00
16	2.00	0.00	0		449.37	0.00	0.00	0.00
17	2.00	0.00	0		444.16	0.00	0.00	0.00
18	2.00	0.00	0		397.38	0.00	0.00	0.00
19	2.00	0.00	0		350.85	0.00	0.00	0.00
20	2.00	0.00	0		403.45	0.00	0.00	0.00
21	2.00	0.20	0		483.75	0.45	9.61	0.00
22	2.00	0.00	0		376.22	0.00	0.00	0.70
23	2.00	0.00	0		406.38	0.00	0.00	0.20
24	2.00	0.00	0		384.52	0.00	0.00	0.00
25	2.00	0.00	0		389.72	0.00	0.00	0.00
26	2.00	0.00	0		366.83	0.00	0.00	0.00
27	2.00	0.00	0		353.27	0.00	0.00	0.00
28	2.00	0.00	0		434.74	0.00	0.00	0.00
29	2.00	0.00	0		446.32	0.00	0.00	0.00
30	2.00	0.00	0		362.21	0.00	0.00	0.00
31	2.00	0.00	0		327.75	0.00	0.00	0.00
32	2.00	0.00	0		381.02	0.00	0.00	0.00
33	2.00	0.00	0		417.34	0.00	0.00	3.20
34	2.00	0.00	20		278.09	0.00	0.00	3.20

50 Nov 98 21:38 ALPHA/BETA - 1.01 ~~Page #2~~
Protocol #: 3 PW H3 403728 12-1-98 User : 5379

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.00	20		288.55	0.00	0.00	0.00
36	2.00	0.00	11		296.69	0.00	0.00	1.20
37	2.00	0.00	0		424.74	0.00	0.00	0.00
38	2.00	0.00	0		447.84	0.00	0.00	0.20
39	2.00	0.00	0		431.85	0.00	0.00	0.00
40	2.00	0.00	0		316.43	0.00	0.00	0.00
41	2.00	0.00	0		405.79	0.00	0.00	0.00
42	2.00	0.00	0		395.46	0.00	0.00	0.00
43	2.00	0.00	0		397.03	0.00	0.00	0.00
44	2.00	0.00	0		412.55	0.00	0.00	0.00
45	2.00	0.00	0		416.23	0.00	0.00	0.00
46	2.00	0.00	0		434.01	0.00	0.00	0.00
47	2.00	0.00	0		374.09	0.00	0.00	0.00
MISSING TUBE(S)								
49	2.00	0.00	0		504.14	0.00	0.00	2.70
50	2.00	0.00	0		371.34	0.00	0.00	3.20
51	2.00	0.00	0		461.98	0.00	0.00	4.70
52	2.00	0.00	0		564.87	0.00	0.00	0.00
53	2.00	0.00	0		549.77	0.00	0.00	1.70
54	2.00	0.00	0		393.47	0.00	0.00	0.00
55	2.00	0.00	0		356.89	0.00	0.00	0.00
56	2.00	0.00	0		294.17	0.00	0.00	1.20
57	2.00	0.00	0		425.51	0.00	0.00	0.00
58	2.00	0.00	0		450.32	0.00	0.00	0.00
59	2.00	0.00	0		433.24	0.00	0.00	0.00
60	2.00	0.00	0		452.72	0.00	0.00	0.00
61	2.00	0.00	0		492.01	0.00	0.00	0.00
62	2.00	0.00	0		440.55	0.00	0.00	0.70
63	2.00	0.00	0		491.09	0.00	0.00	0.00
64	2.00	0.00	0		477.89	0.00	0.00	0.00
65	2.00	0.00	0		446.47	0.00	0.00	0.00
66	2.00	0.00	0		487.84	0.00	0.00	0.00
67	2.00	0.70	0		499.48	1.54	9.67	0.00
68	2.00	0.20	0		460.92	0.46	9.91	0.00
69	2.00	0.00	0		508.58	0.00	0.00	0.20
70	2.00	0.00	0		503.28	0.00	0.00	0.00
71	2.00	0.00	0		438.81	0.00	0.00	0.00
72	2.00	0.00	0		447.75	0.00	0.00	1.20
73	2.00	0.00	0		529.77	0.00	0.00	0.00
74	2.00	0.00	0		518.16	0.00	0.00	0.00
75	2.00	0.00	0		459.60	0.00	0.00	0.00
76	2.00	0.20	0		540.27	0.42	9.08	0.00
77	2.00	0.00	0		429.33	0.00	0.00	0.00
78	2.00	0.20	0		501.90	0.44	9.40	0.00
79	2.00	0.00	0		499.05	0.00	0.00	0.00
80	2.00	0.00	0		450.75	0.00	0.00	0.00
81	2.00	0.00	0		559.06	0.00	0.00	0.00
82	2.00	0.00	0		510.81	0.00	0.00	0.20
83	2.00	0.00	0		439.76	0.00	0.00	0.00
84	2.00	0.00	0		519.04	0.00	0.00	0.00
85	2.00	0.20	0		524.26	0.43	9.21	2.20
86	2.00	0.00	0		590.67	0.00	0.00	0.00
87	2.00	0.00	0		539.82	0.00	0.00	1.20
88	2.00	0.00	0		547.70	0.00	0.00	0.00
89	2.00	0.00	0		597.51	0.00	0.00	2.20
90	2.00	0.00	0		459.00	0.00	0.00	0.00

01 Dec 98 00:20 ALPHA/BETA - 1.01
Protocol #: 3 PW H3 403728 User : 5379

S#	TIME	CPMA	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
91	2.00	0.00	0	441.35	0.00	0.00	0.00
92	2.00	0.00	0	506.58	0.00	0.00	0.00
93	2.00	0.00	0	527.32	0.00	0.00	1.20
94	2.00	0.00	0	583.89	0.00	0.00	0.00
95	2.00	0.00	0	496.33	0.00	0.00	0.00
96	2.00	0.00	0	449.21	0.00	0.00	0.00
97	2.00	0.00	0	491.92	0.00	0.00	0.00
98	2.00	0.00	0	395.88	0.00	0.00	0.00
99	2.00	0.00	0	464.19	0.00	0.00	0.00
100	2.00	0.00	0	545.58	0.00	0.00	0.00
101	2.00	0.00	0	610.09	0.00	0.00	0.00
102	2.00	1.20	0	441.00	2.85	10.72	1.20
103	2.00	0.00	0	481.08	0.00	0.00	1.20
104	2.00	0.00	0	460.20	0.00	0.00	0.70
105	2.00	0.00	0	609.02	0.00	0.00	0.00
106	2.00	0.00	0	512.06	0.00	0.00	0.00
107	2.00	0.00	0	465.40	0.00	0.00	0.70
108	2.00	0.00	0	528.71	0.00	0.00	0.20
109	2.00	0.00	0	598.30	0.00	0.00	0.00
110	2.00	0.00	0	327.64	0.00	0.00	3.70
111	2.00	0.00	0	496.66	0.00	0.00	0.00
112	2.00	0.00	0	556.63	0.00	0.00	0.70
113	2.00	0.00	0	461.71	0.00	0.00	0.20
114	2.00	0.00	0	589.42	0.00	0.00	0.00
115	2.00	0.00	0	505.74	0.00	0.00	0.00
116	2.00	0.00	0	501.51	0.00	0.00	0.00
117	2.00	0.00	0	556.83	0.00	0.00	0.00
118	2.00	0.00	0	535.95	0.00	0.00	0.00
119	2.00	0.00	0	583.36	0.00	0.00	0.00
120	2.00	0.00	0	558.81	0.00	0.00	1.20
121	2.00	0.00	0	569.71	0.00	0.00	0.70
122	2.00	0.00	0	452.25	0.00	0.00	0.70
123	2.00	0.00	0	520.47	0.00	0.00	0.00
124	2.00	0.00	0	575.80	0.00	0.00	1.20
125	2.00	0.00	0	543.50	0.00	0.00	0.00
126	2.00	0.00	0	570.22	0.00	0.00	0.00
127	2.00	0.00	0	568.47	0.00	0.00	0.00
128	2.00	0.00	0	454.61	0.00	0.00	0.00
129	2.00	0.00	0	479.33	0.00	0.00	0.00
130	2.00	0.00	0	509.31	0.00	0.00	0.00
131	2.00	0.00	0	434.79	0.00	0.00	0.00
132	2.00	0.00	0	443.78	0.00	0.00	0.00
133	2.00	0.20	0	495.40	0.44	9.47	0.00
134	2.00	0.00	0	627.20	0.00	0.00	0.00
135	2.00	0.00	0	563.14	0.00	0.00	0.00
136	2.00	0.00	0	600.22	0.00	0.00	0.00
137	2.00	0.00	0	531.17	0.00	0.00	0.00
138	2.00	0.00	0	557.07	0.00	0.00	0.00

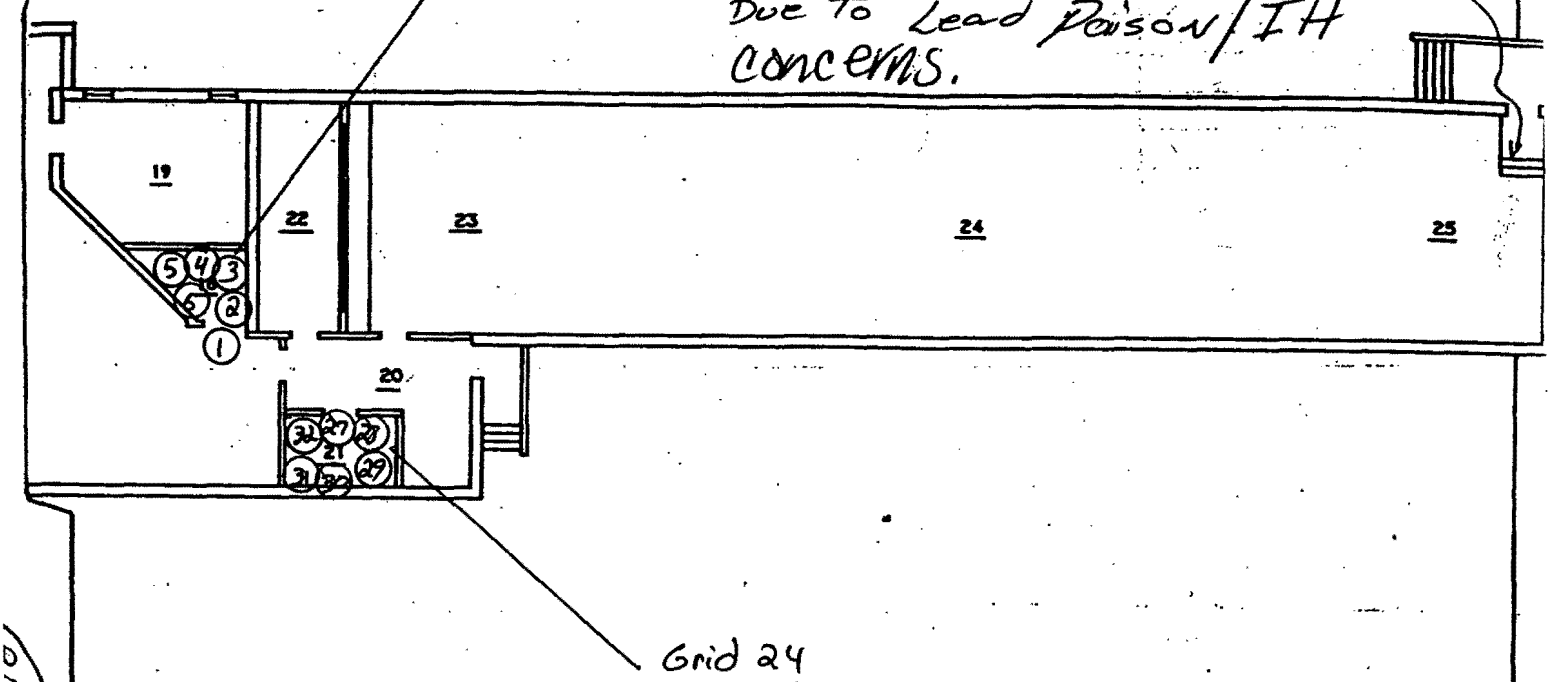
RADIOLOGICAL SURVEY DATA SHEET

Q1/Q1 08 R-2B

LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 98-GP-1-03
PURPOSE: Free Release	RWP NO. N/A
	DATE: 11-30-98
	TIME: 1600

MAP/DRAWING

* The Area Directly Behind The Shooting Range was unaccessable and was not Surveyed Due To Lead Poison/IH concerns.



*NOTE: (1) GRID ≈ 10FT x 10FT ROOMS SMALLER THAN 10FT x 10FT WILL BE TREATED AS A GRID.

GP-1 BLDG.
FIRST FLOOR

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= Room number
= 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
electra	5382/5365	5-11-99
	N	
	A	

Completed by: (Signature) [redacted]	HP# 8257	Date: 12-1-98
Completed by: (Print Name) [redacted]		
[redacted]	HP# 3950	Date: 12/02/98
Completed by: (Print Name) [redacted]		
R[redacted]ature)	HP# 5996	Date: 12-8-98
Review [redacted]		

ML-9620 (2-98)

GROUP-A GROUP-C

P-2

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

Please see attached results for smear results

Direct Survey Not performed 1/6/99

COMMENTS: ~~All Smear locations < 100 DPM/100cm² α < 5000 DPM/100cm² β/γ~~

NOTES:

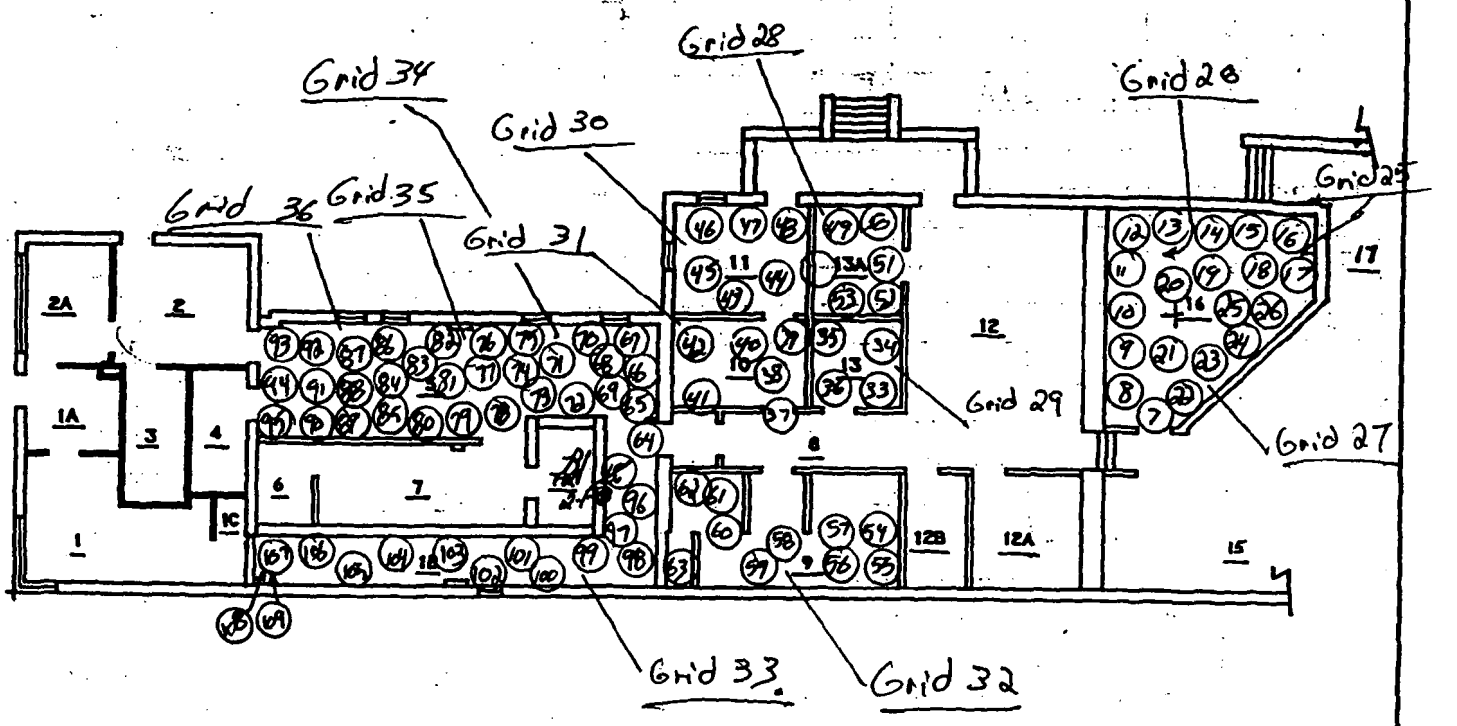
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) N/A	SURVEY NO. 98-GP-1-03
PURPOSE:	RWP NO.
	DATE: N/A
	TIME: A

MAP/DRAWING



LEGEND:
- # = mrem/hr (γ) whole body
- # E = mrem/hr (β+η+γ) extremity on contact
- # = Room Number
- # = 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	5382/5365	5-11-99
	N	
	A	

[redacted]	HPs 8257	Date: 12-1-98
[redacted]		
[redacted]	HPs 3950	Date: 12/02/98
Counted by: (Print Name) [redacted]		
[redacted]	HPs 5996	Date: 12-8-98
[redacted]		

ML-9620 (2-98)

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

See Attached Smear Results

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)

LB5100-W Low Background Counting System -- Smear Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\SME1A001.XLD
Batch Ended: 12/2/98 9:54
Crosstalk Correction: Applied
Cal. Due Date: 11/3/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00
Certainty level for MDA and flags: 95.00%

Serial Number: 15764-3
Batch ID: T 98-GP-1-03 BELCHER [1-50 OF 108] 12-01-98 JM

		Alpha Activity			Beta Activity			Count
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)
147	1	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
98	2	1.793	2.03	<AL	0.000	3.19	<MDA	1.50
125	3	1.793	2.03	<AL	0.000	3.19	<MDA	1.50
53	4	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
74	5	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
28	6	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
134	7	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
100	8	1.792	2.05	<AL	0.000	3.60	<MDA	1.50
29	9	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
129	10	0.000	2.09	<MDA	4.070	4.62	<MDA	1.50
122	11	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
149	12	0.000	2.09	<MDA	4.070	4.62	<MDA	1.50
66	13	1.789	2.09	<AL	3.841	4.62	<MDA	1.50
6	14	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
78	15	0.000	2.00	<MDA	0.000	2.15	<MDA	1.50
93	16	0.000	2.13	<MDA	9.077	5.45	<AL	1.50
118	17	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
45	18	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
126	19	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
68	20	0.000	2.00	<MDA	0.000	2.15	<MDA	1.50
124	21	0.000	2.10	<MDA	5.739	4.91	<MDA	1.50
142	22	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
115	23	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
43	24	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
25	25	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50

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98-GP-1-03

LB5100-W Low Background Counting System -- Smear Analysis

Date: 12/2/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\SME1A001.XLD
Batch Ended: 12/2/98 9:54
Crosstalk Correction: Applied
Cal. Due Date: 11/3/99
Serial Number: 15764-3

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00
Certainty level for MDA and flags: 95.00%

Batch ID: T 98-GP-1-03 BELCHER [1-50 OF 108] 12-01-98 JM

		Alpha Activity			Beta Activity			Count
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)
34	26	0.000	2.13	<MDA	9.077	5.45	<AL	1.50
37	27	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
49	28	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
124	29	0.000	2.09	<MDA	4.070	4.62	<MDA	1.50
74	30	0.000	2.02	<MDA	0.000	2.72	<MDA	1.50
61	31	3.759	2.86	<AL	1.943	4.31	<MDA	1.50
70	32	1.791	2.06	<AL	0.503	3.97	<MDA	1.50
44	33	1.794	2.02	<AL	0.000	2.72	<MDA	1.50
127	34	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
142	35	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
133	36	1.791	2.06	<AL	0.503	3.97	<MDA	1.50
67	37	0.000	2.10	<MDA	5.739	4.91	<MDA	1.50
69	38	0.000	2.09	<MDA	4.070	4.62	<MDA	1.50
32	39	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
147	40	1.794	2.02	<AL	0.000	2.72	<MDA	1.50
66	41	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
65	42	1.793	2.03	<AL	0.000	3.19	<MDA	1.50
70	43	0.000	2.09	<MDA	4.070	4.62	<MDA	1.50
134	44	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
93	45	0.000	2.06	<MDA	0.732	3.97	<MDA	1.50
3	46	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
78	47	0.000	2.03	<MDA	0.000	3.19	<MDA	1.50
69	48	0.000	2.07	<MDA	2.401	4.31	<MDA	1.50
128	49	0.000	2.05	<MDA	0.000	3.60	<MDA	1.50
146	50	1.791	2.06	<AL	0.503	3.97	<MDA	1.50

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98-GP-1-03

LB5100-W Low Background Counting System -- Smear Analysis

Date: 12/2/98
Counting Unit id: 4
Data file name: C:\LBXL\UNIT4\SME4C001.XLD
Batch Ended: 12/2/98 10:46
Crosstalk Correction: Applied
Cal. Due Date: 9/1/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00
Certainty level for MDA and flags: 95.00%

Serial Number: 15764-1
Batch ID: X 98-GP-1-03 BELCHER [51-108 OF 108] 12-01-98 JM

		Alpha Activity			Beta Activity			Count
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)
76	1	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
71	2	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
77	3	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
11	4	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
119	5	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
88	6	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
127	7	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
73	8	1.850	2.06	<AL	0.684	3.35	<MDA	1.50
77	9	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
64	10	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
114	11	1.892	2.04	<AL	0.000	2.14	<MDA	1.50
33	12	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
147	13	0.000	2.08	<MDA	6.324	4.60	<AL	1.50
91	14	1.850	2.06	<AL	0.684	3.35	<MDA	1.50
47	15	1.829	2.06	<AL	2.505	3.81	<MDA	1.50
90	16	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
65	17	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
142	18	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
140	19	0.000	2.09	<MDA	8.146	4.95	<AL	1.50
127	20	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
54	21	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
137	22	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
146	23	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
50	24	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
70	25	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50

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98-GP-1-03

LB5100-W Low Background Counting System -- Smear Analysis

Date: 12/2/98
Counting Unit id: 4
Data file name: C:\LBXL\UNIT4\SME4C001.XLD
Batch Ended: 12/2/98 10:46
Crosstalk Correction: Applied
Cal. Due Date: 9/1/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00
Certainty level for MDA and flags: 95.00%

Serial Number: 15764-1
Batch ID: X 98-GP-1-03 BELCHER [51-108 OF 108] 12-01-98 JM

		Alpha Activity			Beta Activity			Count
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)
86	26	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
136	27	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
149	28	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
133	29	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
134	30	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
56	31	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
136	32	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
37	33	1.871	2.05	<AL	0.000	2.81	<MDA	1.50
50	34	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
70	35	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
130	36	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
126	37	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
97	38	0.000	2.06	<MDA	0.861	3.35	<MDA	1.50
23	39	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
148	40	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
53	41	0.000	2.09	<MDA	8.146	4.95	<AL	1.50
138	42	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
87	43	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
122	44	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
35	45	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
2	46	0.000	2.08	<MDA	6.324	4.60	<AL	1.50
34	47	0.000	2.06	<MDA	2.682	3.81	<MDA	1.50
90	48	0.000	2.07	<MDA	4.503	4.23	<MDA	1.50
80	49	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
75	50	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50

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98-GP-1-03 001 12

LB5100-W Low Background Counting System -- Smear Analysis

Date: 12/2/98
Counting Unit id: 4
Data file name: C:\LBXL\UNIT4\SME4C001.XLD
Batch Ended: 12/2/98 10:46
Crosstalk Correction: Applied
Cal. Due Date: 9/1/99

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00
Certainty level for MDA and flags: 95.00%

Serial Number: 15764-1
Batch ID: X 98-GP-1-03 BELCHER [51-108 OF 108] 12-01-98 JM

		Alpha Activity			Beta Activity			Count
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)
150	51	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
77	52	0.000	2.05	<MDA	0.000	2.81	<MDA	1.50
53	53	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
67	54	1.871	2.05	<AL	0.000	2.81	<MDA	1.50
134	55	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
76	56	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50
122	57	1.787	2.08	<AL	6.147	4.60	<AL	1.50
54	58	0.000	2.04	<MDA	0.000	2.14	<MDA	1.50

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98-GP-1-03

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98-GP-1-03

Protocol #: 2 Name:PW H3 #401388 02-Dec-98 17:12
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-GP-1-03 BELCHER [Q1-Q108] 12-02-98 JM
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On

S#	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	2Sigma
-1	10.00	10.00	12.80	11.40	B	68	601.		0.00
0	2.00	1732.00	1652.20	0.00		1	632.	3883.80	273.40
1	2.00	10.00	6.20	0.00		12	553.	25.27	18.63
2	2.00	0.00	0.00	2.60		28	398.	0.00	0.00
3	2.00	0.00	0.00	0.00		30	368.	0.00	0.00
4	2.00	7.50	3.70	0.00		3	331.	25.12	21.50
5	2.00	2.00	0.00	0.00		12	343.	6.50	18.95
6	2.00	1.50	0.00	0.00		19	359.	4.69	19.03
7	2.00	10.50	7.20	0.00		5	368.	32.21	21.99
8	2.00	19.00	14.70	0.60		15	290.	71.63	34.01
9	2.00	9.50	6.70	0.00		25	448.	25.71	22.54
10	2.00	2.50	0.00	0.60		12	453.	6.75	15.98
11	2.00	5.50	0.70	0.00		12	511.	14.56	17.38
12	2.00	6.00	1.70	0.00		21	528.	15.62	19.16
13	2.00	0.00	0.00	0.00		16	509.	0.00	0.00
14	2.00	13.50	8.20	0.00		2	488.	36.17	19.63
15	2.00	7.00	3.20	0.00		3	489.	18.75	16.98
16	2.00	2.00	0.00	0.00		4	475.	5.36	14.70
17	2.00	0.00	0.00	0.00		18	482.	0.00	0.00
18	2.00	0.00	0.00	0.00		17	475.	0.00	0.00
19	2.00	6.00	1.70	0.00		9	437.	16.39	17.73
20	2.00	2.50	0.00	0.00		8	522.	6.55	15.06
21	2.00	1.50	0.00	0.00		12	482.	4.02	15.40
22	2.00	0.00	0.00	0.00		10	439.	0.00	0.00
23	2.00	4.50	1.20	0.00		4	433.	12.35	16.25
24	2.00	0.00	0.00	0.00		27	459.	0.00	0.00
25	2.00	3.50	0.00	0.00		20	566.	8.68	16.28
26	2.00	0.00	0.00	1.60		10	451.	0.00	0.00
27	2.00	0.00	0.00	0.00		22	438.	0.00	0.00
28	2.00	0.00	0.00	0.00		25	421.	0.00	0.00
29	2.00	0.00	0.00	0.00		23	445.	0.00	0.00
30	2.00	0.00	0.00	0.00		31	449.	0.00	0.00
31	2.00	0.00	0.00	0.00		27	424.	0.00	0.00
32	2.00	0.00	0.00	0.00		27	398.	0.00	0.00
33	2.00	0.00	0.00	0.00		48	475.	0.00	0.00
34	2.00	0.00	0.00	0.00		35	516.	0.00	0.00
35	2.00	0.00	0.00	0.10		36	470.	0.00	0.00
36	2.00	6.00	0.00	0.00		17	481.	16.08	18.60
37	2.00	8.00	4.70	0.00		20	437.	21.84	20.48
38	2.00	0.00	0.00	0.00		24	406.	0.00	0.00
39	2.00	3.00	0.00	0.00		11	419.	8.39	16.79
40	2.00	0.00	0.00	0.00		31	448.	0.00	0.00
41	2.00	0.00	0.00	0.00		43	501.	0.00	0.00
42	2.00	11.50	7.70	0.00		13	461.	30.96	21.12
43	2.00	1.50	0.00	0.00		19	448.	4.06	16.47
44	2.00	5.50	0.00	0.00		9	539.	14.15	16.89

S#	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	2Sigma
45	2.00	1.00	0.00	0.10		22	536.	2.58	16.34
46	2.00	8.50	4.20	1.10		8	490.	22.77	18.42
47	2.00	1.00	0.00	0.00		20	500.	2.67	16.02
48	2.00	3.50	0.00	0.00		7	464.	9.41	15.92
49	2.00	4.00	0.00	1.10		14	465.	10.76	17.02
50	2.00	8.00	4.20	0.00		11	482.	21.44	18.61
51	2.00	5.50	1.20	0.00		20	528.	14.32	18.62
52	2.00	5.50	2.20	0.00		7	432.	15.11	17.18
53	2.00	0.00	0.00	0.00		26	423.	0.00	0.00
54	2.00	8.50	3.70	0.00		8	514.	22.46	18.17
55	2.00	11.50	5.20	0.00		20	577.	27.50	19.94
56	2.00	3.00	0.00	0.00		20	347.	9.64	20.84
57	2.00	4.50	3.20	0.00		24	457.	12.13	18.89
58	2.00	5.50	1.20	0.00		20	489.	14.74	18.78
59	2.00	2.00	0.00	0.00		25	462.	5.38	17.44
60	2.00	3.00	0.20	0.00		25	451.	8.11	18.74
61	2.00	1.00	0.00	0.00		20	453.	2.70	16.21
62	2.00	0.00	0.00	0.00		33	452.	0.00	0.00
63	2.00	0.00	0.00	0.00		43	493.	0.00	0.00
64	2.00	4.00	0.00	0.00		16	463.	10.76	17.45
65	2.00	14.00	7.70	0.00		6	494.	37.51	20.54
66	2.00	3.00	0.70	0.00		27	517.	7.90	18.64
67	2.00	9.00	6.70	0.00		10	366.	27.70	21.83
68	2.00	9.50	6.20	0.10		12	423.	26.43	20.32
69	2.00	11.50	6.20	0.00		9	490.	30.81	19.96
70	2.00	2.00	0.00	0.00		25	534.	5.18	16.77
71	2.00	8.50	4.20	0.00		11	450.	22.98	18.98
72	2.00	0.00	0.00	0.00		31	530.	0.00	0.00
73	2.00	0.00	0.00	2.10		10	483.	0.00	0.00
74	2.00	6.50	2.20	0.00		12	499.	17.37	17.96
75	2.00	6.50	2.70	0.00		9	476.	17.43	17.62
76	2.00	0.50	0.00	0.00		14	480.	1.34	14.92
77	2.00	0.00	0.00	0.00		36	489.	0.00	0.00
78	2.00	0.00	0.00	0.00		31	550.	0.00	0.00
79	2.00	5.50	0.70	0.00		18	602.	12.77	15.94
80	2.00	2.50	0.00	0.00		15	525.	6.53	15.90
81	2.00	0.00	0.00	0.00		12	467.	0.00	0.00
82	2.00	4.00	0.00	1.10		11	494.	10.72	16.53
83	2.00	1.50	0.00	0.00		25	413.	4.23	18.06
84	2.00	0.00	0.00	0.00		23	568.	0.00	0.00
85	2.00	2.50	0.00	0.00		21	551.	6.33	16.23
86	2.00	1.50	0.00	0.00		5	530.	3.90	14.01
87	2.00	2.50	0.00	0.00		28	546.	6.38	17.86
88	2.00	3.00	0.00	0.00		11	532.	7.78	15.57
89	2.00	5.00	0.00	0.00		16	430.	13.78	18.30
90	2.00	1.50	0.00	0.00		22	524.	3.93	16.34
91	2.00	4.50	1.70	0.00		13	422.	12.53	17.85
92	2.00	5.00	2.20	0.00		10	471.	13.42	17.42
93	2.00	9.00	3.20	2.10		15	550.	22.83	18.69
94	2.00	0.00	0.00	0.00		17	575.	0.00	0.00
95	2.00	12.50	3.70	0.00		5	613.	28.64	16.77
96	2.00	2.50	0.00	0.00		14	539.	6.43	16.07
97	2.00	0.00	0.00	0.00		34	494.	0.00	0.00
98	2.00	0.00	0.00	0.00		51	565.	0.00	0.00
99	2.00	4.50	0.70	0.00		13	605.	10.41	14.82
100	2.00	0.50	0.00	0.00		23	504.	1.33	16.63

98-6P-1-0

S#	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	2Sigma
101	2.00	1.50	0.00	0.00		9	556.	3.78	14.02
102	2.00	0.50	0.00	0.00		21	488.	1.34	15.85
103	2.00	9.00	7.20	0.00		19	514.	23.77	20.51
104	2.00	0.00	0.00	0.00		34	498.	0.00	0.00
105	2.00	6.50	1.20	0.00		14	591.	15.29	16.15
106	2.00	0.50	0.00	0.60		24	516.	1.32	16.04
107	2.00	0.00	0.00	0.00		50	560.	0.00	0.00
108	2.00	0.00	0.00	0.00		70	570.	0.00	0.00

RADIOLOGICAL SURVEY DATA SHEET

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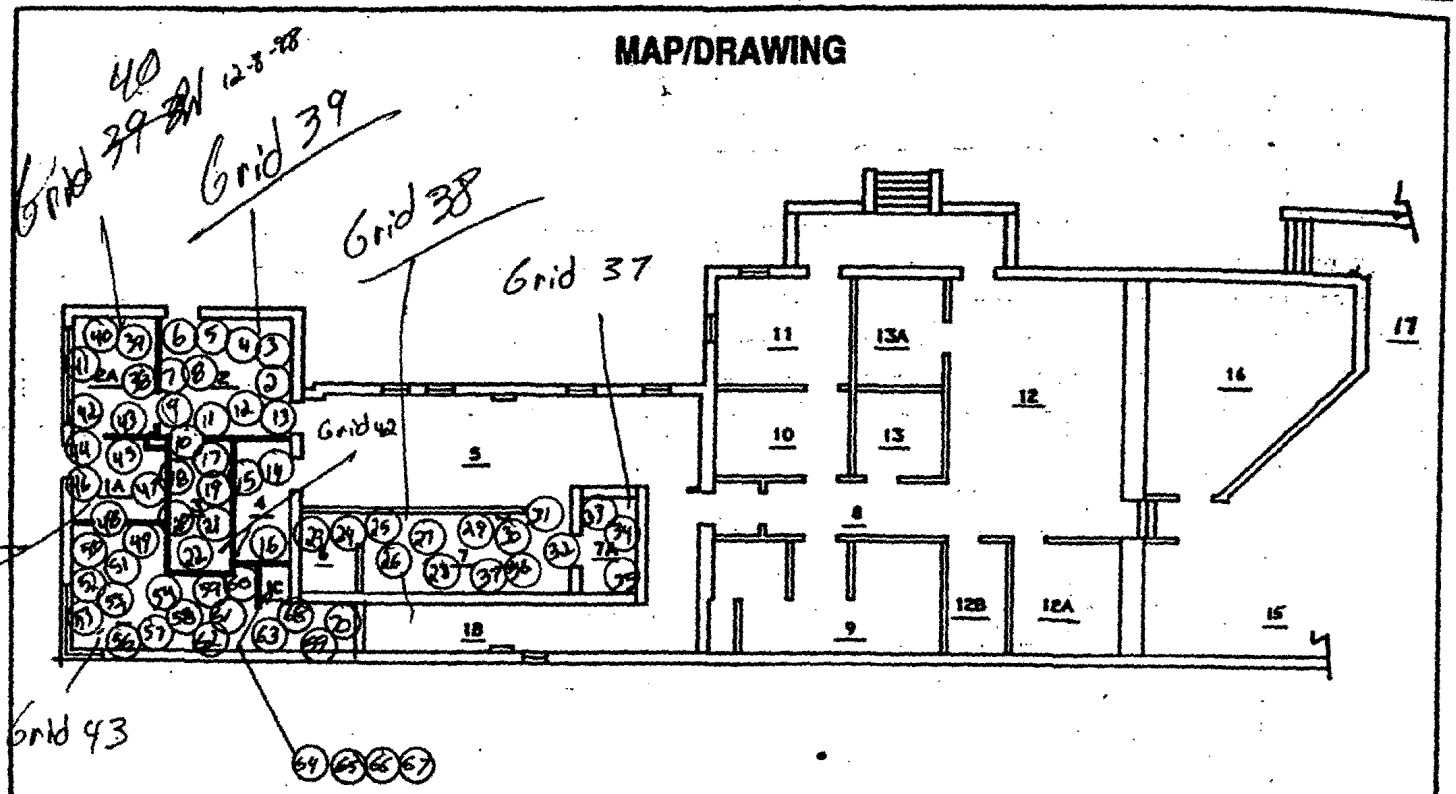
LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 98-GP-1-04
PURPOSE: Free Release	RWP NO. N/A
	DATE: 12-1-98
	TIME: 0900

MAP/DRAWING



*NOTE: (1) GRID ≈ 10 FT X 10 FT

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= Room Number
△# = 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
lectra	5382/5365	5-11-99
	N	
	A	

[redacted]	HPS 8257	Date: 12-1-98
[redacted]		
[redacted]	HPS 5309	Date: 12-2-98
[redacted]		
[redacted]	HPS 5996	Date: 12-8-98
[redacted]		

20 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
See Attached for Smear Results				

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

direct survey not performed KSK 1-6-99

COMMENTS: ~~All Smear Locations <100 DPM/100cm² α & <5000 DPM/100cm² β γ~~

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: SMEAR010
Batch Ended: 12/2/98 9:51

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 98-GP-1-04 BELCHER [70] 12-2-98 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	2	0.00	2.14	<MDA	0.00	1.99	<MDA
A3	3	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	4	0.00	1.97	<MDA	1.48	2.56	<MDA
B1	5	0.00	2.09	<MDA	2.99	2.64	<MDA
B2	6	0.00	2.04	<MDA	2.15	2.57	<MDA
B3	7	0.00	1.86	<MDA	0.00	1.29	<MDA
B4	8	0.00	1.89	<MDA	0.00	1.65	<MDA
C1	9	0.00	2.25	<MDA	3.01	2.56	<AL
C2	10	0.00	2.29	<MDA	2.67	2.76	<MDA
C3	11	3.68	2.76	<AL	0.00	1.20	<MDA
C4	12	3.60	2.77	<AL	1.15	1.96	<MDA
D1	13	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	14	0.00	2.49	<MDA	0.00	1.56	<MDA
D3	15	1.67	2.02	<AL	3.64	2.95	<AL
D4	16	3.60	2.81	<AL	0.00	1.53	<MDA
A1	17	1.88	2.22	<AL	0.83	2.26	<MDA
A2	18	1.93	2.16	<AL	1.62	2.72	<MDA
A3	19	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	20	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	21	0.00	2.05	<MDA	0.00	1.77	<MDA
B2	22	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	23	1.64	1.89	<AL	1.41	2.28	<MDA
B4	24	0.00	1.90	<MDA	0.00	1.94	<MDA
C1	25	2.10	2.25	<AL	2.86	2.56	<AL
C2	26	0.00	2.27	<MDA	0.00	2.01	<MDA
C3	27	0.00	2.01	<MDA	5.68	2.92	<AL
C4	28	0.00	1.97	<MDA	0.26	1.63	<MDA
D1	29	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	30	0.00	2.52	<MDA	0.00	2.08	<MDA
D3	31	0.00	1.99	<MDA	0.00	1.96	<MDA
D4	32	0.00	2.01	<MDA	0.00	1.53	<MDA
A1	33	0.00	2.27	<MDA	5.96	3.36	<AL

12-8-9

Page 30f 1
98-GP-1-04

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR010
Batch Ended: 12/2/98 9:51

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 98-GP-1-04 BELCHER [70] 12-2-98 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	34	1.93	2.15	<AL	0.30	2.39	<MDA
A3	35	0.00	1.96	<MDA	0.32	2.06	<MDA
A4	36	3.63	2.73	<AL	0.00	1.39	<MDA
B1	37	0.00	2.05	<MDA	0.00	1.77	<MDA
B2	38	0.00	2.00	<MDA	0.00	1.41	<MDA
B3	39	0.00	1.87	<MDA	0.00	1.69	<MDA
B4	40	0.00	1.93	<MDA	2.45	2.64	<MDA
C1	41	2.10	2.24	<AL	1.62	2.24	<MDA
C2	42	0.00	2.26	<MDA	0.00	1.49	<MDA
C3	43	0.00	1.96	<MDA	0.00	1.20	<MDA
C4	44	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	45	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	46	0.00	2.49	<MDA	0.00	1.56	<MDA
D3	47	1.69	1.99	<AL	0.00	1.96	<MDA
D4	48	0.00	2.05	<MDA	2.81	3.00	<MDA
A1	49	1.89	2.21	<AL	0.00	1.88	<MDA
A2	50	4.03	3.02	<AL	2.78	3.02	<MDA
A3	51	0.00	1.97	<MDA	1.44	2.35	<MDA
A4	52	0.00	1.94	<MDA	0.00	1.39	<MDA
B1	53	1.77	2.04	<AL	0.00	1.37	<MDA
B2	54	0.00	2.04	<MDA	2.15	2.57	<MDA
B3	55	0.00	1.87	<MDA	0.00	1.69	<MDA
B4	56	0.00	1.95	<MDA	5.56	3.19	<AL
C1	57	0.00	2.22	<MDA	0.00	1.39	<MDA
C2	58	0.00	2.28	<MDA	1.34	2.41	<MDA
C3	59	0.00	1.98	<MDA	1.34	1.95	<MDA
C4	60	0.00	1.97	<MDA	0.00	1.21	<MDA
D1	61	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	62	0.00	2.52	<MDA	0.00	2.08	<MDA
D3	63	0.00	1.99	<MDA	0.00	1.49	<MDA
D4	64	0.00	2.01	<MDA	0.00	1.53	<MDA
A1	65	0.00	2.19	<MDA	0.00	1.41	<MDA
A2	66	0.00	2.16	<MDA	1.76	2.72	<MDA
A3	67	0.00	1.99	<MDA	3.67	2.83	<AL
A4	68	0.00	1.97	<MDA	1.48	2.56	<MDA

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4 of 7

98-GP-1-04

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR010
Batch Ended: 12/2/98 9:51

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 98-GP-1-04 BELCHER [70] 12-2-98 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	69	0.00	2.09	<MDA	2.99	2.64	<MDA
B2	70	0.00	2.02	<MDA	0.00	1.88	<MDA

12-2-98

98-GP-1-04

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6 OF 1

12-8-98

02 Dec 98 15:11 ALPHA/BETA - 1.01 Page #1

Protocol #: 4 PW H3 403728 User : 5662

98-GP-1-04

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	6.40
Region B:	2.0 -	18.6	0	0.0	5.90
Region C:	40.0 -	2000	0	0.0	10.50

Quench Indicator: tSIE/AEC

Ext Std Terminator: Count

T 98-GP-1-04 [P1-P70] BELCHER 12-2-98 RLH

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	6.40	7	B	572.73		0.00	10.50
0	2.00	1237.60	0		607.22	2473.47	178.81	0.00
1	2.00	0.00	10		405.62	0.00	0.00	0.00
2	2.00	0.00	0		497.13	0.00	0.00	0.00
3	2.00	0.00	0		571.55	0.00	0.00	0.00
4	2.00	0.00	0		497.69	0.00	0.00	3.00
5	2.00	5.10	0		561.47	10.60	10.55	0.00
6	2.00	1.60	0		489.52	3.56	9.61	0.00
7	2.00	2.10	0		595.61	4.24	8.96	0.00
8	2.00	3.10	5		546.19	6.53	9.81	0.00
9	2.00	0.00	0		482.35	0.00	0.00	0.00
10	2.00	1.60	0		447.81	3.76	10.17	0.00
11	2.00	0.00	0		484.39	0.00	0.00	2.50
12	2.00	0.00	0		344.25	0.00	0.00	2.50
13	2.00	0.00	0		416.08	0.00	0.00	0.00
14	2.00	0.00	0		561.55	0.00	0.00	0.00
15	2.00	0.00	0		451.28	0.00	0.00	0.00
16	2.00	0.10	0		496.98	0.22	8.72	0.00
17	2.00	0.00	14		560.07	0.00	0.00	2.00
18	2.00	0.00	0		502.66	0.00	0.00	0.00
19	2.00	0.00	0		571.94	0.00	0.00	0.00
20	2.00	0.00	0		452.88	0.00	0.00	0.50
21	2.00	1.60	0		621.75	3.16	8.54	0.00
22	2.00	0.10	8		438.69	0.24	9.43	0.00
23	2.00	0.00	0		520.50	0.00	0.00	0.00
24	2.00	0.60	0		526.80	1.29	8.75	0.00
25	2.00	0.00	0		362.32	0.00	0.00	0.00
26	2.00	1.10	0		501.02	2.41	9.22	0.00
27	2.00	0.00	0		468.08	0.00	0.00	0.00
28	2.00	0.00	0		566.13	0.00	0.00	0.00
29	2.00	0.00	0		343.45	0.00	0.00	2.00
30	2.00	0.00	0		352.16	0.00	0.00	0.00
31	2.00	0.00	0		367.33	0.00	0.00	0.00
32	2.00	0.00	0		409.61	0.00	0.00	0.00
33	2.00	1.60	0		536.41	3.40	9.18	0.00
34	2.00	0.00	0		484.97	0.00	0.00	1.50

12-8-98 7 of 7

Protocol #: 4 PW H3 403728 User : 5662

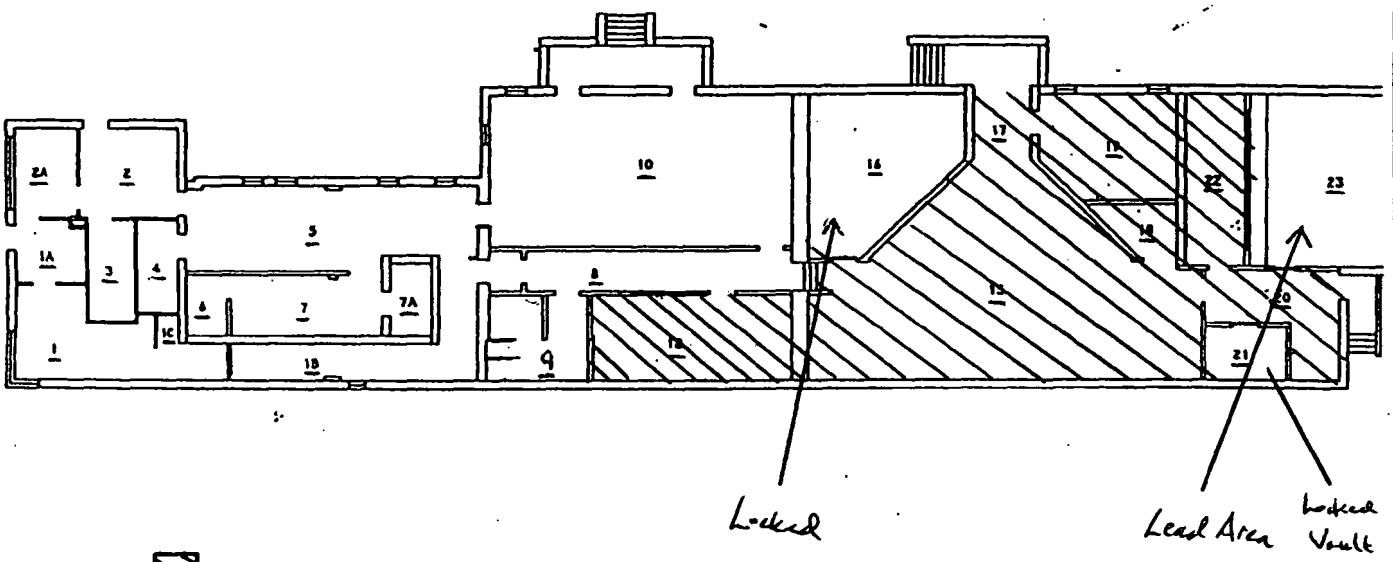
98-6P-1-04

S#	TIME	CPMA	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	0.00	0	489.89	0.00	0.00	0.00
36	2.00	0.60	0	427.28	1.45	9.88	3.00
37	2.00	0.00	0	302.86	0.00	0.00	0.00
38	2.00	0.10	0	444.72	0.24	9.35	2.00
39	2.00	0.00	0	494.12	0.00	0.00	0.50
40	2.00	0.00	0	426.31	0.00	0.00	0.00
41	2.00	0.00	0	477.97	0.00	0.00	0.00
42	2.00	0.00	0	380.37	0.00	0.00	0.00
43	2.00	0.60	0	462.01	1.38	9.42	0.50
44	2.00	0.00	0	503.21	0.00	0.00	0.00
45	2.00	0.00	0	401.18	0.00	0.00	0.00
46	2.00	0.00	0	585.42	0.00	0.00	0.00
47	2.00	0.10	0	520.61	0.22	8.53	0.00
48	2.00	0.00	0	370.91	0.00	0.00	0.00
49	2.00	0.10	0	504.60	0.22	8.65	0.00
50	2.00	0.00	0	429.45	0.00	0.00	0.00
51	2.00	0.00	0	514.69	0.00	0.00	0.00
52	2.00	0.00	0	561.18	0.00	0.00	0.00
53	2.00	0.60	0	555.19	1.25	8.53	0.00
54	2.00	1.60	0	567.94	3.31	8.93	0.00
55	2.00	0.00	0	404.74	0.00	0.00	0.00
56	2.00	0.00	0	384.01	0.00	0.00	0.00
57	2.00	0.00	0	428.94	0.00	0.00	0.00
58	2.00	0.00	0	489.72	0.00	0.00	0.00
59	2.00	0.00	0	457.00	0.00	0.00	1.00
60	2.00	0.00	0	450.58	0.00	0.00	0.00
61	2.00	0.00	0	489.41	0.00	0.00	0.00
62	2.00	0.00	0	472.52	0.00	0.00	0.00
63	2.00	0.00	0	464.78	0.00	0.00	0.00
64	2.00	0.10	0	557.49	0.21	8.26	0.00
65	2.00	0.00	0	415.06	0.00	0.00	4.50
66	2.00	0.00	0	400.55	0.00	0.00	0.00
67	2.00	0.00	0	522.31	0.00	0.00	0.00
68	2.00	2.60	0	544.02	5.49	9.60	0.00
69	2.00	0.00	0	565.03	0.00	0.00	0.00
70	2.00	0.00	0	476.10	0.00	0.00	0.00

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 99-GP-1-01
PURPOSE: Release of GP-1 Bldg.	RWP NO. N/A
	DATE: 1/4/99
	TIME: 1500

MAP/DRAWING



▨ => Areas Survey

<100/α
<5K/β

All Rdgs Above

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= ROOM NUMBER

(#) = 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	021799
	5382/5365	051199
	5308/5325	051199
	5303/5315	060999
N/A	N/A	N/A

Completed by: (Signature) [redacted]	HP# 7889 7872 3875 8939	Date: 1/4/99	
Completed by: (Print Name) [redacted]	[redacted]		
Counted by: (Signature) N/A	HP#	Date:	
Counted by: (Print Name) N/A			
[redacted]	HP# 5996	Date: 1-12-99	
Rev: [redacted]			

ML-9620 (2-98)

Survey No. 99-GP-1-01

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: None

NOTES:

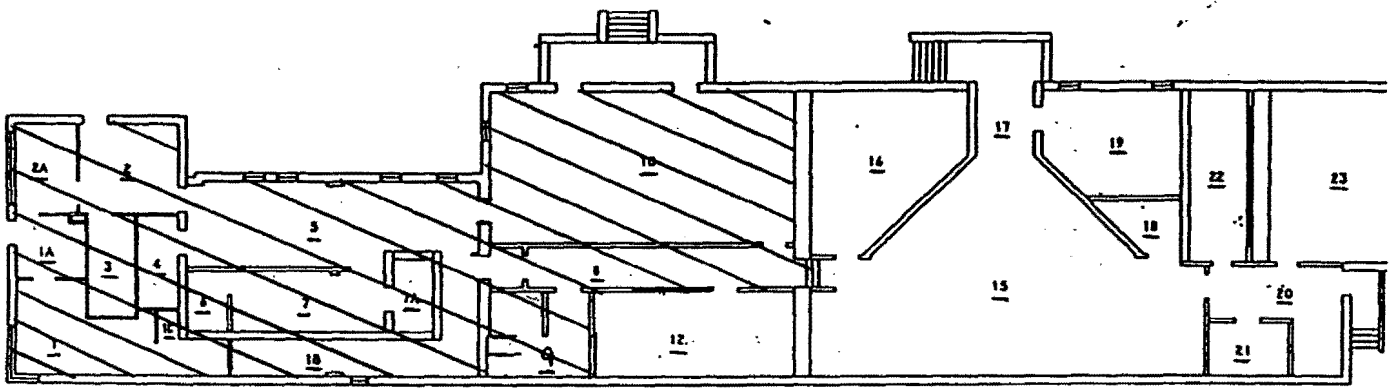
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-9620 (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 99-GP-1-02
PURPOSE: Release of GP-1 Bldg.	RWP NO. N/A
	DATE: 1/5/99
	TIME: 1500

MAP/DRAWING



⇒ Area of Survey

<100/α
<5k/β
All Bldgs Above

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
= ROOM NUMBER
△# = 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~~ M5305 / 5316	021799
	5382/5365	051199
	5308/5325	051199
	5303/5315	060999

Completed by: (Signature) [redacted]	[redacted]	HP# 7829 7973 8237 7872	Date: 1/5/99
Completed by: (Print Name) [redacted]			
Counted by: (Signature) N/A		HP#	Date:
Counted by: (Print Name) N/A			
[redacted]		HP# 5996	Date: 1-12-99
[redacted]			

ML-9620 (2-98)

Survey No. 99-GP-1-02

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: None

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.

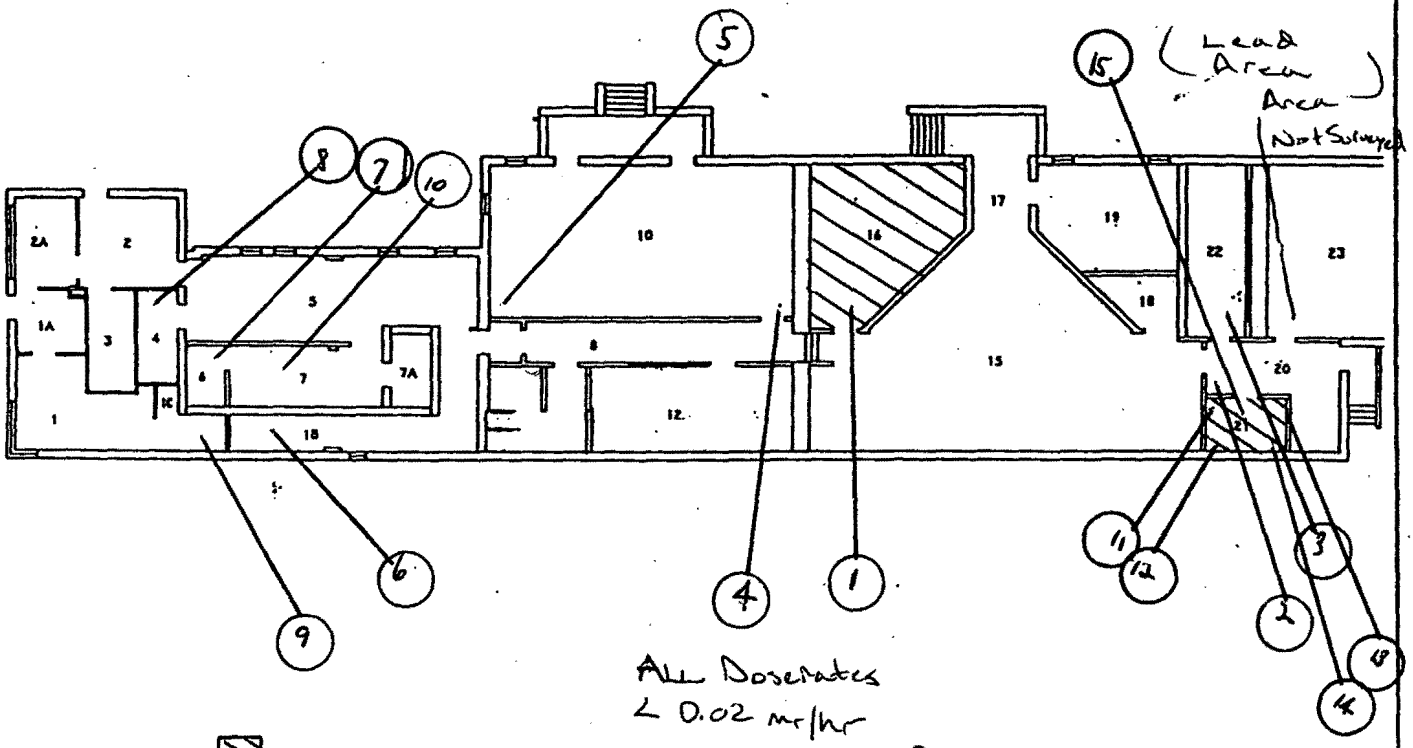
ML-9620 (4-98)

RADIOLOGICAL SURVEY DATA SHEET R-214

K-1 / K-15 P5

LOCATION: (BLDG./AREA/ROOM) 6P [illegible]	SURVEY NO. 99-6P-1-03
PURPOSE: Release Survey	RWP NO. N/A
	DATE: 1/6/99
	TIME: 1500

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 ELDITRA	5303/5315	060999
↓	5382/5365	051199
↓	5305/5316	021799
BICRON μR	3928	0309 99
N A	N A	N A

Completed by: (Signature) [redacted]	HP# 7809 7873	8939 7872	Date: 1/6/99
Completed by: (Print Name) [redacted]			
[redacted]	HP# 5879		Date: 1-7-99
[redacted]			
[redacted]	HP# 5996		Date: 1-12-99
[redacted]			

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-15	← See	Attached	→	
			N	A

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

COMMENTS: Directs and smears taken on current floor cover. ← 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: SMEAR020
Batch Ended: 1/7/99 9:47

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-GP-1-03 SMITH [15] 01-07-99 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.21	<MDA	0.00	1.88	<MDA
A2	2	0.00	2.16	<MDA	1.76	2.72	<MDA
A3	3	1.65	1.96	<AL	0.20	2.06	<MDA
A4	4	0.00	1.96	<MDA	0.00	2.06	<MDA
B1	5	0.00	2.05	<MDA	0.00	1.77	<MDA
B2	6	7.65	4.01	<AL	6.50	3.57	<AL
B3	7	0.00	1.87	<MDA	0.00	1.69	<MDA
B4	8	0.00	1.93	<MDA	2.45	2.64	<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	1.98	<MDA	1.34	1.95	<MDA
C4	12	0.00	1.99	<MDA	2.44	2.24	<MDA
D1	13	0.00	2.15	<MDA	0.00	1.51	<MDA
D2	14	0.00	2.55	<MDA	1.03	2.49	<MDA
D3	15	0.00	1.99	<MDA	0.00	1.49	<MDA

1/11/99

3 of 4

4c4

 1/6/99

Protocol #: 5 PW H3 403728 User : 5662

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	9.50
Region B:	2.0 -	18.6	0	0.0	10.30
Region C:	40.0 -	2000	0	0.0	11.90

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
99-GP-1-03 [K1-K15] NEAL/MURPHY 1-7-99 RLH
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\prot1.dat
Count Data Filename: c:\data\SDATA5.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	9.50	44	B	476.13		0.00	11.90
0	2.00	363.00	0		577.81	743.73	71.74	0.00
1	2.00	0.00	0		473.96	0.00	0.00	0.00
2	2.00	0.00	0		419.68	0.00	0.00	0.00
3	2.00	0.00	0		436.86	0.00	0.00	1.60
4	2.00	0.00	0		615.41	0.00	0.00	0.00
5	2.00	0.00	0		426.45	0.00	0.00	0.60
6	2.00	0.00	0		375.39	0.00	0.00	2.60
7	2.00	0.00	0		663.20	0.00	0.00	0.00
8	2.00	0.00	0		487.31	0.00	0.00	0.60
9	2.00	0.00	0		651.16	0.00	0.00	0.00
10	2.00	0.00	0		682.75	0.00	0.00	0.00
11	2.00	0.00	0		613.69	0.00	0.00	0.00
12	2.00	0.00	0		600.70	0.00	0.00	0.00
13	2.00	0.00	0		600.47	0.00	0.00	0.00
14	2.00	0.50	5		556.01	1.04	10.75	1.10
15	2.00	0.00	0		624.74	0.00	0.00	0.00

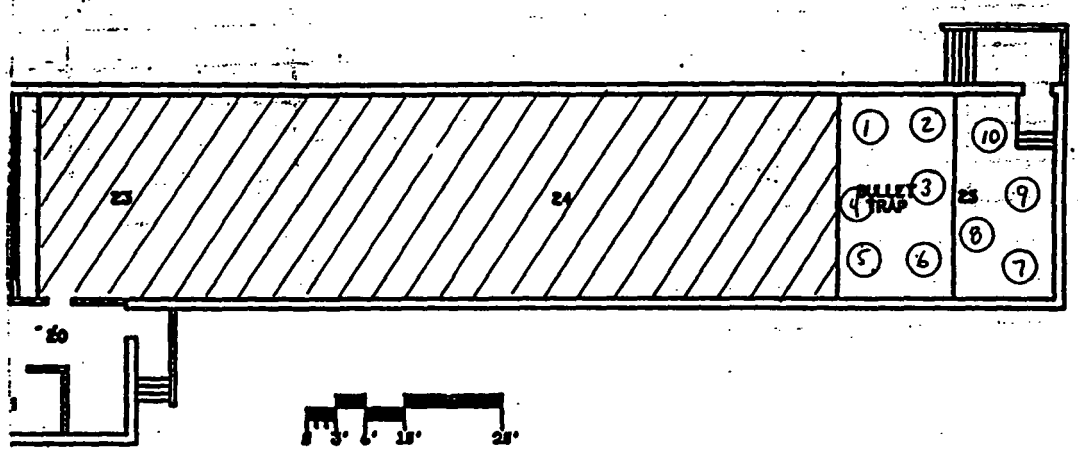
RADIOLOGICAL SURVEY DATA SHEET

M-1/M-10 P3

R214

LOCATION: (BLDG/AREA/ROOM) GP-1	SURVEY NO. 99-CP-1-04
PURPOSE: RELEASE SURVEY	RWP NO. N/A
	DATE: 01/01/99
	TIME: 1400

MAP/DRAWING



*NOTE: DIRECT READINGS TAKEN IN ALL SHADED AREAS AND AT SMEAR LOCATIONS
ALL READINGS = < 100 DPM/100 cm² α
< 5000 DPM/100 cm² β-γ

GP-1 BLDG
FIRST FLOOR
BLDG CODE:3508

LEGEND: #= mrem/hr (γ) whole body
E = mrem/hr (β+n+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	021799
	5340/5343	020699
	5303/5315	060999
	5896/5279	061599
N A	N A	N A

Completed by: (Signature) [redacted]	HPS 3077 7873	Date: 01/01/99
Completed by: (Print Name) [redacted]		
[redacted]	HPS 5340	Date: 01/12/99 01/11/99
[redacted]		
[redacted]	HPS 5896	Date: 7-13-99
Rev [redacted]		

ML-9620 (2-96)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-10				SEE ATTACHMENT
			A	
		N		

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

COMMENTS: DIRECT READINGS TAKEN AT SMEAR LOCATIONS N/A

NOTES:

1. See MD-60036 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: SMEAR000
Batch Ended: 1/12/99 8:02

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-GP-1-04 MURPHY [10] 01-12-99 TAS

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	2.14	<MDA	0.00	1.99	<MDA
A3	3	1.65	1.96	<AL	0.20	2.06	<MDA
A4	4	0.00	1.97	<MDA	1.48	2.56	<MDA
B1	5	0.00	2.06	<MDA	0.72	2.10	<MDA
B2	6	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	7	0.00	1.91	<MDA	4.78	2.95	<AL
B4	8	1.68	1.90	<AL	0.00	1.94	<MDA
C1	9	0.00	2.23	<MDA	0.53	1.86	<MDA
C2	10	0.00	2.27	<MDA	0.00	2.01	<MDA

MM
01.3.99

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	6.20
Region B:	2.0 -	18.6	0	0.0	5.60
Region C:	40.0 -	2000	0	0.0	10.10

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
99-CP-1-04 [M1-M10] MURPHY 1-12-99 RLH
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	6.20	31	B	591.73		0.00	10.10
0	2.00	1339.80	0		608.27	2675.39	191.09	2.40
1	2.00	1.30	0		538.22	2.76	9.09	0.00
2	2.00	0.00	0		641.68	0.00	0.00	0.40
3	2.00	0.30	0		473.87	0.68	9.18	1.90
4	2.00	0.00	0		553.21	0.00	0.00	3.90
5	2.00	0.30	0		625.47	0.59	7.96	0.00
6	2.00	0.00	0		534.54	0.00	0.00	0.00
7	2.00	0.00	0		566.50	0.00	0.00	0.00
8	2.00	1.80	0		559.38	3.75	9.16	0.00
9	2.00	0.00	0		615.26	0.00	0.00	5.40
10	2.00	0.00	0		602.17	0.00	0.00	0.00

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) GP-1	SURVEY NO. 99-GP-1-05
PURPOSE: SOIL SAMPLES	RWP NO. N/A
	DATE: 011499
	TIME: 1400

MAP/DRAWING

	GPS #'s
(7) SOIL SAMPLES # 99-GP-1-05-01 →	4441
-02 →	4442
-03 →	4443
-04 →	4444
-05 →	4445
-06 →	4446
99-GP-1-05-07 →	4447

SEE ATTACHED MAP FOR SAMPLE LOCATIONS.

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
N/A	N/A	N/A

Completed by: (Sig[redacted]	HP# 7872	Date: 011499
Completed by: (Print Name) [redacted]		
Counted by: (Signature) N/A	HP#	Date:
Counted by: (Print Name) N/A		
F[redacted]ture)	HP# 5996	Date: 1-25-99
Rev[redacted]		

ML-9620 (2-96)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: N/A

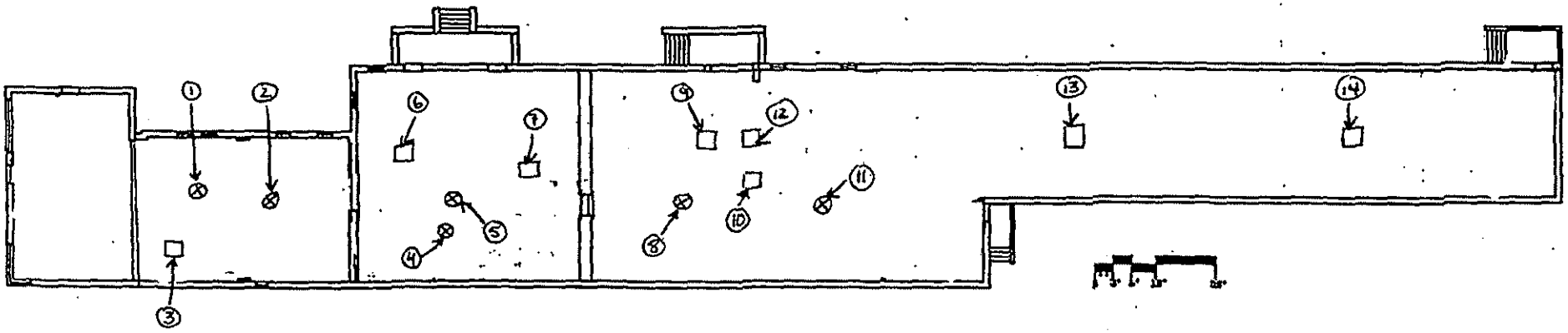
NOTES:

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.

ML-9620 (2-98)

Fig. 3 of 3

0	12/12/91	ASBUILT ISSUE	OCV				DVO



LEGEND:

⊗ = DRAINS

□ = EXHAUST VENTS

DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing Official: J. A. NESHEIM
EM CBC Class Name Office

Date: 08-26-08

GP-1 BLDG
FIRST FLOOR
BLDG CODE:3508

NOT FOR PUBLIC DISCLOSURE

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

SHEET	1	2	3	4	5	6
TOTAL	6					

TITLE: GP-1 BLDG FLOOR PLANS

(U) TITLE CLASSIFICATION

UCNI

D | FSD911309 | 12333

MO-RSL-12/12/91 | MO-DUS-V3.0

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR008
Batch Ended: 1/19/99 13:04

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-GP-1-08 NEAL [14] 01-19-99 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.23	<MDA	2.23	2.58	<MDA
A2	2	0.00	2.16	<MDA	1.76	2.72	<MDA
A3	3	1.66	1.94	<AL	0.00	1.33	<MDA
A4	4	0.00	1.98	<MDA	2.56	2.78	<MDA
B1	5	0.00	2.04	<MDA	0.00	1.37	<MDA
B2	6	0.00	2.02	<MDA	0.00	1.88	<MDA
B3	7	1.65	1.86	<AL	0.00	1.29	<MDA
B4	8	1.68	1.91	<AL	0.27	2.20	<MDA
C1	9	2.10	2.24	<AL	1.62	2.24	<MDA
C2	10	0.00	2.27	<MDA	0.00	2.01	<MDA
C3	11	0.00	1.98	<MDA	1.34	1.95	<MDA
C4	12	1.65	1.99	<AL	3.43	2.49	<AL
D1	13	0.00	2.16	<MDA	0.03	2.02	<MDA
D2	14	2.12	2.52	<AL	0.00	2.08	<MDA

Protocol #: 1 Name:PW H3 #401388 19-Jan-99 14:04
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-GP-1-08 [B1-B14] NEAL/MURPHY 1-19-99 RLH
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On

S#	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	2Sigma
-1	10.00	6.40	6.60	10.20	B	52	628.		0.00
0	2.00	1659.60	1586.40	0.00		1	622.	3765.03	266.10
1	2.00	1.60	0.00	0.30		6	540.	4.11	11.65
2	2.00	4.10	3.90	0.00		9	560.	10.26	13.15
3	2.00	0.00	0.00	0.00		43	568.	0.00	0.00
4	2.00	2.60	2.90	0.00		33	432.	7.14	16.62
5	2.00	0.10	0.00	0.00		14	422.	0.28	12.33
6	2.00	2.10	1.90	0.00		6	572.	5.09	11.25
7	2.00	2.10	2.40	0.00		21	542.	5.38	13.46
8	2.00	8.10	6.40	1.80		16	414.	22.84	18.66
9	2.00	20.60	13.40	0.00		11	551.	52.22	21.83
10	2.00	31.10	25.40	0.00		5	590.	73.21	22.48
11	2.00	2.10	2.90	0.00		33	466.	5.64	16.48
12	2.00	2.10	0.00	0.00		9	497.	5.62	12.99
13	2.00	6.60	4.40	1.80		4	562.	16.45	13.82
14	2.00	2.10	0.40	0.00		11	566.	5.21	12.04

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

...e	Bldg	Bldg Description	Room	Avg Radon pCi/l	Duplicate Radon pCi/l	Monitor Monid	Monitor Dupid	Monitor Install Date	Monitor Retrieve Date	Comments
	21		ABOVE AIR SAMPLER	161.1	125.8	1678055	1666782	12/14/89	2/16/90	MET - OLD THORIUM STORAGE
	21		ABOVE AIR SAMPLERS	115.7		1668508		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
	48		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	
	87		163	1.5		1681563		12/13/89	2/19/90	
	998	FIRE STATION	ROOM 002 EQUIPMENT ROOM WITH SUMP	1.4		1654468		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		1678020		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	70	.9		1678077		1/15/90	2/19/90	
		T	30	.9		1681586		1/15/90	2/19/90	
	105	PARTS MACHINING BUILDING	STAIRWELL NEXT TO ROOM 127	.8		1681564		12/12/89	2/19/90	
	25	ARAC	3 ON BOOK CASE MIDDLE	.8		1671314		12/16/89	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		1678050		12/13/89	2/16/90	
		SM	8 WEST WALL AT OLD RECOVERY	.8		1672057		12/11/89	2/16/90	
		MO BLDG	MO 8	.8		1678045		12/18/89	2/16/90	
	87		124	.8		1678032		12/12/89	2/19/90	
	88		ROOM 116 ON NORHT WALL RIGHT OF CEN	.7	.5	1661524	1661535	12/12/89	2/19/90	
	69		101 NEAR BACK CORNER BY ROOF DRAIN	.7	.5	1666703	1668532	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		1678086		12/12/89	2/19/90	
		E ANNEX	E 225 EAST WALL	.7		1681552		12/18/89	2/16/90	
		POWER HOUSE PH-1	REPAIR SHOP NORTH EAST CORNER	.7		1678040		12/12/89	2/19/90	
		M BLDG	M-135	.7		1681553		12/12/89	2/16/90	
	26		ROOM 84 SOUTH WEST WALL	.6	.9	1672048	1667159	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		1654459		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	RM STAIRWELL AT BASEMENT LEVEL	.6		1672086		12/14/89	2/19/90	
		OSM	120 C	.6		1681573		12/12/89	2/16/90	
		SM	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	1650118	1666819	12/12/89	2/16/90	

Radon Monitor Results for US Round Facility

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	2/16/90	
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 BULLETIN BOARD	.5		1678047		12/12/89	2/16/90	
47		102 MIDDLE OF EAST WALL	.5		1678059		12/12/89	2/16/90	
50		CELL 113	.5		1661582		12/13/89	2/19/90	
79		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		1661569		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	108D 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	318 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		1661587		12/19/89	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	
	N BLDG	ROOM 127	.5		1661571		12/12/89	2/16/90	
	NH	NH-8	.5		1671269		12/18/89	2/19/90	
	I BUILDING	BASEMENT LEFT CRAWL SPACE DOOR	.5		1671260		12/12/89	2/19/90	
	N BUILDING	N 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	
	OSN	4HT FLOOR	.5		1678020		12/12/89	2/16/90	
	OSE	CORR 212 SOUTH WALL NEAR 210 DOOR	.5		1678036		12/15/89	2/16/90	
	OSN	319	.5		1678069		12/13/89	2/16/90	
	OSN	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	
	NH	NH-24	.4		1667187		12/14/89	2/19/90	
	DS BUILDING	CORRIDOR 7 NEXT TO ROOM 216	.4		1661514		12/12/89	2/19/90	
	GP 81	1A MIDDLE OF WEST WALL	.4	.5	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		1661570		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	

Radon Monitor Results for 08 Mound Facility

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		1681568		12/14/89	2/19/90	
46		81 EAST WALL	.4		1672078		12/12/89	2/19/90	
49		WALL OUTSIDE RM 125	.4		1678028		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	
63N		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		17D MEETING ROOM CENTER WALL	.4		1678041		12/12/89	2/19/90	
88		ROOM 116	.4		1671285		12/12/89	2/19/90	
95	SH/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		1667184		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		1678035		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

(There is no data available for asbestos summary/information.)

Appendix J

Lead Summary/Information

SURFACE MONITORING RESULTS

Sample Location	Sample Results (ug/ft2)
Ceiling 10-12' from Bullet trap	86
Ceiling 8' from Bullet trap	91
Ceiling 5-6' from Bullet trap	130
Left Wall 12-14' from Bullet trap	120
Left Wall 8-10' from Bullet trap	690
Left Wall 5-6' from Bullet trap	130
Right Wall 13-15' from Bullet trap	140
Right Wall 10-12' from Bullet trap	160
Right Wall 6-8' from Bullet trap	160
Floor 15-17' from Bullet trap	1,800
Floor 8-10' from Bullet trap	3,300
Floor 5-6' from Bullet trap	2,900
Bullet Trap Face (Left Side)	230,000
Bullet Trap Face (Center)	420,000
Bullet Trap Face (Right Side)	98,000
Floor Backside of the Bullet trap	48,000
Floor Backside of the Bullet trap	59,000
Floor Backside of the Bullet trap	62,000
Inside the front HVAC unit for the range	2,300

Appendix K

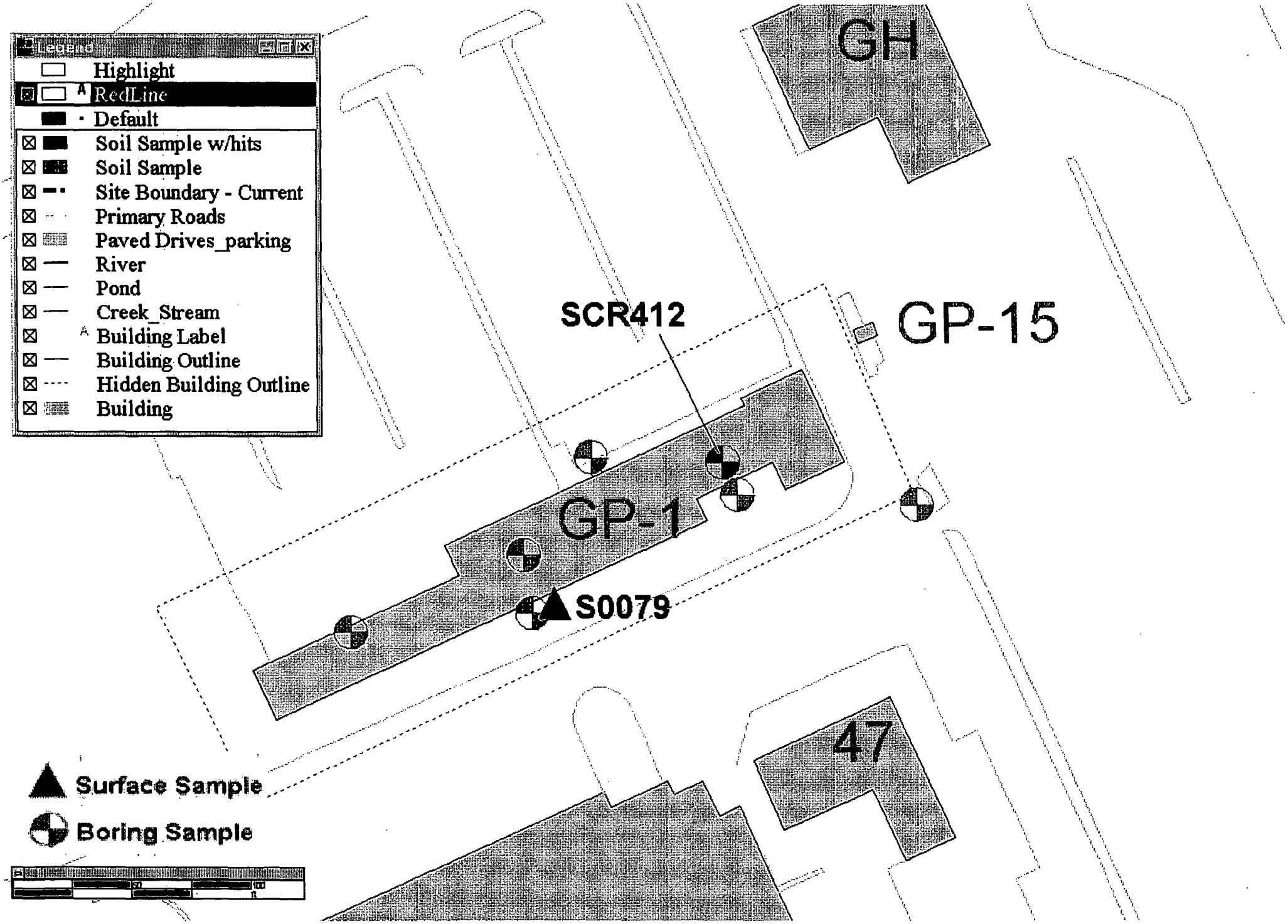
Chemical Summary/Information

(There is no chemical summary/information available.)

Appendix L

Noted Soil Sampling, Vicinity

Appendix L samples that exceeds comparison values are noted on the spreadsheet in the right-most column and with bold numbers in the "Measured Value" column. The constituent of concern may be addressed in the Parameter Name attachment to the appendix. This attachment lists comparison values in its right-most column, and reference sources in its left-most column.


Legend
Highlight
RedLine
Default
Soil Sample w/hits
Soil Sample
Site Boundary - Current
Primary Roads
Paved Drives_parking
River
Pond
Creek_Stream
Building Label
Building Outline
Hidden Building Outline
Building
GH
GP-15
SCR412
GP-1
S0079
47
Surface Sample
Boring Sample

Location_n	Sample_i	Location_t	Collection_	Med	Value_name	Measure	Value_u	Detectic	Chem_c	Star	End	Depth	Cas_number	Lab	Project_code	Dat	Comments
S0079	3039	Surface lo	19831001	Soil	Plutonium-238	0.03	PCI/G	0.01	RAD	0	0	FT	13981-16-3		RSS		
S0079	3039	Surface lo	19831001	Soil	Tritium	1.32	PCI/ML		RAD	0	0	FT	10028-17-8		RSS		
SCR412	9208045	Borehole	19920804	Soil	Plutonium-238	**35.00**	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		Exceeds soil 10-6 GV. Exceeds background value. Exceeds other criteria.

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

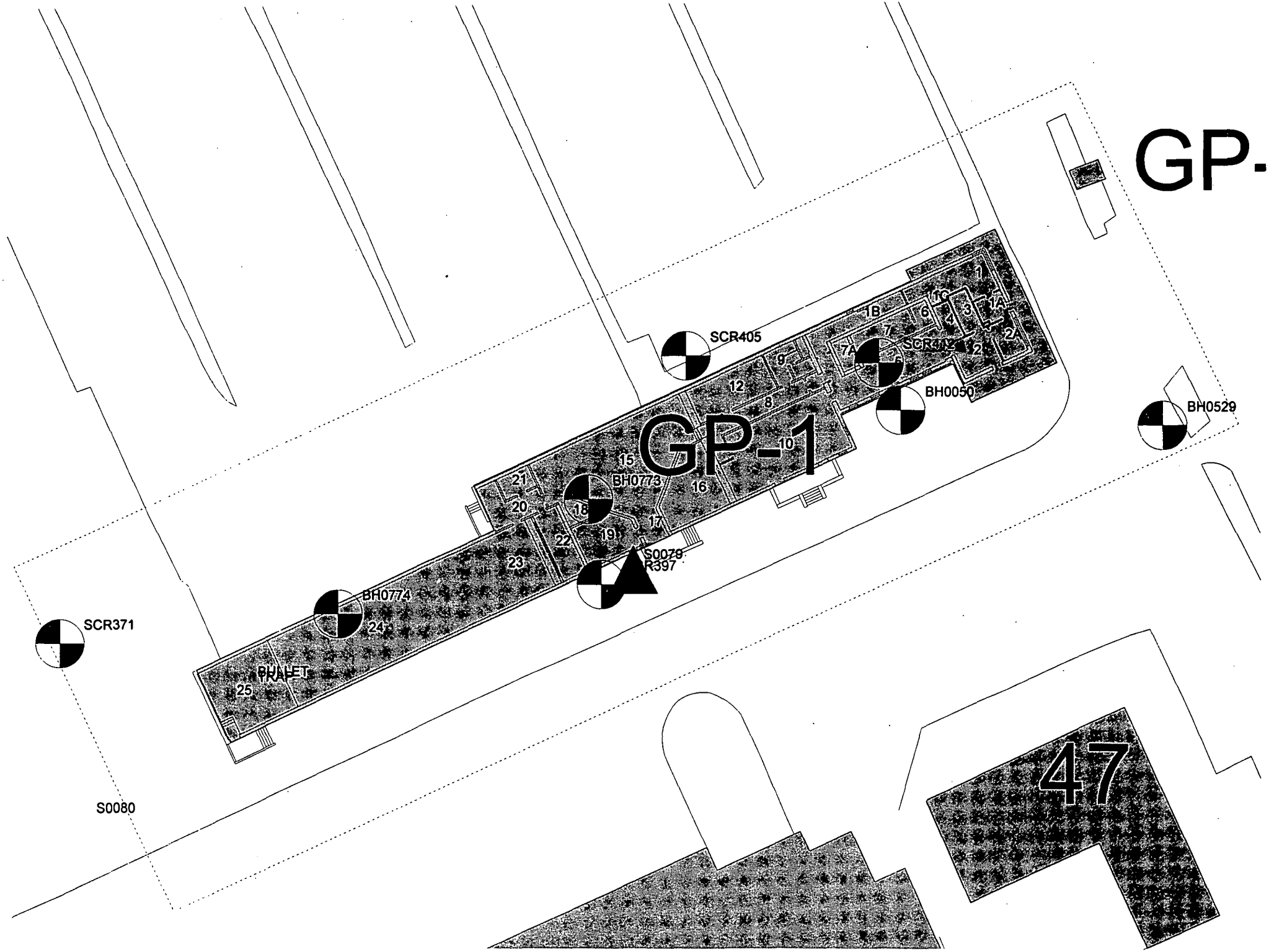
comp_no	par_code	parameter name	comparison value	units
2	7440-38-2	Arsenic	8.6	MG/KG
2	7440-39-3	Barium	180	MG/KG
2	7440-69-9	Bismuth	ND	MG/KG
2	7440-41-7	Beryllium	1.3	MG/KG
2	7440-43-9	Cadmium	2.1	MG/KG
2	7440-70-2	Calcium	310000	MG/KG
2	7440-47-3	Chromium	20	MG/KG
2	7440-48-4	Cobalt	19	MG/KG
2	7440-50-8	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


GP-
GP-1
47
SCR405
SCR412
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BH0529
BH0773
BH0774
S0079
R397
SCR371
S0080
DRAFT
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Soil Sample

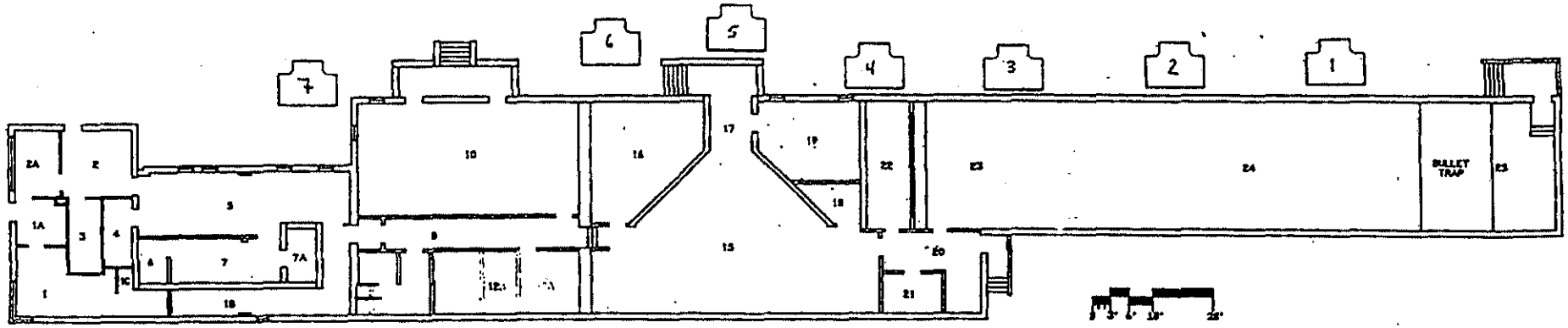
Project_code	Location_name	Chem_class	Value_name	Measured_value	Value_units	Lab_qualifier
RSS	S0079	RAD	Plutonium-238	0.03	PCI/G	
RSS	S0079	RAD	Tritium	1.32	PCI/ML	
RSS	S0079	RAD	Thorium-232	2.0	PCI/G	U
SCRDATA	SCR371	RAD	Plutonium-238	12.0	PCI/G	U
SCRDATA	SCR371	RAD	Thorium-232	1.0	PCI/G	U
SCRDATA	SCR371	RAD	Plutonium-238	15.0	PCI/G	U
SCRDATA	SCR371	RAD	Thorium-232	1.0	PCI/G	U
SCRDATA	SCR371	RAD	Plutonium-238	14.0	PCI/G	U
SCRDATA	SCR371	RAD	Thorium-232	0.8	PCI/G	U
SCRDATA	SCR371	RAD	Plutonium-238	11.0	PCI/G	U
SCRDATA	SCR371	RAD	Thorium-232	0.7	PCI/G	U
SCRDATA	SCR397	RAD	Plutonium-238	1.0	PCI/G	U
SCRDATA	SCR397	RAD	Thorium-232	0.6	PCI/G	U
SCRDATA	SCR397	RAD	Plutonium-238	7.0	PCI/G	U
SCRDATA	SCR397	RAD	Thorium-232	0.8	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	0.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	1.0	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	4.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	1.4	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	8.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	1.3	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	0.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	1.4	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	0.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	0.6	PCI/G	U
SCRDATA	SCR405	RAD	Plutonium-238	8.0	PCI/G	U
SCRDATA	SCR405	RAD	Thorium-232	1.7	PCI/G	U

Soil Sample

Project_code	Location_name	Chem_class	Value_name	Measured_value	Value_units	Lab_qualifier
SCRDATA	SCR412	RAD	Plutonium-238	1.0	PCI/G	U
SCRDATA	SCR412	RAD	Thorium-232	0.7	PCI/G	U
SCRDATA	SCR412	RAD	Plutonium-238	35.0	PCI/G	
SCRDATA	SCR412	RAD	Thorium-232	0.6	PCI/G	U
SCRDATA	SCR412	RAD	Plutonium-238	11.0	PCI/G	U
SCRDATA	SCR412	RAD	Thorium-232	0.5	PCI/G	U

Radiological Soil Sampling Data

REV	DATE	REVISION	BY	CHKD	ENG	APPD	PROJ	R
0	12/12/91	ABOUTLT ISSUE	DCV				DVO	



DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing Official: J. A. NESHEIM
EMCBC Classifier Name Office
Date: 08-26-08

✳ NOTE: # DENOTES SOIL SAMPLE LOCATIONS

GP-1 BLDG
FIRST FLOOR
BLDG CODE:3508

APPROVALS: VERY CRITICAL REQUIRED: ___NONE ___TRUEBK ___TOXIC ___CHEM
DATE:
TECH. ADP.
SR. MGR.
TRUEBK
TOXIC
CHEM

NOT FOR PUBLIC DISSEMINATION
MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

DRAWN DATE | PROJ MGR | DSGN | CHK MGR | CP & EE | PLCK MGR | CHK MGR | APPD | DATE

SHEET	1	2	3	4	5	6
SHEET						

TITLE (U) TITLE CLASSIFICATION
GP-1 BLDG
FLOOR PLANS

SUBJ CLASSIFICATION
DRAWING CLASSIFICATION NONE
SIZE D | DRAWING NUMBER FSD911309 | JOB NUMBER 12335
DWG TYPE SFP | PROJ GP-1 BLDG | CODE 14845 | SCALE AS NOTED | SHEET 1 OF 1
STATUS MD-REL.-12/12/91 | DRAWN MD-BR3-V3.8

pg. 4 of 1+

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004441
LAB SAMPLE ID: ML800219
FILE ID: MG200008.S0
PRIORITY: Y

Description\Location:
S#1 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.02	0.05	45,000
Cs-137		0.17	0.05	45,000
Pb-210	*	0.00	1.07	45,000
Ra-226		2.81	1.03	800
Ac-227 (D)	*	0.00	0.37	40
Th-230	*	5.52	9.89	800
Th-232 (D)		0.64	0.14	130
Pu-238	*	7.86	29.24	500
Am-241	*	0.06	0.10	500

Other Nuclides:

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

Σ DOT 0.04 nCi/g

Σ Respirator 0.09

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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004441
LAB SAMPLE ID: ML800226
FILE ID: MG100202.S0
PRIORITY: Y

Description\Location:
S#1 RSDS-99-GP1-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide	Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	0.03	0.02	45,000
Cs-137	0.15	0.02	45,000
Pb-210	1.92	0.25	45,000
Ra-226	2.27	0.31	800
Ac-227 (D) •	0.00	0.09	40
Th-230 •	1.70	2.33	800
Th-232 (D)	0.57	0.07	130
Pu-238 •	0.00	6.23	500
Am-241 •	0.00	0.03	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: 1/19/99 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted] 1-19-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004442
LAB SAMPLE ID: ML800227
FILE ID: MG200012.S0
PRIORITY: Y

Description\Location:
S#2 RSDS-99-GPI-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.02	45,000
Cs-137		0.12	0.02	45,000
Pb-210	•	0.00	0.41	45,000
Ra-226		2.48	0.42	800
Ac-227 (D)		0.26	0.14	40
Th-230	*	0.00	4.54	800
Th-232 (D)		0.52	0.07	130
Pu-238		16.20	11.50	500
Am-241	•	0.00	0.05	500

Other Nuclides:

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

Σ DOT 0.02 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: 1/19/99 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted] 1-19-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004447
LAB SAMPLE ID: ML800233
FILE ID: MG100205.S0
PRIORITY: Y

Description\Location:
S#7 RSDS-99-GP1-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/19/99 **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	0.02	45,000
Pb-210		2.05	0.26	45,000
Ra-226		1.78	0.30	800
Ac-227 (D)	•	0.06	0.09	40
Th-230	•	0.00	2.57	800
Th-232 (D)		0.56	0.08	130
Pu-238	•	2.31	6.45	500
Am-241	*	0.00	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: 1/21/99 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted] 1-21-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004442
LAB SAMPLE ID: ML800220
FILE ID: MG100199.S0
PRIORITY: Y

Description\Location:
S#2 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.06	45,000
Cs-137		0.10	0.04	45,000
Pb-210		1.93	0.50	45,000
Ra-226		1.19	0.64	800
Ac-227 (D)	*	0.15	0.17	40
Th-230		6.09	4.25	800
Th-232 (D)		0.56	0.15	130
Pu-238	*	0.00	15.30	500
Am-241	*	0.02	0.05	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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004443
LAB SAMPLE ID: ML800228
FILE ID: MG100203.S0
PRIORITY: Y

Description\Location:
S#3 RSDS-99-GP1-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.02	45,000
Cs-137		0.13	0.01	45,000
Pb-210		1.42	0.25	45,000
Ra-226		1.70	0.29	800
Ac-227 (D)	*	0.00	0.08	40
Th-230	*	0.00	2.21	800
Th-232 (D)		0.48	0.06	130
Pu-238	*	2.06	5.40	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: 1/20/99 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted] -20-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004443
LAB SAMPLE ID: ML800221
FILE ID: MG100200.S0
PRIORITY: Y

Description\Location:
S#3 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.06	45,000
Cs-137		0.12	0.05	45,000
Pb-210		1.65	0.45	45,000
Ra-226		2.03	0.53	800
Ac-227 (D)	•	0.00	0.19	40
Th-230	•	0.99	4.92	800
Th-232 (D)		0.48	0.15	130
Pu-238	*	0.00	12.70	500
Am-241	•	0.00	0.06	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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004444
LAB SAMPLE ID: ML800229
FILE ID: MG200013.S0
PRIORITY: Y

Description\Location:
S#4 RSDS-99-GPI-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.01	0.02	45,000
Cs-137	•	0.01	0.02	45,000
Pb-210	•	0.00	0.41	45,000
Ra-226		3.53	0.45	800
Ac-227 (D)	*	0.05	0.16	40
Th-230	*	1.80	4.64	800
Th-232 (D)		0.76	0.07	130
Pu-238	*	0.00	13.46	500
Am-241	•	0.00	0.05	500

Other Nuclides:

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

Σ DOT 0.02 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: 1/20/99 Counted By: 5801 Analyzed By: 6086 INITIALS [redacted] 1-20-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004444
LAB SAMPLE ID: ML800222
FILE ID: MG200009.S0
PRIORITY: Y

Description\Location:
S#4 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.05	0.05	45,000
Cs-137	•	0.00	0.06	45,000
Pb-210	•	0.00	0.92	45,000
Ra-226		3.88	0.99	800
Ac-227 (D)		0.43	0.33	40
Th-230		17.88	8.42	800
Th-232 (D)		0.94	0.18	130
Pu-238	*	16.62	26.99	500
Am-241		0.11	0.10	500

Other Nuclides:

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

Σ DOT 0.05 nCi/g

Σ Respirator 0.10

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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004445
LAB SAMPLE ID: ML800230
FILE ID: MG200015.S0
PRIORITY: Y

Description\Location:
S#5 RSDS-99-GP1-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/19/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.02	45,000
Cs-137		0.08	0.02	45,000
Pb-210	•	0.00	0.41	45,000
Ra-226		2.89	0.41	800
Ac-227 (D)		0.33	0.14	40
Th-230	•	0.00	4.42	800
Th-232 (D)		0.66	0.06	130
Pu-238	*	0.00	12.91	500
Am-241	•	0.00	0.05	500

Other Nuclides:

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

Σ DOT 0.02 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: 1/21/99 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted] 1-21-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004445
LAB SAMPLE ID: ML800223
FILE ID: MG100201.S0
PRIORITY: Y

Description\Location:
S#5 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.06	45,000
Cs-137		0.06	0.05	45,000
Pb-210		1.64	0.56	45,000
Ra-226		2.48	0.56	800
Ac-227 (D)	*	0.00	0.22	40
Th-230	*	0.00	5.90	800
Th-232 (D)		0.50	0.18	130
Pu-238	•	0.00	15.43	500
Am-241	*	0.00	0.06	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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004446
LAB SAMPLE ID: ML800231
FILE ID: MG100204.S0
PRIORITY: Y

Description\Location:
S#6 RSDS-99-GP1-05-02
10 HOUR RE-COUNT

Collector: HP#7868

Date Received: 1/19/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	•	0.01	0.02	45,000
Cs-137		0.05	0.02	45,000
Pb-210		1.78	0.26	45,000
Ra-226		2.00	0.26	800
Ac-227 (D)	*	0.01	0.08	40
Th-230	*	0.00	2.35	800
Th-232 (D)		0.60	0.07	130
Pu-238	•	0.00	5.83	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: 1/21/99 Counted By: 6086 Analyzed By: 6086 INITIALS [redacted] 1-21-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004446
LAB SAMPLE ID: ML800224
FILE ID: MG200010.S0
PRIORITY: Y

Description\Location:
S#6 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.05	45,000
Cs-137		0.09	0.04	45,000
Pb-210	*	0.00	0.90	45,000
Ra-226		2.62	0.95	800
Ac-227 (D)	*	0.12	0.31	40
Th-230		8.35	8.04	800
Th-232 (D)		0.50	0.15	130
Pu-238	*	0.00	27.51	500
Am-241	*	0.02	0.10	500

Other Nuclides:

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

Σ DOT 0.04 nCi/g

Σ Respirator 0.08

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: 1/18/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-18-99

SOIL ANALYSIS REPORT

FIELD SAMPLE ID: 004447
LAB SAMPLE ID: ML800225
FILE ID: MG200011.S0
PRIORITY: Y

Description\Location:
S#7 RSDS-99-GPI-05-02

Collector: HP#7868

Date Received: 1/18/99 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA (pCi/g)	MD-10438 Limit (pCi/g)
Co-60		0.05	0.03	45,000
Cs-137		0.13	0.05	45,000
Pb-210	*	0.00	1.30	45,000
Ra-226		3.50	1.14	800
Ac-227 (D)	•	0.29	0.39	40
Th-230	•	3.14	10.82	800
Th-232 (D)		0.68	0.20	130
Pu-238	*	5.19	18.50	500
Am-241	•	0.03	0.12	500

Other Nuclides:

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

Σ DOT 0.04 nCi/g

Σ Respirator 0.07

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

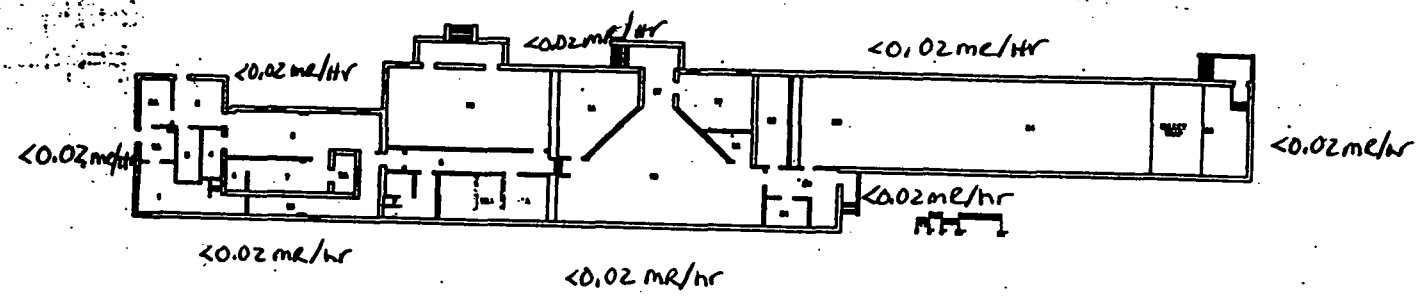
Comments:

Date: 1/19/99 Counted By: 5890 Analyzed By: 6086 INITIALS [redacted] 1-19-99

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) GP-1	SURVEY NO. 99-GP-1-07
PURPOSE: EXTERIOR Radiation SURVEY FOR RELEASE	RWP NO. N/A
	DATE: 01/18/99
	TIME: 1240

MAP/DRAWING



*DOSE RATES TAKEN ~ 15 ft. outside OF Bldg.

GP-1 BLDG
FIRST FLOOR
BLDG CODE:3508

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
BICRON uR	3929	04/08/99
	A	
N		

Con[redacted]	HPS 7873	Date: 01/18/99
Completed by: (Print Name) [redacted]		
Completed by: (Signature) N/A	HPS	Date:
Completed by: (Print Name) N/A		
F[redacted]ature)	HPS 5996	Date: 1-19-99
Re[redacted]me)		

ML-0620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: RADIATION SURVEY ONLY

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 (2-96)

RADIOLOGICAL SURVEY DATA SHEET

R-214 B-14 P1

LOCATION: (BLDG/AREA/ROOM) GP-1 ROOF	SURVEY NO. 99-GP-1-08
PURPOSE: SURVEY OF VENTS/DRAINS ON ROOF	RWP NO. N/A
	DATE: 011999
	TIME: 1030

MAP/DRAWING

SEE ATTACHED MAP FOR SURVEY LOCATION

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	060999
N A	N A	N A

Completed by: (Signature) [redacted]	HPS 7873 7872	Date: 011999
Completed by: (Print Name) [redacted]		
[redacted]	HPS 5374	Date: 01-19-99
[redacted]		
R [redacted]	HPS 5996	Date: 1-20-99
R [redacted]		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1 - 14	SEE	ATTACHED	→	

N/A

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

N/A

COMMENTS: DIRECT READINGS TAKEN AT SMEAR LOCATIONS. 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.

ML-9620 (2-98)

Appendix M

Occurrence Reports

(There are no occurrence reports for this building.)

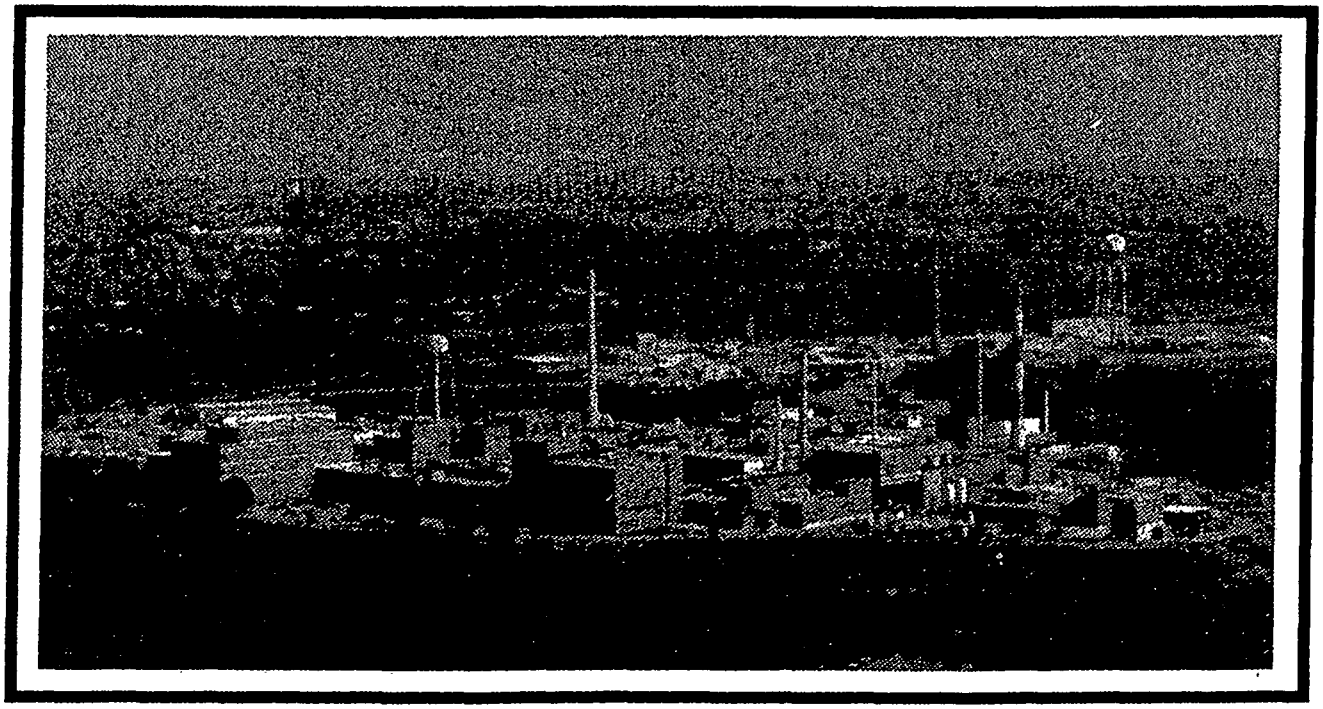
Appendix N

PRS Information

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:

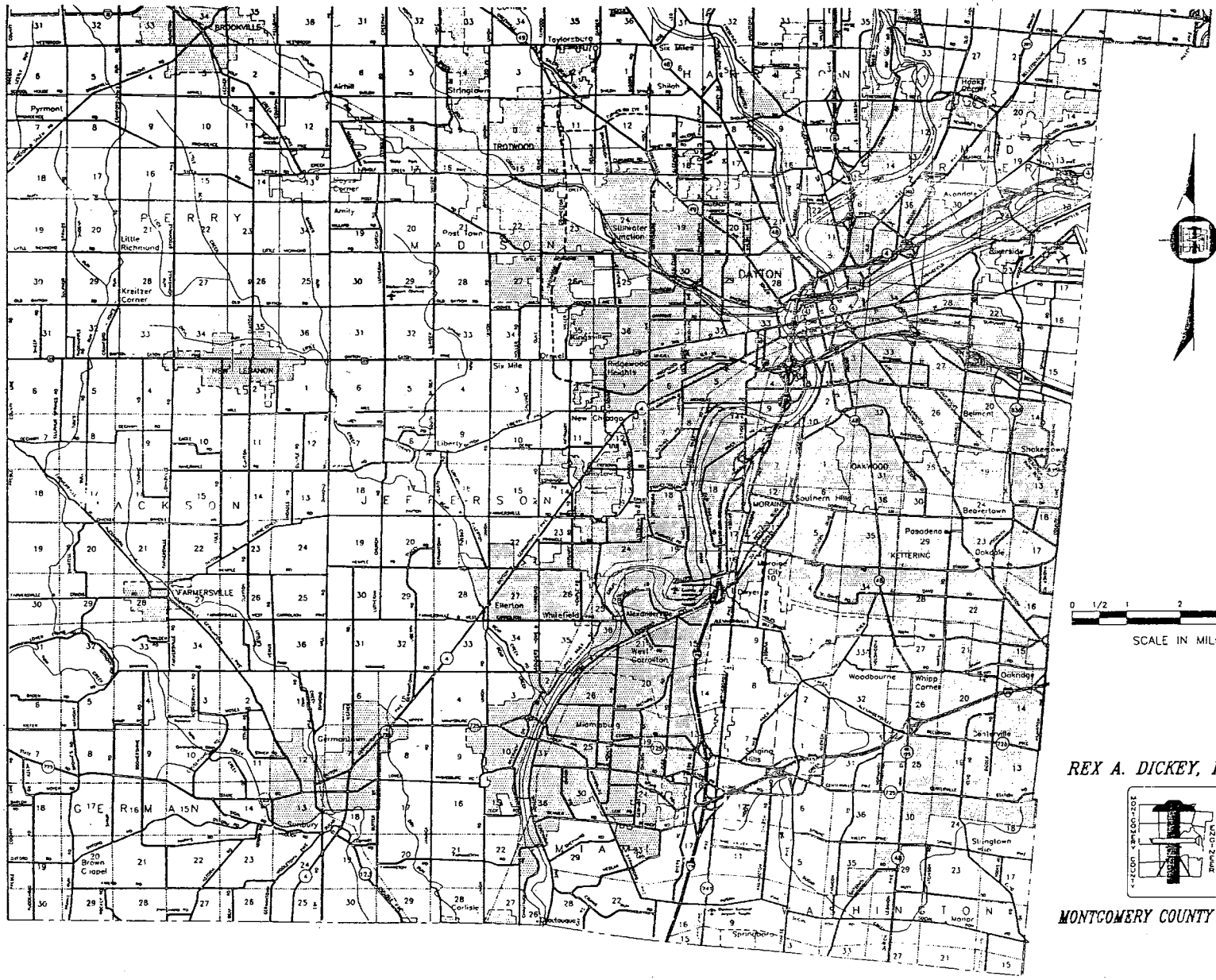
Comment period from 6/17/97 to 7/18/97

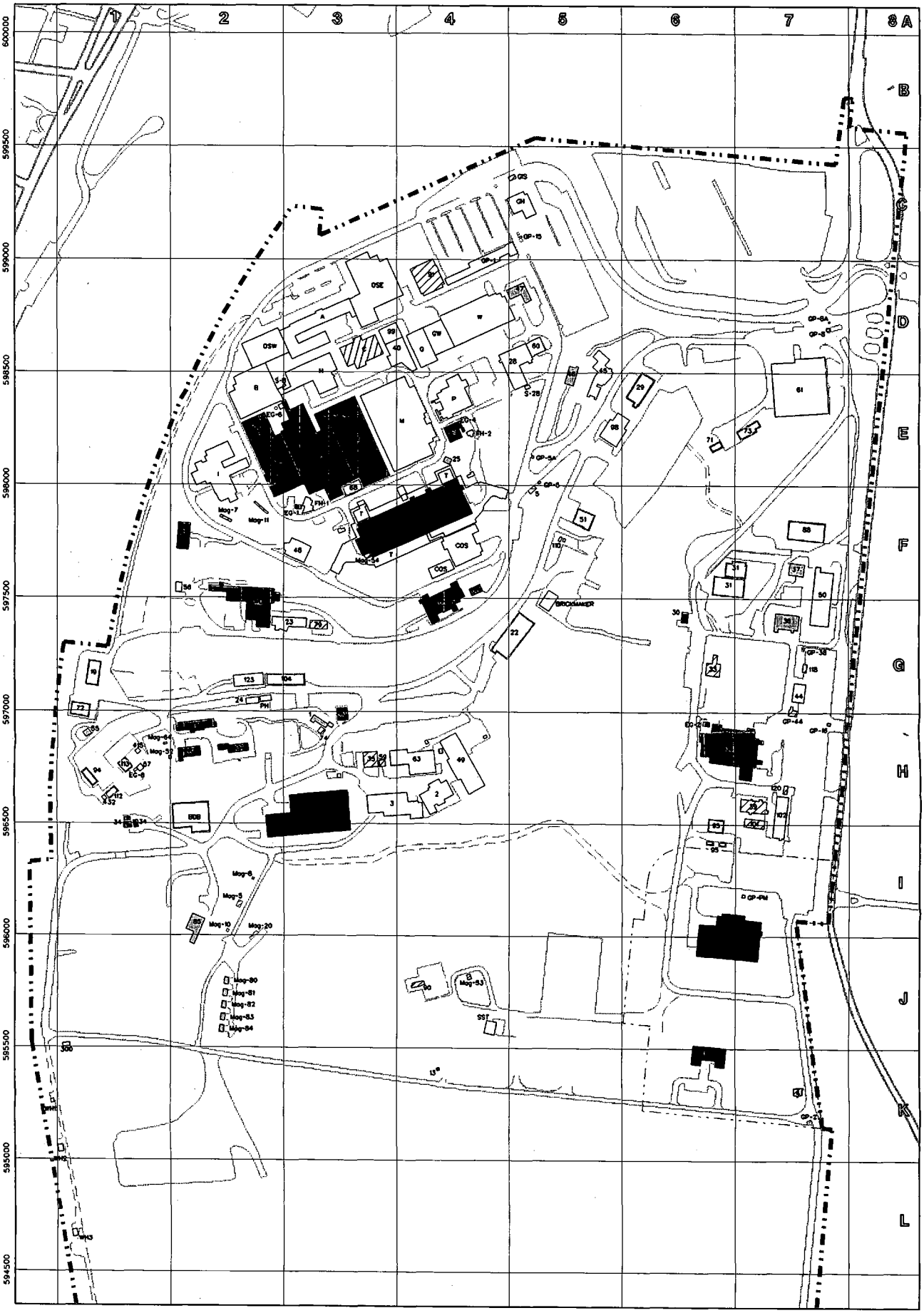
☐ No comments were received during the comment period.

☒ Comment responses can be found on page 1-2 of this package.

Page Redacted

Contains Proprietary Information


BROOKVILLE
Pyrmont
Taylorsburg
Six Miles
Airhill
Stringtown
Shiloh
TROTWOOD
Amity
Little Richmond
Kreitzer Corner
Post Town
Stillwater Junction
DAYTON
Riverside
Kingsville
Drexel
Ridgewood Heights
NEW LEBANON
Six Mile
New Chicago
Liberty
Belmont
Shakertown
OAKWOOD
Southern Hills
MORAINE
Beavertown
Pasadena
KETTERING
Oakdale
FARMERSVILLE
Ellerton
Whitefield
Dayton
West Carrollton
Woodbourne
Whipp Corner
Oakridge
Miamisburg
Centerville
Germantown
Sunbury
Brown Chapel
Carlisle
Springboro
Stringtown
Manor
0 1/2 1 2 3 4
SCALE IN MILES
REX A. DICKEY, P.E.,P.S.
MONTGOMERY COUNTY ENGINEER
FEBRUARY, 1992



Legend

- To Be Demolished (CERCLA)
- To Be Demolished (Construction)
- Personal Property
- Hatch: Removed/Demolished
- Transfer (Waiting Evaluation)
- Transfer (NFA)
- Transfer (FA)
- Transfer (RA)

D&D PRS CERCLA Response Action

0 100 200 400 600 800 1000

Scale in Feet

TN GN MN

ISS	DATE	REVISION	BY	CHKR	ENG	M
	01/19/99	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
01/19/99

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE: D

DRAWING NUMBER: BLDG DISP

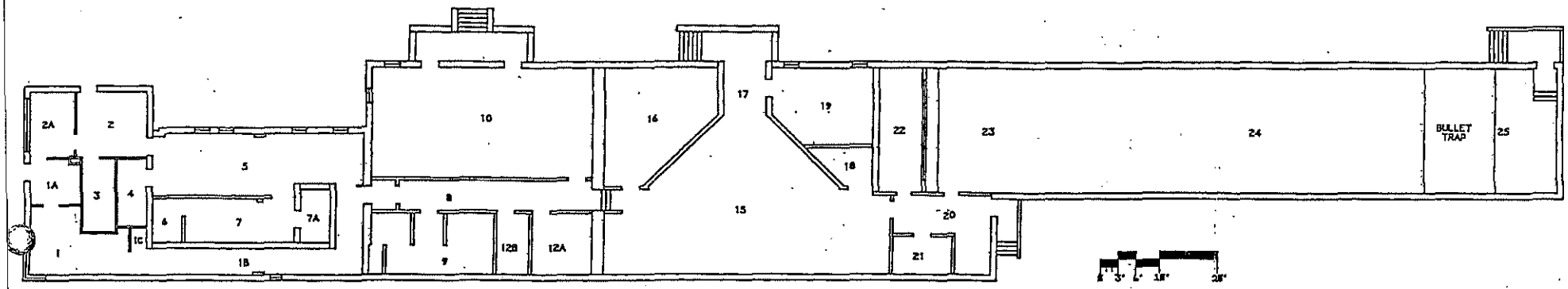
JOB NUMBER

DWG TYPE | PRMG | CAGEC | SCALE | SHEET 1 OF

STATUS | ORIGIN: MSTATION 5.0

A B C D

ISS	DATE	REVISION	BY	CHKR	ENG	LPNEC	APVD	K
8	12/12/91	ASBUILT ISSUE	DCW				DVD	



DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing Official: J. A. NESHEIM, UCNI RO
EMCBC Class Name Office
Date: 08-26-08

UNCLASSIFIED

DERIVATIVE CLASSIFIER
(Title) (Date) 2/29/96

GP-1 BLDG
FIRST FLOOR
BLDG CODE:3508

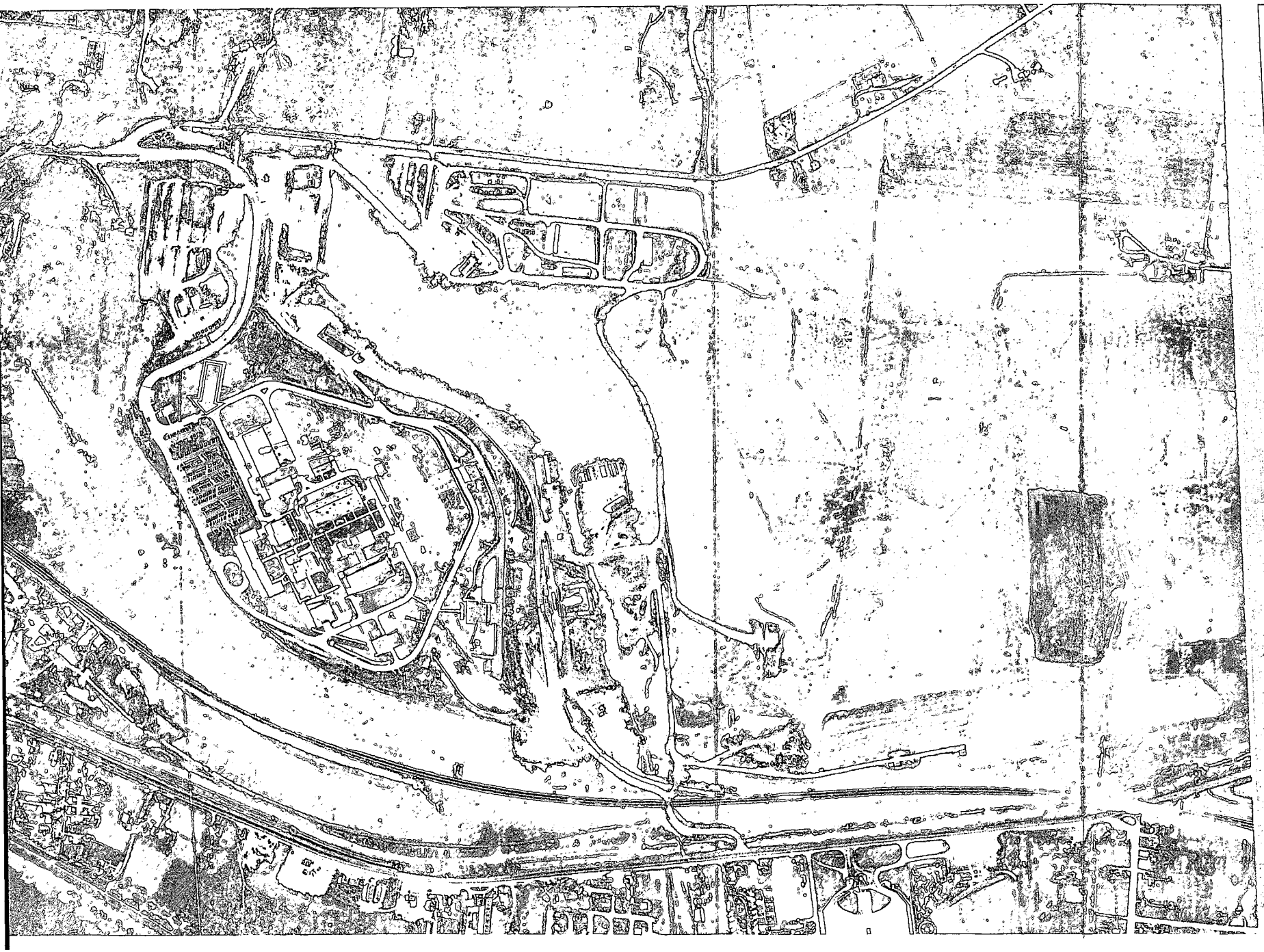
NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

DESIGN ENG		PROJ MGR	
BROKE		ENG MGR	
LP & EE		FCSR REV	
ENG MGR			
APVD		DATE	

SHEET	1	2	3	4	5	6	TITLE (U) TITLE CLASSIFICATION
ISSUE	8						GP-1 BLDG FLOOR PLANS
PART CLASSIFICATION							
DRAWING CLASSIFICATION	UCNI						SIZE D / DRAWING NUMBER FSD911309 / JOB NUMBER 12335
DWG TYPE SFP	PROJ GP-1 BLDG	CHKD 14865	SCALE AS NOTED	SHEET 1 OF 1			
STATUS MD-REL-12/12/91		ORIGIN MD-BRJ-V3.8					

9-10-61



11/08/49

11/19/59
1959-20-1

04/07/65

03/30/68

04/14/73

06/83

04/04/94