

Document Control No. _____

Decontamination and Decommissioning Program

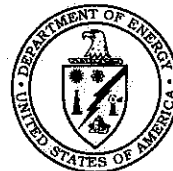
**BUILDING 21 AND SURROUNDING
SOILS INVESTIGATION
DATA REPORT**

**MOUND PLANT
MIAMISBURG, OHIO**

Volume III - Appendices F through L

June 1995

**U.S. Department of Energy
Ohio Field Office**



EG&G Mound Applied Technologies

Decontamination and Decommissioning Program

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(25 AUGUST 1994)**
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**F. BWS&C MEETING NOTES FROM JOSEPH ZIMMERMAN
(25 AUGUST 1994)**

MEETING NOTES

DATE OF MEETING: August 25, 1994
CONTRACT NO.: 30025
TASK ORDER NO.: 78297
PROJECT: BUILDING 21, SAMPLING
AND ANALYSIS PLAN
FILE NUMBER: 18297-00

Barge,
Waggoner,
Sumner and
Cannon, Inc.

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PARTICIPANTS:

Mr. Rich Bauer, EG&G/MAT
Mr. Eric Horstman, EG&G/MAT
Mr. Gerald Gels, Roy F. Weston, Inc.
Mr. Andrew Sperry, Roy F. Weston, Inc.
Mr. Kerby Burton, BWS&C
Ms. Amy Snyder, BWS&C
Mr. Joseph Zimmerman, BWS&C

cc: Participants
Mr. Bill Claiborne, BWS&C

ITEMS DISCUSSED:

1. B. Gels and A. Sperry reviewed the work performed to date on the sampling effort for the Building 21 D&D characterization.
 - a) Gridded exterior of building
 - b) MicroR survey of three exterior walls
 - c) MicroR survey of soils area identified two "hot spots" east of the building. Most dose rates in the range of 7-25 mR/hr.
 - d) Staking grids for soil sampling. Sampling will take place after 9/6/94 when EG&G will have a contract for the analytical work in place.
2. Regarding smear samples from the building's exterior as required by §4.1.2 and §4.2. It was decided that the requirement to take smear samples from the exterior walls and roof would be deleted.
3. A concern was raised by BWS&C that the sensitivity of the field instruments specified in the SAP would be inadequate for counting the smear samples taken from the building's interior. It was decided that Weston would not count the samples in the field, but rather would submit the samples to the EG&G/MAT Project Engineer for counting by Mound in their own facility.

MEETING NOTES

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CONTRACT NO.: 30025
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Barge,
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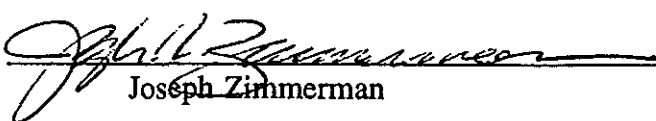
4. Current requirements are for smear samples and chip samples to be taken from all 1023 interior grids. This requirement will remain unchanged. However, a reduced number of samples may be submitted for actual analysis or counting. R. Bauer will confer with the Mound counting lab regarding their capacity. A. Snyder will review data from direct readings when available and make a recommendation regarding the quantity and grid location of samples to be submitted for counting.
5. BWS&C expressed that the direct reading instruments should be calibrated for the contaminants of concern. For the building interior, this is Th-232; for the building exterior, Pu-238 and Th-232.

G. Gels stated that the instrument to be used for alpha direct readings is an alpha scintillation detector with a scaler to be used to take one minute readings. He does not believe that the calibration source is relevant for this instrument since it will detect alpha emissions irrespective of their source.

For the beta/gamma direct readings, a pancake detector with a GM counter would be used. Calibrations are performed by Weston's Health Physics Department. He assumes the instrument is calibrated to Cs-137, and will check if the energy range for Cs-137 is appropriately representative of Th-232. If it is not, he will determine what steps will be required to ensure that the detector used will accurately characterize Th-232.

6. A. Sperry requested that BWS&C provide the .DXF files for the CAD/D drawings included in the SAP. J. Zimmerman will comply and deliver the files on disk either Monday, August 29 or Tuesday, August 30.

The above represents our understanding of matters discussed and conclusions reached. Other participants are requested to review these items and advise the undersigned of any errors or omissions.

Signed: 
Joseph Zimmerman

Date: 8/29/94

G. BWS&C SUPPLEMENTAL DOCUMENT TO THE SAP

ENGINEERING BULLETIN

PROJECT NAME: Building 21 and Surrounding SoilsDATE: September 6, 1994REF. DOCUMENT: Sampling and Analysis PlanSUBMITTED BY: Barge, Waggoner, Sumner and CannonBULLETIN NO.: 1CONTRACTOR: Roy F. Weston, Inc.

This bulletin is intended to document that a coordination effort involving either a clarification of the contract documents or a deviation from them has occurred or is proposed. This bulletin is solely for the purpose of documenting the occurrence. The actions described herein may or may not result in a contract modification.

BULLETIN TITLE:

DETAILED DESCRIPTION:

See Attachment A

REASON FOR BULLETIN: ☐ Clarification ☐ Error ☒ Change Requirements ☐ Differing Site Condition
☐ Doc. Change Only ☐ Other

See Attachment A

MOUND REVIEW

INSPECTOR	DATE	ENGINEER	DATE	PROJECT MGR.	DATE	MGMT. REV.	DATE
		<u>Eric Hostman</u>	<u>9-7-94</u>	<u>Donald Schmitz</u>	<u>9/8/94</u>	<u>Richard L. Bower</u>	<u>9/8/94</u>
	DATE		DATE		DATE		DATE

DIRECTIONS FOR CONTRACTOR RESPONSE

CONTRACTOR RESPONSE DUE BY _____

- ☒ Submit cost and schedule impact on attached form.
☐ Submit schedule and cost estimate on cost not to exceed (subject to negotiation) \$ _____
 Change in performance period required.
☐ No schedule/cost impact—signature will indicate receipt of Bulletin.
☒ Work may proceed immediately upon approval of Contracting Officer.
☐ No work shall be performed until after negotiation of Bulletin.

RESPOND TO:

☐ MOUND PROCUREMENT

CONTRACTOR: _____

DATE: _____

ENGINEERING BULLETIN

Building 21 and Surrounding Soils Bulletin No. 1

Attachment A

DETAILED DESCRIPTION:

The following items have been added to the work:

- 1) Perform radiation survey of Building 21 roof by methods described in § 4.2.1, § 4.2.2, and § 4.2.5. Direct readings and material samples shall be taken at grids indicated in the attached Figure 4-10 and Table. No smear samples of the roof are required. No MicroR survey of the roof is required.

The following items have been changed/deleted from the work:

- 1) The requirement for smear samples from the building's exterior, as indicated by § 4.1.2 and § 4.2.3 is deleted.
- 2) The requirement for field readings taken of smear samples from the building's interior, as indicated by § 4.2.3, is deleted. Smear samples shall be collected as required and submitted to the EG&G MAT Project Engineer for laboratory analysis.
- 3) The requirement for field readings taken of material samples from the building's interior and exterior, as indicated by § 4.1.1, § 4.1.2 and § 4.2.5, is deleted. Material samples shall be collected as required and submitted to the EG&G MAT Project Engineer for laboratory analysis.

REASON FOR BULLETIN:

- 1) Review comments received subsequent to bid indicated a need to perform radiological characterization of roof.
- 2) Physical condition of building's exterior and exposure to elements makes the presence of removable activity most unlikely. Smear samples deemed necessary.
- 3) Field instruments do not have adequate sensitivity for reading smear or material samples. More accurate characterization will be attained thorough laboratory analysis of these samples.

PROJECT NAME: Building 21 and Surrounding Soils

DATE: September 6, 1994

REF. DOCUMENT: Sampling and Analysis Plan

SUBMITTED BY: Roy F. Weston, Inc.

BULLETIN NO.: 1

ACTION RECOMMENDED: _____

☐ CHANGE CONTROL REVIEW ☐ CONFIGURATION REVIEW

JUSTIFICATION FOR CHANGE:

Changes were determined, through review of initial characterization data, to provide better site

characterization information.

COST ESTIMATE: _____ SCHEDULE IMPACT + 2 Weeks

CHANGE TYPE:

☐ TYPE I ☐ TYPE II ☐ TYPE III

REVIEW BOARD APPROVAL:

☐ CHANGE CONTROL BOARD

DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE

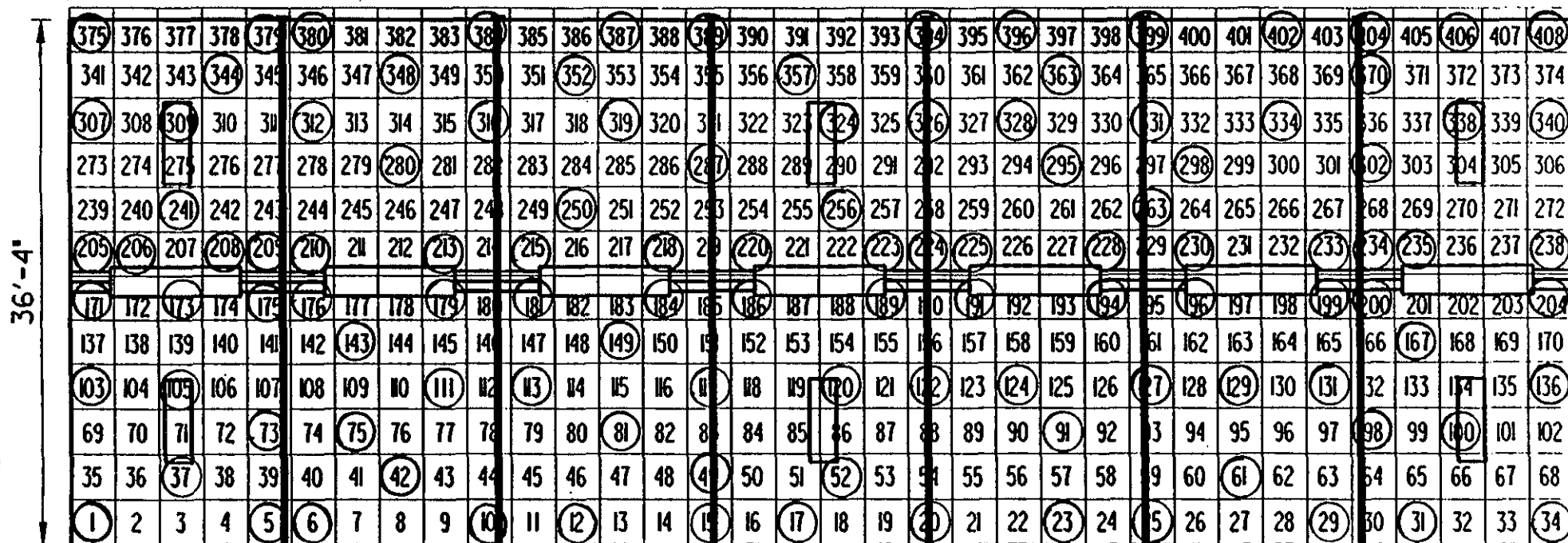
☐ CONFIGURATION BOARD

DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE

☐ REJECTED

REASON: _____

112'-0"



**Barge
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Cannon**

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8755 GANDER CREEK DRIVE

MAHANSBURG, OHIO 45342

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**BUILDING 21
ROOF PLAN
SAMPLING LOCATIONS**

FIGURE 4-10



GRID TO BE SAMPLED

Roof (R) 112 Grids Sampled

GRID NOS.

1	49	122	184	215	263	334	394
5	52	124	186	218	280	338	396
6	61	127	189	220	287	340	399
10	73	129	191	223	295	344	402
12	75	131	194	224	298	348	404
15	81	136	196	225	302	352	406
17	91	143	199	228	307	357	408
20	98	149	200	230	309	363	
23	100	167	204	233	312	370	
25	103	171	205	234	316	375	
29	105	173	206	235	319	379	
31	111	175	208	238	324	380	
34	113	176	209	241	326	384	
37	117	179	210	250	328	387	
42	120	181	213	256	331	389	

TEXT CONTINUED ON PAGE 41

H. CHANGE ORDER REQUEST #1

Technical Scope of Work

Building 21 and Surrounding Soils Change Order Request No. 01

This Change Order Request will require the following additional efforts by the WESTON field and support teams:

- 1) The exterior surface of the Building 21 roof will be gridded and marked into 1 meter by 1 meter grids with no grid closer than 2 meter from the roof edge. The total number of grids on the roof surface shall be 240, as specified in Figure 4-10 in the letter dated September 16, 1994 from Gregory Clark to John Price, with the exclusion of the two exterior rows and columns of grids. The grids will be placed on the roof surface as if it were flat, without respect to any protuberances projecting from the roof, such as ventilation ports.
- 2) Radiation measurements will be taken at the designated grid locations (per Figure 4-10). It is assumed that no scraping of paint will be required. Smear samples will not be required on the roof surface.
- 3) Both Mound and WESTON safety procedures will need to be in place before the work can begin. A Job Safety and Health Analysis (JSHA) will be submitted to the Mound project manager prior to starting work. It is also assumed that roof work, like the other work already completed on the exterior of Building 21, will require only modified Level D protective equipment, including street clothing.
- 4) It is estimated that the entire gridding and sampling effort on the roof can be accomplished in 3 working days of 10 hours each.

**I. BUILDING 21 AND SURROUNDING SOILS
SAMPLING AND ANALYSIS PLAN**

SAMPLING AND ANALYSIS PLAN

**for the
ASSESSMENT PHASE**

**of the
DECONTAMINATION &
DECOMMISSIONING
of**

**BUILDING 21 &
SURROUNDING SOILS**

Prepared by
Barge, Waggoner, Sumner and Cannon
Miamisburg, Ohio

March 31, 1994

MOUND

operated by
 **EG&G MOUND APPLIED TECHNOLOGIES**
P.O. Box 3000, Miamisburg, Ohio 45343-3000

for the
U. S. DEPARTMENT OF ENERGY
Contract No. DE-AC04-88DP43495

SAMPLING AND ANALYSIS PLAN

for the
ASSESSMENT PHASE

of the
**DECONTAMINATION &
DECOMMISSIONING**
of

**BUILDING 21 &
SURROUNDING SOILS**

**MOUND PLANT
MIAMISBURG, OHIO**

Prepared by
Barge, Waggoner, Sumner and Cannon
Miamisburg, Ohio

Prepared for
EG&G Mound Applied Technologies, Inc.
P.O. Box 3000
Miamisburg, Ohio 45434-3000

March 31, 1994

Final Draft

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APPENDIX D:	MOUND NOTICE TO EMPLOYEES

1.0 PURPOSE

The purpose of this plan is to specify the sampling and analysis requirements for the radiological and hazardous material characterization of Building 21 and surrounding soils at the EG&G Mound Applied Technologies, Inc. (hereinafter called EG&G/MAT) facility at Miamisburg, Ohio. This document shall outline the Scope of Work and responsibilities of the Contractor chosen to complete this Sampling and Analysis effort.

To properly plan the decommissioning of the facility, the existing levels of contamination with either radioactive or hazardous materials must be known. The facility decommissioning plan must identify the potential hazards present during the operations. The extent of contamination will be the determining factor for the safety precautions that must be utilized during operations.

This Sampling and Analysis Plan describes the methodology for obtaining the necessary data to make logical decisions concerning the decommissioning process. The activities associated with this document are designed as a screening device to determine the extent of contamination and its order of magnitude. The collected information will not be of the detail which would allow the release of the facility for unrestricted use.

All structural components will have a radiological survey performed. Material samples will be obtained from selected areas to determine if radiological and/or hazardous materials are present. Sampling and analysis of the soils around the building will be conducted to determine if the radioactive and hazardous materials which were stored there migrated into the environment.

2.0 FACILITY DESCRIPTION

Building 21, built in 1966, is a single story (4,032 ft²), reinforced poured concrete structure (36 ft wide × 112 ft long × 14 ft high) with 14 to 16 inch thick walls and a sheet metal¹ roof. It has two rooms and was built for the storage of thorium-232 sludge (approximately 200 tons).

In 1954 Mound, then operated for the Atomic Energy Commission (AEC) by Monsanto Research Corporation, undertook an assignment for the AEC to separate and purify a large quantity of thorium-232 from an AEC stockpile of various sludges. The pure thorium-232 was to have been irradiated in a nuclear reactor to produce uranium-233 for defense programs. The process was called "thorium breeding".

Mound received approximately 6,000 drums of these hydroxide and oxalate sludges from United Lead Company's Middlesex Sampling Plant in Middlesex, N.J. Initially, the drums were stored outside. Deterioration of the drums required the entire drum lot to be re-packaged three times during the 1954 to 1966 time period.

Building 21 was constructed in 1966 for the bulk storage of this sludge. The building has a peaked sheet metal roof with removable panels that permitted natural ventilation of the evolved radon. The smaller room was for the storage of oxalate sludge and the larger room for the storage of the hydroxide sludge. The roof panels were removed and the contents of the drums were emptied into the building. The empty drums were crushed and land-filled on site. The top layer of soil areas, contaminated by previous drum storage/re-drumming/unloading operations, was removed.

The outside area on the north side of the building was used after 1966 and through the 1970's as a temporary storage for waste packages containing plutonium-238 contaminated waste. Deterioration of these packages also resulted in soil contamination.

The "thorium breeding" program was never fully funded, and in 1974 the AEC sold the sludge to the General Atomics Company, which removed the material in 1975. In 1976 an initial cleanup of the building was performed, and the interior was washed and painted.

Beginning in 1976, the building was used to store "Cotter Concentrates" in drums from which protactinium-231 and thorium-230 were to be recovered for DOE's Division of Basic Energy Sciences for related civilian purposes. The "Cotter Concentrates" material was doubly contained in rigid plastic liners inside the drums and did not contribute to the contamination of the building or area.

The project area, as delineated in Figure 2-1, consists of two distinct sub-areas: the building (Figure 2-2); and the soils immediately surrounding it north of the fence opposite the adjacent road.

¹The roof is assumed to be sheet metal. See § 5.1.3 for additional information.

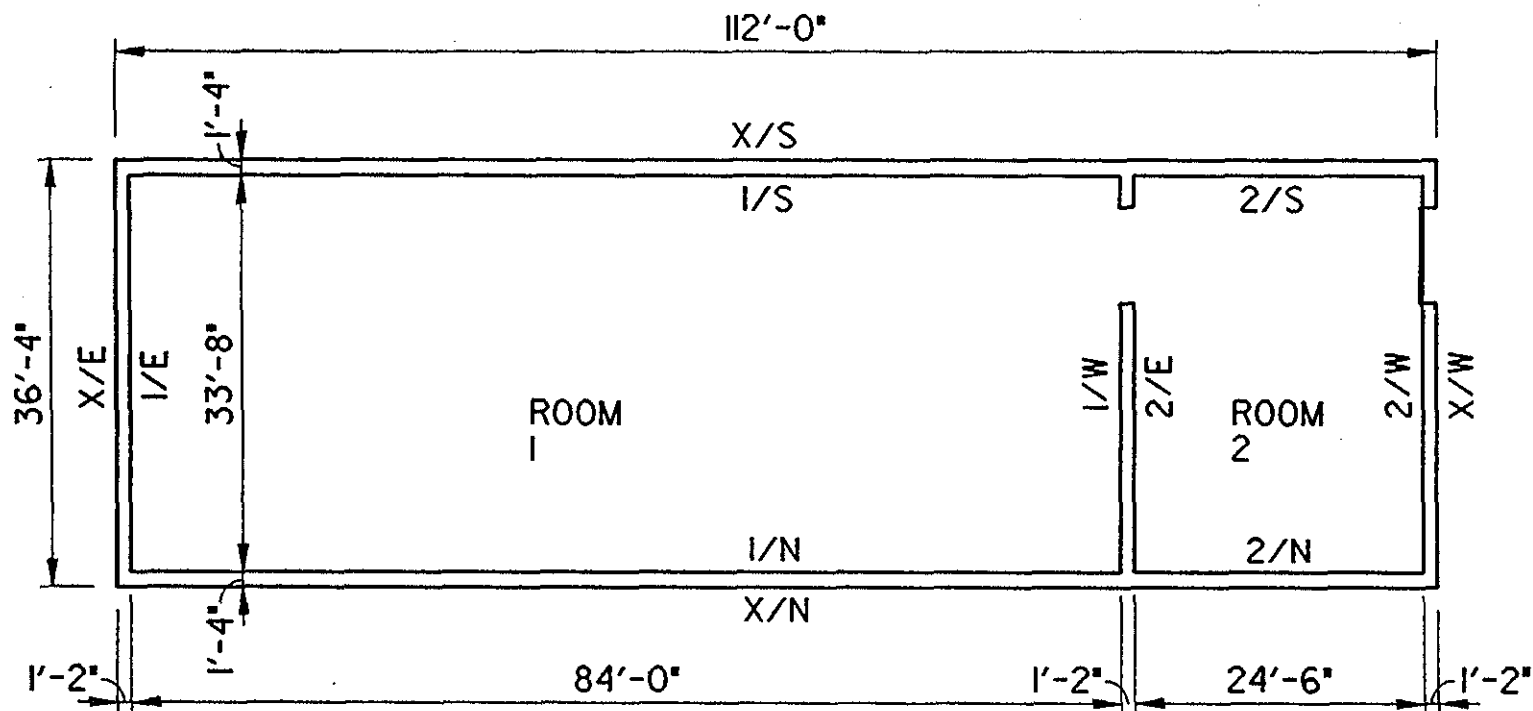
W.E. 708.8
OVERFLOW
POND

BUILDING 21
SAMPLING AND ANALYSIS PLAN
OVERALL SITE PLAN

BUILDING 21

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**BUILDING 2I
FLOOR PLAN**

FIGURE 2-2



3.0 SAFETY HAZARDS

3.1 Radiological

Various operations in and around Building 21 have resulted in radiological contamination of the building and the surrounding soils. All stored inventory of radioactive material was removed from the building by November 1987. However, moderate levels of residual contamination (LSA levels) remain on room surfaces and in the surrounding soil areas from operations previous to the "Cotter Concentrates" storage.

A preliminary radiological survey², conducted in April and May of 1984, indicated that for thorium-232, most concentrations were below 2 pCi/g. However, one well location exhibited a measurement of 9.2 pCi/g at one (1) foot above the surface. The conclusions of this survey dismissed that data point as an anomaly. The location of the elevated reading corresponds approximately to Grid No. 52, and will be sampled as part of this effort. The results and conclusions from the 1984 survey are included as Appendix A.

Another preliminary radiological survey³ performed sometime prior to 1985 indicated the following levels of contamination present inside the building and in the soils immediately surrounding the building.

Building 21 (INTERIOR):

Removable alpha contamination ranged from background to 600 dpm/100cm².

Fixed alpha contamination ranged from background to 120K dpm/60cm².

External surface radiation ranged from background to 1 mr/hr.

Air levels (radon daughters) ranged from background to 1.5 x Working Level.

OUTSIDE AREAS:

Plutonium-238 soil samples ranged from background to 220 nCi/g, primarily within one foot of the surface.

Thorium-232 samples ranged from background to 0.7 nCi/g, primarily within two feet of the surface.

A copy of the summary from the above referenced survey is included as Appendix B.

² Characterization of Waste Burial Areas, Final Report
Radiation Management Corporation, May 21, 1984

³ SFMP Facility Acceptance Document Package for Building 21, Monsanto Research Corporation, February 28, 1985.

A later preliminary survey⁴ of the building's interior performed in April of 1988 yielded direct readings in the range from background to 51K dpm/100cm². The highest readings occurred on the floor of the smaller room, with all but a few readings < 15K dpm/100cm². All wipe samples taken were < 50 dpm/100cm².

There are a number of uncertainties associated with the April 1988 survey. Because of time limitations, only 20% of the wall surfaces were surveyed. Also, moisture present during the survey may have reduced the overall probe efficiency. Lastly, but most significantly, contamination present under the paint may exceed the levels recorded. The report from this survey is included as Appendix C.

Radioactive effluent from Building 21 and surrounding contaminated soils may exceed DOE guidelines⁵ of 5 pCi/g for thorium-230 and thorium-232, and are significantly above ALARA guidelines of 25 pCi/g for plutonium-238.

Based on the information provided, there should be no criticality concerns associated with the sampling and analysis activities.

A copy of the EG&G/MAT "Notice to Employees" will be posted at the job site. A copy of this notice is provided as Appendix D.

3.2 Industrial

Industrial hazards associated with the sampling and characterization of Building 21 are very few. The building is essentially an empty concrete shell, which in and of itself does not present any hazards.

It is not expected that any detectable levels of hazardous chemicals will be present in the building or in the surrounding soils. However, because no data presently exists to verify that expectation, this characterization activity will include sampling and analysis for hazardous chemical constituents as well as for radiological contamination. Consequently, precautions and procedures as outlined below will be utilized to guard against the possibility that such hazardous chemicals are present.

3.3 Precautions and Procedures

During the characterization process, radioactive or chemical contamination may be encountered. As a minimum, each individual will wear one set of disposable coveralls, plastic shoe covers, rubber overshoes, surgeons gloves, and/or rubber gloves. This protective clothing will be provided by EG&G/MAT. Each individual will also wear a TLD pack (dosimeter) provided by EG&G/MAT upon entry to the facility. Additional protective equipment, such as plastic bubble-suits, respirators, or fall protection may also

⁴ Building 21 Preliminary Survey, Monsanto Research Corporation, April 18, 1988

⁵DOE Order 5400.5 Chapter IV (pg.IV-4)

be required as determined by local conditions or as specified by EG&G/MAT's Health Physics or Safety personnel. The protective clothing and equipment requirements for potential radiation exposure will be specified in the Radiation Work Permit, and will be provided by EG&G/MAT. Other Personal Protective Equipment (PPE) required by the D&D Permit as protection against chemical or physical hazards will be provided by the Contractor.

If there are any conflicts between the safety requirements of this plan and EG&G/MAT policies and procedures, the EG&G/MAT policies and procedures will take precedence. Compliance with EG&G/MAT Manuals MD-10019 "Mound Radiological Protection Program Manual" and MD-10286 "Safety and Hygiene Manual" policies and will be required during all operations.

Before any characterization field activities begin, the site outside the building will be surveyed for background levels of volatile organic compounds (VOC). Background levels will be established as an un-weighted eight-hour average of VOC sampling performed continuously over an eight-hour period. If at any time during the sampling operations, organic vapors in the breathing zone exceed 5 ppm above background, full-face respirators with organic vapor cartridges shall be worn. If radiological conditions warrant; respirator cartridges shall be a stacked pair of High Efficiency Particulate Air (HEPA) and Organic Vapor Cartridges. If levels exceed 25 ppm above background, the area shall be immediately evacuated and a reassessment of personal protective equipment, including respiratory protection, will be made.

Additional air monitoring will be performed for combustible gases, oxygen content, carbon monoxide and hydrogen sulfide prior to entering the building. If combustible gases exceed 10% of the lower explosive limit (LEL), the areas will be ventilated until the levels are brought below this threshold. If oxygen levels are below 19.5%, the area will be ventilated until oxygen concentrations exceed this threshold; or personnel will be required to wear supplied air breathing apparatus. If oxygen levels are above 22%, the area will be ventilated until the levels are brought below this threshold. If hydrogen sulfide levels are above 3 ppm, the area will be ventilated until the hydrogen sulfide levels are below this threshold. If carbon monoxide levels exceed 20 ppm, the area will be ventilated until carbon monoxide levels are below this threshold. Ventilation of these areas will be performed using a portable HEPA filtered ventilation system.

Ambient air measurements will be taken to evaluate potential personnel exposure to hazardous material. These measurements shall be taken within the breathing zone and shall be at least 30 seconds in duration. Breathing zone air monitoring will be performed continuously during all sampling operations.

All monitoring equipment will be maintained in accordance with the manufacturer's manuals and shall be properly calibrated.

3.4 Permits

Prior to implementing this Sampling and Analysis Plan, a number of permits are required. A Radiation Work Permit will be prepared which will identify the work activities to be performed, evaluate potential radiological exposure conditions, and establish appropriate levels of protection. A D&D Work Permit will also be required prior to starting such activities. This permit identifies the activities which will be performed, identifies and assesses any safety hazards, and identifies specifically the appropriate protective clothing and equipment requirements. An Excavation/Digging Permit will be required when the soil sampling operations are started. A Confined Space Permit will be required for the entry into the building. In addition, a Penetration Permit will be required in order to take samples from the concrete walls of the building. Arrangements for required permits will be made by the EG&G/MAT Project Engineer or his designated representative.

3.5 Administrative Prerequisites

All workers performing on-site activities associated with this Sampling and Analysis Plan will be required to complete the following requirements:

- Respirator physical
- Respirator training
- Respirator fit test
- OSHA 40-hour Hazardous Waste Operations Safety Training (HAZWOPER)
- Contractor Safety and Security Orientation
- Health Physics Orientation
- Project orientation
- Bioassay testing.

Arrangements for the above administrative prerequisites, except HAZWOPER training, will be made by the EG&G/MAT Project Engineer or his designated representative. HAZWOPER training must be completed by Contractor's employees prior to entry into the project area.

4.0 RADIOLOGICAL CHARACTERIZATION

The purpose of the radiological characterization is to determine the radiological status of Building 21 and the surrounding area. A radiological survey, to include isotopic analysis of all samples, will be performed to determine the radiological status. The radiological survey is designed to identify areas which will require special considerations or controls and possible specific dismantling procedures during decommissioning. Other areas not specifically identified, but in the opinion of the Contractor's On-Site Leader, having a high potential for contamination, will be discussed with the EG&G/MAT Project Engineer to determine sampling requirements.

The radiological survey will consist of direct and smear surveys for both alpha and beta-gamma contamination, general area radiation readings, and airborne radioactivity sampling. Soil samples will be taken and analyzed as described in § 4.3.3.

The survey is divided into two phases: the Building 21 structure, and the soils surrounding the building north of the fence opposite the adjacent road. The following paragraphs will describe in detail the methods for performing the particular radiological survey designated for each area. The methods developed for sampling each major component have been designed with these specific characteristics of the area in mind.

4.1 Building Survey

The building survey includes the interior floors, walls, and ceilings; and exterior of both rooms of the building. Particular attention should be paid to the joints in the concrete and where the walls meet the floor. No samples will be taken from under the floor slab.

4.1.1 Interior Surfaces

A sampling grid using the following convention will be applied in each room:

- Using a template and waterproof ink marking pen, divide and grid each room surface into one meter squares. For each wall, the origin of the grid is the lower left corner as you face the wall. For each floor, the origin of the grid is the northeast corner of the floor. The markings can be made by placing a "cross" that is parallel with the walls and/or floor, at each one (1) meter intersection. The cross marks should extend about 35 centimeters, centered on the one-meter intersections. The marks should be made on all accessible surfaces of the floor and walls.
- Each ceiling grid shall be identified by the number of the floor grid directly beneath it, but with a "C" designation rather than an "F." Ceiling grids will be slightly larger than one meter square because of the additional area resulting from the roof's slope. This difference will not affect the sampling or analytical methods to a degree to be significant so will be disregarded.

- Identification of individual grid locations in each room will include the room designation and surface identifier preceding the Grid No. For example, "1/N(33)" is Grid No. 33 on the north interior wall of Room 1, and "2/F(20)" is Grid No. 20 on the floor of Room 2.

Surface Identifier	Surface
F	Floor
C	Ceiling
N	North Wall
S	South Wall
E	East Wall
W	West Wall
X/E	East Exterior Wall
X/N	North Exterior Wall
X/W	West Exterior Wall
X/S	South Exterior Wall

Building 21 was used as a storage area for radioactive materials. Based on this information, 100% sampling of the grid locations on the floors and walls in the building's interior shall be conducted.

Table 4-1 lists the individual surface areas within the interior of Building 21 and enumerates the total 1 meter x 1 meter grids available for sampling.

Because the ceiling was not normally in direct contact with the stored radioactive materials, it shall be sampled at only 30% of the available grids. The ceiling grids to be sampled are identified in Table 4-2.

TABLE 4-1: INTERIOR SURFACE GRIDS

Room 1	Number of Grids	Room 2	Number of Grids
1/F	275	2/F	88
1/C	275	2/C	88
1/N	125	2/N	40
1/S	125	2/S	40
1/E	55	2/E	55
<u>1/W</u>	<u>55</u>	<u>2/W</u>	<u>55</u>
TOTAL AVAILABLE	910		366
GRIDS TO BE SAMPLED	718		305

TABLE 4-2: INTERIOR CEILING SAMPLE LOCATIONS

Room 1 Ceiling (1/C) 78 Grids Sampled

GRID NOS.

1	33	69	104	132	171	200	235
3	37	73	107	135	175	203	239
5	41	77	110	139	179	208	243
9	43	80	112	143	181	210	245
13	45	84	115	147	183	214	247
17	49	89	117	151	186	218	251
21	53	92	119	156	188	222	255
23	57	96	122	159	190	226	260
26	59	98	127	163	194	230	
29	65	100	131	167	198	232	

Room 2 Ceiling (2/C) 24 Grids Sampled

GRID NOS.

1	20	44	65
4	23	48	68
8	26	50	71
10	32	53	73
14	33	57	75
17	41	64	80

4.1.2 Exterior Surfaces

The exterior of the building was not exposed to the same concentrations of radioactive materials as the inside, so only 30% of the available grids will be sampled. Table 4-3 lists the exterior areas and identifies the grids, determined by a random-number generator, to be sampled (Figures 4-2 through 4-4).

A general micro-R scan of each exterior wall will be performed on 100% of the available grids. If readings from any grid are higher than highest reading from the randomly chosen grids; then the new grids will be sampled in place of the same number of randomly chosen grids with the lowest micro-R readings.

TABLE 4-3: BUILDING EXTERIOR SURFACE SAMPLE LOCATIONS

North Wall (X/N) 51 Grids Sampled

GRID NOS.

2	4	5	7	10	12	14	23	24	25	34	36
37	38	40	41	42	49	50	52	53	56	61	63
67	69	72	81	82	85	87	99	101	106	112	113
121	130	138	144	147	151	156	158	161	163	167	

South Wall (X/S) 51 Grids Sampled

GRID NOS.

4	7	8	12	15	16	21	31	33
35	45	48	50	54	55	57	59	65
69	72	74	78	81	87	89	95	96
109	110	111	115	118	122	128	134	135
137	141	143	146	152	159	163	165	169

East Wall (X/E) 17 Grids Sampled

GRID NOS.

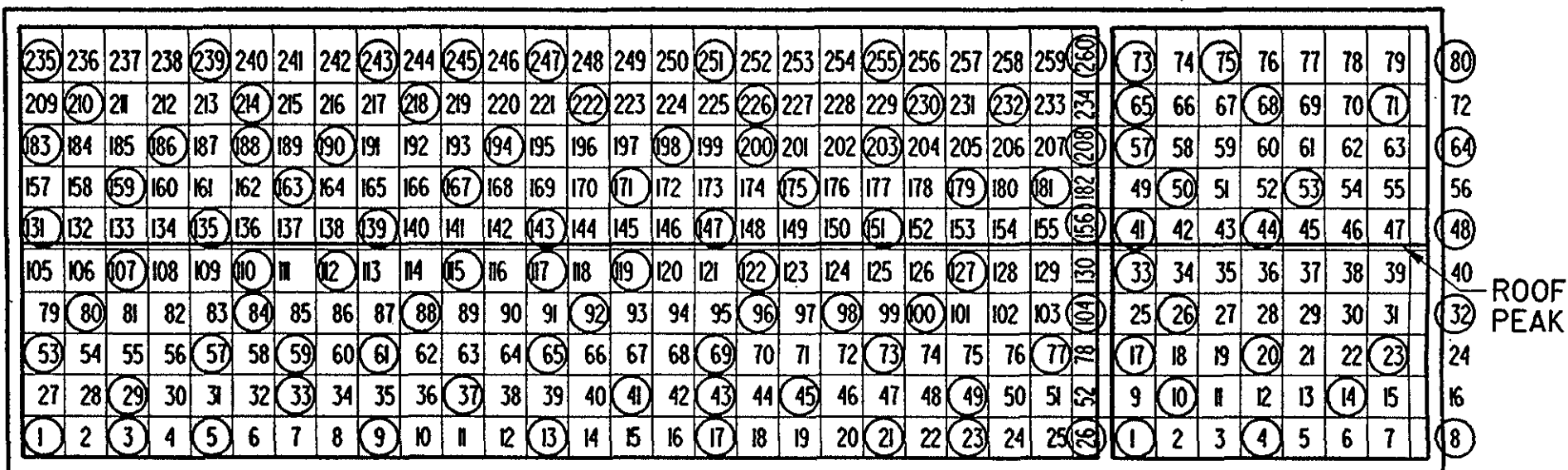
1	4	5	12	15
18	22	25	31	34
38	44	46	49	50
52	54			

West Wall (X/W) 17 Grids Sampled

GRID NOS.

1	3	6	11	16
17	24	26	31	38
40	43	47	48	50
51	53			

TEXT CONTINUED ON PAGE 26

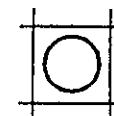


**Barge
Waggoner
Sumner and
Cannon**

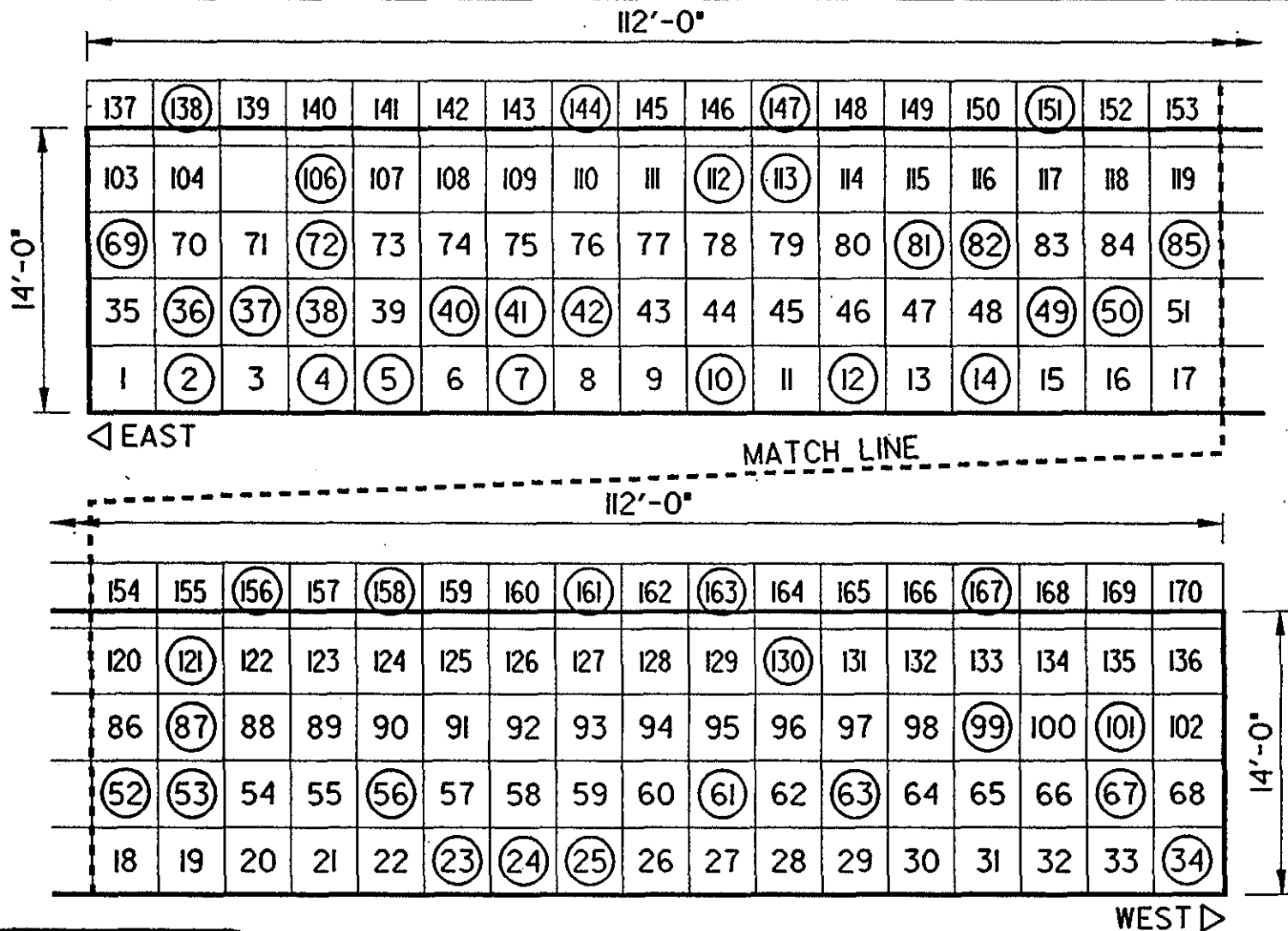
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**BUILDING 21
REFLECTED CEILING PLAN
AND SAMPLING LOCATIONS**
FIGURE 4-1



GRID TO BE SAMPLED

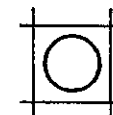


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Waggoner
Sumner and
Cannon**

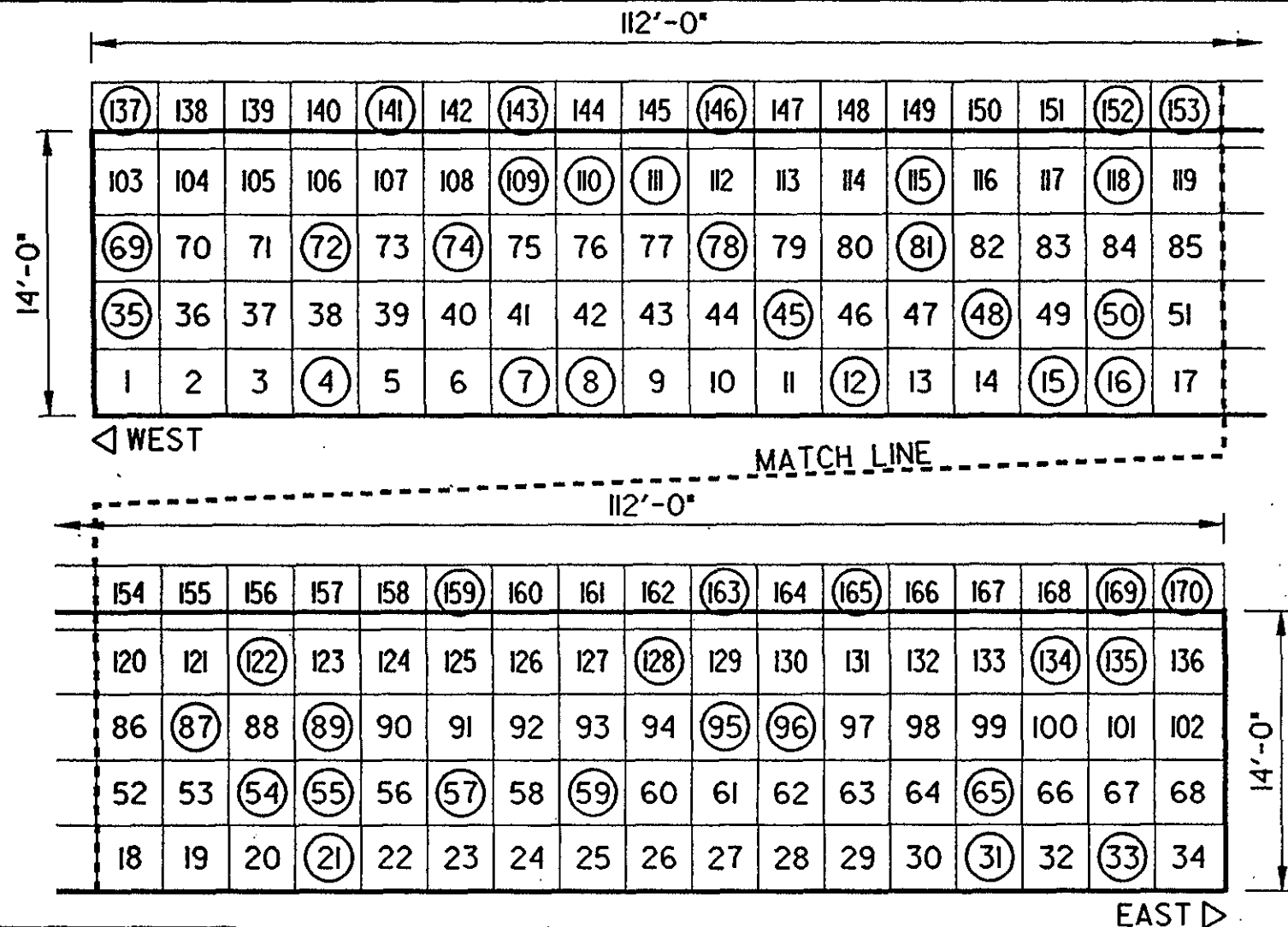
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**BUILDING 21
NORTH EXTERIOR WALL (X/N)
SAMPLING LOCATIONS**

FIGURE 4-2



GRID TO BE SAMPLED

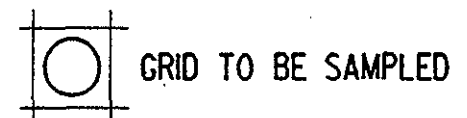


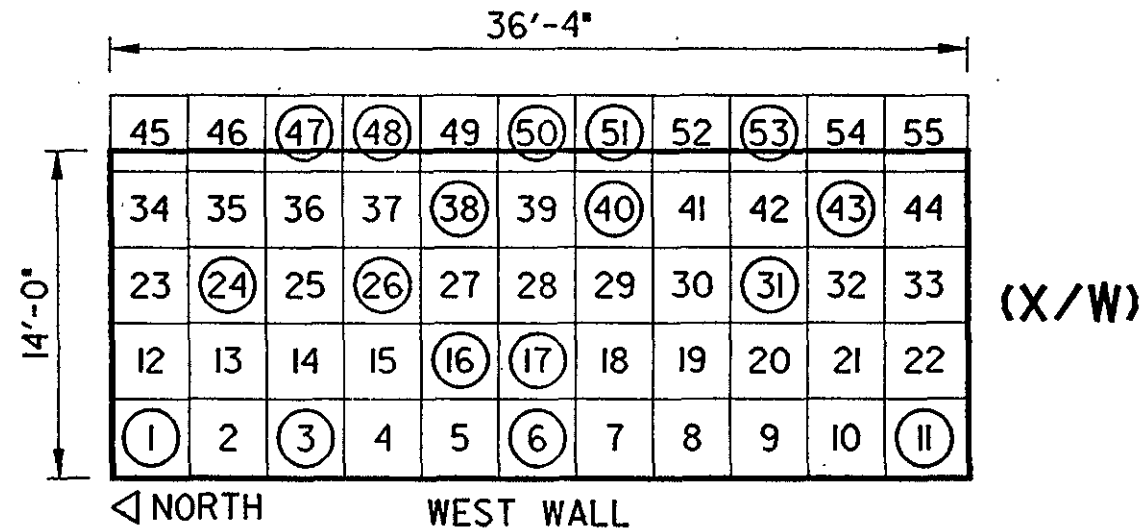
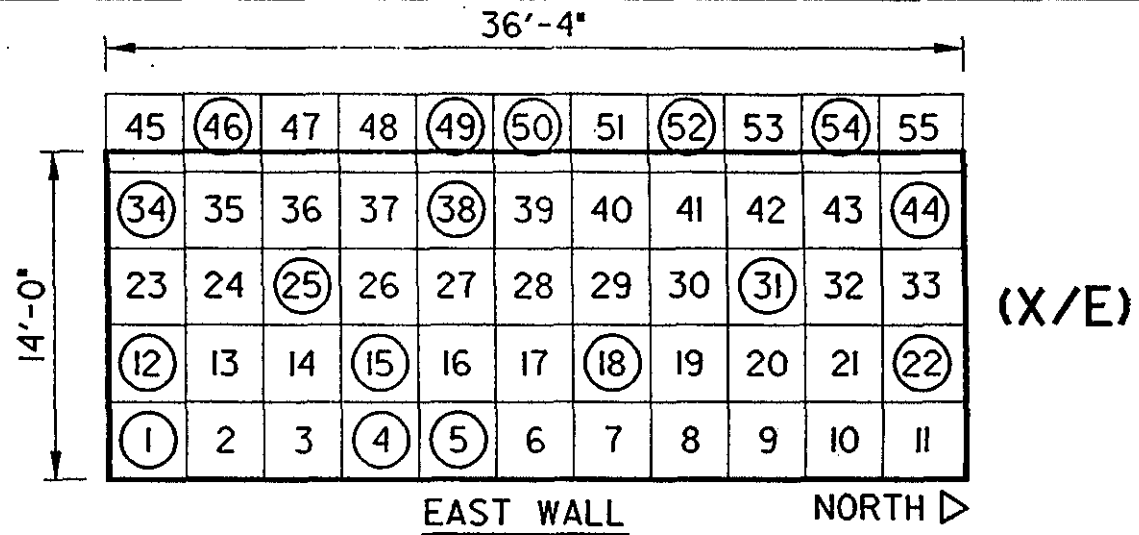
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**BUILDING 21
SOUTH EXTERIOR WALL (X/S)
SAMPLING LOCATIONS**

FIGURE 4-3



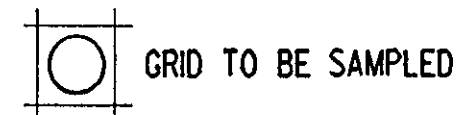


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**BUILDING 21
EAST AND WEST
EXTERIOR WALLS
SAMPLING LOCATIONS**

FIGURE 4-4



4.2 Survey Methodology and Sample Analysis

To ensure consistent survey techniques among individuals performing the surveys and to reduce repetition, the surveys to be used have been defined in the following paragraphs. Typical types of detection equipment are identified for each survey. Equivalent substitute instruments may be used. All instruments and equipment shall be used in accordance with all applicable standards and this Sampling and Analysis Plan.

4.2.1 Direct Beta-Gamma Survey

Place a beta-gamma probe with an appropriate portable scaler at the identified location within 1/4 inch of the surface. Allow the probe to stay in place for one minute. (Ludlum 44-9, Ludlum 43-20, or Eberline HP-210 probe with a Ludlum Model 3 or an Eberline ESP-1 meter). If the surface of the area being surveyed is not bare concrete (i.e., painted), take a direct reading on top of the coating. Attach a small catch containment with tape such as a plastic bag to the wall under the location where the sample is to be taken. Scrape away an area of the coating which is approximately 100 cm². Take another direct reading from under the coating. Also take a reading of the scraped material in the bag. If detected levels are above background for the area, send at least one sample for isotopic analysis as described in § 4.2.5. Record the number of counts obtained and convert this data into dpm/100 cm². Record the data on the Radiation Survey Form as described in § 7.1.1.

4.2.2 Direct Alpha Survey

Place an alpha probe with an appropriate scaler at the identified location within 1/4 inch of the surface. Allow the probe to remain in place for one minute. Record the number of counts and convert this information into dpm/100 cm². (Ludlum 43-5, Ludlum 43-65, or Eberline AC-3 probe with a Ludlum Model 3 or Eberline ESP-1 meter). For surfaces coated with paint or sludge, remove approximately 100 cm² of coating to expose the area being resurveyed. Take another direct reading from under the coating. Record the data on the Radiation Survey Form as described in § 7.1.1.

4.2.3 Smear Survey

While applying moderate pressure, rub a smear paper (Whatman #1 4.25 cm filter paper) over the identified 100 cm² area. Be sure not to rub a hole in the paper. This survey should be performed after the direct readings have been obtained so as not to remove contamination prior to determining the total contamination. Each smear will be counted with a beta-gamma probe and then an alpha probe connected to a scaler. This information will be recorded in dpm/100 cm². (Eberline HP-210 or Ludlum 44-21 and a Ludlum 43-2 with Ludlum 2220 scaler). Record the data on the Radiation Survey Form as described in § 7.1.1.

4.2.4 Airborne Radioactivity Survey

Take a five minute air sample using a high volume air sampler. Record the volume of air sampled. Remove the filter paper and determine the number of alpha and beta-gamma counts on the paper. Convert this information into airborne concentrations and record the data as microcuries/milliliter. (Radeco hi-volume model H-809V air sampler and the same counting equipment identified in § 4.2.3.) Record the data on the Radiation Survey Form as described in § 7.1.1.

4.2.5 Material Samples

Weigh each empty container. For paint or concrete chip samples, obtain at least 1 gram of material and place in a sealable plastic bag. Seal the container with tape. Complete the Sample Label as described in § 7.1.6. Take a direct radiation reading and a smear of the container. Decontaminate the exterior of the container if required using a mild detergent and water or alcohol. Weigh the filled container to determine the sample weight. Document all information on the Field Sample Data Sheet as described in § 7.1.2. (Direct readings will be taken with the same equipment identified in § 4.2.1 and § 4.2.2 and the smears will be counted with the instruments identified in § 4.2.3).

Perform a gamma analysis on each sample using a multichannel analyzer to determine the curie content. Since the actual isotopes are not known, a full spectrum analysis will be performed. (Canberra Series 20 MCA with Canberra HPGe detector and shield) Record the information in picocuries per gram for solid samples and microcuries per milliliter for water or liquid samples. Record all information on the Laboratory Analysis form as described in § 7.1.5.

4.3 Exterior Grounds Survey

The area outside the structure will be divided into ten (10) meter by ten (10) meter grids. A detailed drawing of the actual grid locations is provided on the accompanying drawing Sheet C1. All grids which fall wholly, or at least 10% partially within the project boundary, have been included in the total grids available for sampling.

Prior to performing coring operations, EG&G/MAT D&D Engineering will arrange to have all buried utilities and structures marked. Core sampling will be performed at each of the grid lines intersections and at the geometric center of each grid segment. Sample points may be moved from the indicated points if an obstruction, such as a buried pipe, is encountered. Any new sampling point must be first checked by EG&G/MAT Construction Inspection, and deviations must be noted on the sampling map. In the unlikely event that a buried utility line is penetrated during sampling, the EG&G/MAT D&D Project Engineer will mobilize an on site solution via use of appropriate EG&G/MAT personnel.

Sampling will consist of taking a sample at the surface as well as subsurface samples at eighteen (18) inches and thirty-six (36) inches. If solid rock is encountered prior to thirty-six (36) inches, a sample will be taken at the soil/rock interface and the sampling operations stopped for that hole. A split tube sampler will be used to ensure that

undisturbed samples are obtained. An auger may be used between sample points to advance the hole. Section § 4.3.3 describes the method for obtaining and analyzing these samples.

4.3.1 General Gamma Radiation Survey

A general area survey will be performed using either a micro-R meter or a gamma probe and meter. This type of survey is used to detect areas of higher radiation and possible concentrations of radioactivity. (Ludlum 19 micro-R meter or Ludlum 44-6 with a Ludlum model 3 meter). This data shall be recorded on the Radiation Survey Form as described in § 7.1.1.

4.3.2 Soil Sample Locations

A ten (10) meter by ten (10) meter grid has been superimposed over the entire area within the project boundary.

EG&G/MAT D&D Program Management has determined that the Building 21 Soils component will be sampled in accordance with a biased/random sampling approach based on a sample set equal to 30% of the totally available ten (10) meter by ten (10) meter grids (233 total grids available in the Soils area). As a result of that approach, 70 grids have been identified for sampling (see Sheet C1).

Grids were chosen for sampling using a combined biased/arbitrary/random approach. A set of biased locations were chosen because of their proximity to Building 21. Any grids which contained a part of the building were selected as biased sample locations and plotted on the site map. No samples will be taken from under the floor slab of the building.

The arbitrary sample locations were selected by visually identifying those parts of the Project Area where coverage was not provided by the biased locations.

The remainder of the total number of sample locations were assigned by using a random number generator. Sample locations are listed below in Table 4-4, which also identifies the reason for selection.

TABLE 4-3: SOILS AREA SAMPLE LOCATIONS

<u>GRID NOS.</u>	<u>SELECTION CRITERIA</u>	<u>GRID NOS.</u>	<u>SELECTION CRITERIA</u>
1	Pu-238	119	Building Proximity
3	Pu-238	120	Building Proximity
4	Pu-238	124	Random
6	Arbitrary	125	Arbitrary
7	Pu-238	128	Random
9	Random	138	Pu-238
11	Pu-238	141	Arbitrary
15	Pu-238	148	Random
17	Random	149	Random
23	Pu-238	161	Pu-238
26	Arbitrary	170	Arbitrary
27	Pu-238	174	Random
28	Random	178	Arbitrary
31	Random	182	Random
32	Random	185	Random
40	Pu-238	195	Random
44	FIDLER	202	Arbitrary
47	Arbitrary	209	Arbitrary
52	Pu-238	221	Random
53	Random	222	Random
54	Random	231	Arbitrary
61	FIDLER		
65	Pu-238		
66	Random		
70	Pu-238		
71	Pu-238		
74	Random		
76	Pu-238		
78	Random		
79	Arbitrary		
82	Pu-238		
83	FIDLER		
84	Building Proximity		
86	Random		
87	Random		
90	Pu-238		
91	Building Proximity		
92	Building Proximity		
93	Building Proximity		
97	Random		
100	Pu-238		
102	Building Proximity		
106	Random		
107	FIDLER		
108	Building Proximity		
109	Building Proximity		
110	Building Proximity		
111	Building Proximity		
118	Building Proximity		

4.3.3 Radiological Soil Sampling Method

Obtain soil samples using a split tube sampler. This type of sampler minimizes the disturbance of the soil during sampling operations. Obtain a sample at the locations identified in § 4.3.2. The procedure for taking a soil sample at the designated locations will be as follows:

Note: For each sampling point, three samples will be taken at each depth - the first a split sample for screening by the EG&G/MAT soil screening laboratory; the second for radiological analysis by the Contractor; and the third for hazardous material characterization by the Contractor, subject to sample preservation requirements and holding time limitations (see § 5.0).

- Record the weight of an empty container and record the information on the Sample Label and Field Sample Data Sheet (§ 7.1.6 and § 7.1.2).
- Obtain approximately 1.5 liters of surface (within 0 - 6 inches of the surface) material using a trowel or shovel. Place the material in a small plastic bag. Label the bag with the Sample Label and complete the Field Sample Data Sheet.
- Drill or core down to the desired depth by either driving the split tube sampler (Acker "lynac") or using a hollow auger (conveyor flight auger).
- Using the split tube sampler, obtain a 1.5 liter sample at the desired depth from the surface. Place the material in a plastic bag labeled with the Sample Label and complete the Field Sample Data Sheet.
- If casing is required because of loose soil, drive the casing into the ground. Be careful not to exceed the sample depth.
- Remove any soil that is inside the casing using the sampler or auger.
- Decontaminate the split tube sampler or auger using mild detergent and rags. Use a catch basin such as a tub to collect all liquids. The small amounts of liquids will be processed in accordance with the EG&G/MAT Environmental Restoration (ER) Program Standard Operating Procedure No. 1.6, "General Equipment Decontamination".
- Drill or core down to the next sample depth and obtain a sample.
- Ensure that all plastic bags containing soil are labeled with the sample hole identification and the depth at which the sample was taken.
- Send sample splits to EG&G/MAT soil screening laboratory
- Perform the soil preparation steps for each sample as described in this section. Perform a smear and direct survey of each plastic bag. Decontaminate the bags as

required using mild detergent, rags, and catch basin. The small amounts of liquids will be processed in accordance with the EG&G/MAT ER Program Standard Operating Procedure number 1.6, "General Equipment Decontamination". Record the radiation reading on the label or bag.

4.3.4 Radiological Soil Sample Analysis

All soil samples will be processed in the following manner to ensure consistency during analysis:

- Using a 30 mesh screen, remove all large material such as rocks and organic matter. This can be done by gently moving the screen or rubbing the material above the screen. All large objects can be removed by hand.
- Dry the soil in an oven (Curtin Matheson sample drying oven, Equatherm) to remove excessive moisture.
- Pulverize the material as required. Re-screen the material through a 30 mesh screen.
- Weigh an empty marinelli beaker and record its weight.
- Place the material into the marinelli beaker.
- Weigh the full beaker and record the weight of the contents.
- Seal the beaker and perform a radiation survey and smear of the container.
- Decontaminate the container as necessary.

Perform a gamma analysis on each sample using a multichannel analyzer to determine the curie content. Since the actual isotopes are not known, a full spectrum analysis will have to be performed. Record the information in picocuries per gram for solid samples. (Canberra Series 20 MCA with Canberra HPGe detector and shield) Approximately 5% of the samples will have an alpha spectrum analysis performed. (Canberra series 7400 alpha spectrometer system).

4.4 Release Criteria

Equipment used during sampling of material and soils may become contaminated with radioactive material. If care is not taken, containers holding these samples may also become contaminated. Prior to reusing this sampling equipment or counting samples, these items must be decontaminated.

Equipment/material with contamination exceeding EG&G/MAT Health Physics limits that cannot be decontaminated will be securely bagged or wrapped. All waste generated will

be handled according to applicable EG&G/MAT standard operating procedure. The item(s) will then be deposited in containers designated for contaminated material.

Contractors will be reimbursed for equipment that cannot be decontaminated to release criteria. Documentation by EG&G/MAT Health Physics is required.

4.5 Sample Disposition

All radiological samples and contaminated waste materials generated during the sampling activities shall be returned to the EG&G/MAT Project Engineer to be forwarded to EG&G/MAT Waste Management.

5.0 HAZARDOUS MATERIAL CHARACTERIZATION

The purpose of the hazardous material characterization (HMC) of Building 21 is to determine the presence of hazardous substances, their concentration, and the potential regulatory status of materials to be disposed.

The HMC will consist of collecting representative samples from various matrices and potential waste streams for laboratory analysis. Because the samples may contain radioactive material higher than normal environmental samples, the laboratory selected to analyze these samples must have the ability and expertise for handling radioactive and/or mixed samples. Sample splits will also be radiologically screened by the EG&G/MAT soil screening laboratory in order to determine shipping requirements; and to check the containers for external contamination, before leaving the EG&G/MAT facility.

All field activities will be conducted in accordance with sampling, health and safety, and quality assurance/quality control methods and protocols described below. The collection of samples for hazardous material analysis will be performed at the same time the radiological material samples are being collected. The use of all instruments and equipment shall be in accordance with all applicable standards and this Sampling and Analysis Plan.

5.0.1 Sampling Strategy

The Building 21 Characterization involves the evaluation of both building and soils components. Differing sampling approaches are necessary to accommodate each and will be further discussed in the following sections.

5.0.2 Preparatory Activities

Several tasks must be completed prior to initiation of HMC field activities. These are:

- EG&G/MAT Construction Inspection will locate and mark all known utilities, and any other known subsurface structures in the study area.
- The soil sampling locations will be identified by the Contractor.

5.1 Building Sampling

It is not expected that there will be materials present inside the building that will require chemical characterization. However, if accumulations of materials are encountered, samples will be collected in accordance with procedures described in § 5.1.1 and subjected to the analytical protocols specified in § 5.1.2.

5.1.1 Material Samples

Depending upon site conditions and sample matrix consistency, samples may be collected by several methods including, but not limited to, dippers; ladles; scoops; or shovels. All sampling devices will be decontaminated prior to use.

Sampling of solids will proceed as follows:

- The sample will be obtained using the appropriate sampling device.
- The sample will be transferred to laboratory supplied and prepared sample containers.
- Sample container labels, field data sheets, and Chain of Custody (COC) forms will be completed by the sampler.
- The sample will be placed in a cooler containing "blue ice" in preparation for shipment.

5.1.2 Sample Analysis

Any material samples taken from inside the building shall be analyzed by the Reference Methods listed below in Table 5-1 using the Extraction Methods appropriate for the sample matrix.

TABLE 5-1: HMC MATERIAL ANALYSIS METHODS

PARAMETER	REFERENCE METHOD*	VOLUME ml	CONTAINER	SAMPLE PRESERVATION	HOLD TIMES
pH	SW 9040	25	p,g	none	analyze immediately
PCB's	SW 8270	1000	g	A	7 Days
Total Cyanide	SW 9010	500	p,g	A	12 Days
Total Sulfide	SW 9030	500	p,g	A	7 Days
Total Organic Carbon (TOC)	SW 9060	25	p,g	A	28 Days
Total Phenols	SW 9065	500	g	A	7 Days
Volatile Organic Compounds (VOC)	SW 8260	80	g	A	14 Days
Semi-Volatile Organic Compounds (SVOC)	SW 8270	1000	g	A	7 Days
Metals	SW 6010	200	p,g	A	180 Days
Mercury	SW 7470 SW 7471	100	p,g	A	28 Days

Sample Preservation

A - cool only, 4 degrees C

Sample Container

p - plastic

g - glass

* "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", USEPA, SW-846, 3rd Edition, July 1992.

5.1.3 Asbestos

The original construction documents for Building 21 contain references to a material called "COLOR GALBESTOS" with regard to the roof panels and ventilator apparatuses. "GALBESTOS" was sometimes used as a trade name for an asbestos-containing cement product. However, in this case it is unclear if the material contains asbestos or if the term has some other meaning. It is also unknown if the original material specified is still present. All subsequent documents for the building identify the roof as sheet metal.

Part of this characterization effort will be to determine the composition of the roofing material and ventilator apparatuses. There are no other materials in the building suspected at this time to contain asbestos. An examination of the building for suspect materials should be conducted by a State of Ohio accredited Asbestos Hazard Evaluation Specialist. Any suspect materials discovered are to be sampled and analyzed by Polarized Light Microscopy with Dispersion Staining by a laboratory participating in the National Voluntary Laboratory Accreditation Program (NVLAP).

5.2 Soil Sampling

Collection of soil samples for the HMC component of the Building 21 Characterization will be coordinated with the radiological characterization component and will utilize the same grid system and sample locations as presented in § 4.3.2.

The HMC soil samples will be obtained with a split tube sampler and will be collected only at the geometric center of each of the designated sample locations. As with the radiological component, samples will be taken at the surface, at eighteen (18) inches deep, and at thirty-six (36) inches deep. If rock is encountered prior to reaching a depth of thirty-six (36) inches, the sample will be collected at the rock/soil interface.

Soil samples will be collected by the contractor as follows:

- For surface samples: A soil sample will be collected at the surface of the core location by using a hand trowel or scoop.
- For subsurface samples: The coring will be stopped at the top of the desired depth, a split tube sampler will be advanced, and a soil sample obtained and retrieved at the same time that the radiological soil sample is taken.
- The soil sample will be placed in a stainless steel mixing bowl, then mixed and stirred by hand while removing large items such as rocks or organic matter. Volatile organic samples will be collected from discrete locations or intervals and placed in sample containers prior to the mixing and stirring of the remaining sample.
- The soil will be transferred to laboratory supplied and prepared sample containers.

- Sample labels, field data sheets, and Chain of Custody (COC) forms will be completed by the sampler.
- Sample containers will be sealed with a waterproof tape.
- The sample will then be placed in a cooler containing "blue ice."
- The cooler will be sealed with tape and sent by Federal Express or other overland carrier to the contracted laboratory. The contractor will complete all shipping forms and documents.
- All equipment will be decontaminated in accordance with § 6.3 and surveyed for radiological contamination prior to reuse.
- Soil cuttings generated from the coring operations will be back-filled into the coring hole to the maximum extent possible.

5.2.1 Soil Analytical Protocols

All HMC soil samples associated with the Building 21 Characterization will conform to a step-wise screen protocol designed to limit the number of detailed analyses necessary. This approach involves the analysis of all HMC soil samples in accordance with the parameters and associated reference methods listed in Table 5-2.

TABLE 5-2: HMC SOIL INDICATOR SCREEN METHODS

PARAMETER	REFERENCE METHOD*	HOLD TIME
pH	SW 9045	Analyze Immediately
Total Cyanide	SW 9010	12 Days
Total Sulfide	SW 9030	7 Days
Total Organic Carbon (TOC)	SW 9060	28 Days
Total Organic Halide (TOX)	SW 9020A	7 Days

* "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA, SW-846, 3rd Edition, July 1992.

In addition to those listed above, the samples taken at the 18 inch depth in each boring will be analyzed in accordance with the parameters and associated reference methods listed in Table 5-3 below.

TABLE 5-3: HMC EXTENDED SOIL ANALYSIS METHODS

PARAMETER	REFERENCE METHOD*	HOLD TIME
PCB	SW 8270	7 Days
Total Phenols	SW 9065	7 Days
Volatile Organic Compounds (VOC)	SW 8260	14 Days
Semi-Volatile Organic Compounds (SVOC)	SW 8270	7 Days
Metals	SW 6010	180 Days

* "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA, SW-846, 3rd Edition, July 1992.

The indicator screen performed on all HMC samples will serve to provide a basis for correlation with the more extensive analysis performed on the middle sample. The TOC analysis provides the total concentration of organic carbon in the sample. It is a gross indicator of the concentration of VOCs, SVOC, PCBs, Phenols, and other organic species in the samples. Total Organic Halide (TOX) analysis provides the total concentration of organic chlorine, bromine, and iodine in the sample. It is a gross indicator of the concentration of PCBs, chlorinated solvents, pesticides, and other halogenated organic compounds in the sample. Total cyanide, total sulfide and pH were included in the screen because no suitable indicator analyses are available.

5.3 HMC Sample Disposition

All HMC samples which are not also radioactive or mixed wastes shall be disposed by the Laboratory or Contractor in accordance with all applicable Federal, State, and Local regulations. All radiologically contaminated samples and waste materials shall be returned to the EG&G/MAT Project Engineer to be forwarded to EG&G/MAT Waste Management.

6.0 QUALITY ASSURANCE

The purpose of the QA/QC program is to describe the procedures that will be followed for ensuring accuracy, precision, comparability, representativeness, and completeness of data during the characterization operations for Building 21 and Surrounding Soils.

6.1 Responsibilities

The EG&G/MAT Project Engineer will have overall responsibility for ensuring that all quality assurance requirements as specified in this section are fulfilled. The Contractor's On-Site Leader will be responsible for ensuring that required samples are collected properly and sent for proper analysis.

6.2 Sample Containers

Sample containers for the radiological material and soil samples collected during the radiological effort will be provided by the sampling contractor. Marinelli beakers or plastic planchets will be used.

Sample containers for the hazardous material samples will be supplied by the contracted laboratory in custody sealed shipping containers. These sample containers must be accompanied by a chain of custody form. Shipping containers will remain closed and sealed until the sample containers are needed. Sample containers will remain closed until needed. The sample container will be opened immediately prior to introduction of the sample after which it will be immediately closed. Sample volumes, sample container material, preservatives, and handling practices will be as prescribed by the referenced parameter method.

6.3 Sampling Equipment Decontamination

Sampling equipment for radiological material sampling will be made of a material which allows for easy decontamination. Decontamination of equipment can be accomplished with soap and water, or alcohol. All materials used for the decontamination of the equipment must be compatible with the waste disposal process used in WD Building, and NVO-325 Waste Burial Requirements.

Sampling equipment for hazardous material sampling will be constructed of inert material (e.g., Teflon or stainless steel) and will be decontaminated prior to each sampling event. Decontamination of hazardous material sampling equipment will be as follows:

- Vigorous scrubbing in a non-phosphate detergent wash (potable water solution);
- Potable water rinse;
- Deionized water rinse;
- 10% nitric acid (trace metal or higher grade nitric acid in deionized water);
- Deionized water rinse;
- Ethane rinse;

- Total air drying or pure nitrogen blow out; and
- Final rinse with deionized water.

During sampling operations, gloves worn by the individuals handling the samples will be changed frequently to prevent cross-contamination of samples.

6.4 Measures of Quality Assurance/Quality Control

Five (5) percent of all radiological samples will be split and be analyzed by a laboratory independent of the primary analytical laboratory for the project.

The following QA/QC samples are necessary for adequate review, interpretation, and validation of analytical data for the hazardous material sampling program.

6.4.1 Trip Blanks

Trip blanks will be prepared by the contracted laboratory and shipped with each shipping container. The blanks will remain within the shipping container and be maintained at 4 degrees centigrade. The blanks must arrive at the site within one day of their preparation in the laboratory and may not be held on site for more than two days. The trip blanks will travel back to the laboratory with the same set of bottles that accompanied them to the project site.

Each sample matrix requires trip blanks at a rate of one per shipment or two day sampling event. For QA/QC purposes, environmental samples collected during the HMC are considered to be one of two matrices - soil or sludge/sediment. Trip blanks will be analyzed for volatile organics only.

6.4.2 Field Blanks

Field blank bottles will be prepared by the contracted laboratory and shipped with each shipping container. The blanks will remain within the shipping container and be maintained at 4 degrees centigrade. The blanks must arrive at the site within one day of their preparation in the laboratory and may not be held on site for more than two days. The field blanks will travel back to the laboratory with the same set of bottles they accompanied to the project site.

Field blanks will be generated by passing laboratory supplied analyte-free water contained in sample bottles through decontaminated sampling equipment into empty sample containers. Field blanks will be generated at the rate of one per day per sample matrix and will be analyzed for all matrix parameters except pH in accordance with the analytical protocol used for the stratum from which it was taken.

6.4.3 Duplicate Samples

Duplicate samples will be obtained at the rate of 5 percent of the samples collected per matrix with a minimum of one per matrix. Samples will be placed in mixing bowls and

mixed and stirred prior to filling sampling containers. Volatile organic samples will be collected from discrete locations or intervals and then placed in sample containers prior to mixing and stirring of the rest of the sample. Duplicate samples will be analyzed for all parameters in accordance with the analytical protocol used for the stratum from which it was taken.

6.4.4 Laboratory QA/QC Samples

Laboratory QA/QC samples (e.g., method blanks and surrogate spikes) will be analyzed in accordance with protocols of stated reference methods.

7.0 DOCUMENTATION

The following sample documentation requirements are necessary to ensure sample integrity. Because the documentation may differ for recording information concerning radiological conditions versus information for hazardous material conditions, the documentation requirements have been divided.

7.1 Radiological

The following documentation will be required to be maintained during the radiological data collection process.

7.1.1 Radiation Survey Forms

A survey form will be completed for each area or item surveyed. The purpose of this form is to record information obtained during the direct and smear surveys. The survey form shall include a sketch or drawing of the area or item, and also will include, as a minimum, the following information:

- Name of site;
- Location of survey or item being surveyed;
- Reason for survey;
- Date of survey;
- Survey point number;
- Type of survey performed;
- Identification of instruments used (manufacturer, model, serial number);
- Calibration data
- Units in which the data was recorded (dpm/100 cm², or mR/hr, not cpm);
- Actual information/data number;
- Name of person performing the survey;
- Name of person recording the data; and
- Name of person reviewing the data and the date of the review.

7.1.2 Field Sample Data Sheet

A field sample data sheet will be completed for each sample at the time of collection. The purpose of this form is to record the location of each material sample taken. The field sample data sheet will, as a minimum, contain the following information:

- Name of site;
- Date and time sample was collected;
- Name(s) of person taking the sample;
- Sample identification number;
- Sample location;
- Weight of empty container
- Written description of the sample (matrix, color, texture, odor, etc); and
- Radiation survey results.

7.1.3 Air Sample Form

The purpose of the air sample form is to record the appropriate data to determine the airborne radioactivity levels in the work environment. As a minimum, the form will include the following information:

- Model and serial number of the air sampler;
- Location where the air sample was taken;
- Task being performed during the air sampling;
- Date and time air sample was started;
- Date and time air sample was terminated;
- Flow rate of air sampler;
- Total volume of air sampled;
- Date and time sample was counted;
- Minimum Detectable Activity (MDA) of counting equipment;
- Counting equipment identification by model and serial number;
- Instrument calibration data;
- Total sample counting time;
- Background counts;
- Probe efficiency;
- Total and corrected counts of sample;
- Activity calculated in uCi/ml;
- Name of individual taking the air sample; and
- Name of individual reviewing the information and the date reviewed.

The form should be designed to allow multiple counts of the sample to determine decay rates.

7.1.4 Laboratory Analysis Form

The purpose of this form is to document the results of the laboratory analysis of the material and soil samples. As a minimum, this form will include the following information:

- Sample number;
- Location of sample collection;
- Description of material;
- Date sample analyzed;
- MDA of analysis equipment;
- Equipment used to analyze sample (model, serial number);
- Instrument calibration data;
- Name of individual performing analysis;
- Analysis data;

- Error bands;
- Name of individual reviewing the information and the date of the review.

The results of the analysis should be reported in picocuries/gram or microcuries/milliliter by radionuclide type.

7.1.5 Sample Label

The sample label is attached to the sample container. It provides general information needed during the analysis and identifies the sample. As a minimum, the following information will be included on the label:

- Unique sample identification number;
- Location where the sample was taken (include hole number and depth if soil sample);
- Type of material sampled;
- Weight of empty container;
- Weight of filled container;
- Date when sample was taken;
- Radiation reading of sample; and
- Name of individual taking the sample.

7.2 Hazardous Material

The following documentation will be required to be maintained during the hazardous material data collection process.

7.2.1 Field Sample Data Sheet

A field sample data sheet will be completed for each sample at the time of collection. The field sample data sheet will, as a minimum, record the following data:

- Name of site;
- Date and time sample was collected;
- Name(s) of sampling personnel;
- Weather conditions;
- Sample location;
- Unique sample identification number;
- Weight of empty container
- Written description of the sample (matrix, color, texture, odor, etc.);
- Sampling methodology and equipment used;
- Any unusual conditions or incidents during sampling; and
- Radiation survey results.

7.2.2 Chain of Custody

A Chain of Custody (COC) form will be initiated for each hazardous material sample by the contracted laboratory with bottle preparation and shipment to the site. Sampling personnel will complete the appropriate information on the COC immediately after collecting the sample. The COC will remain with the sample at all times. Prior to sample shipment for analysis, a custody seal will be placed on the shipping container. The COC will include, as a minimum, the following information:

- Name(s) of laboratory persons preparing the bottles for shipment;
- Date and time the containers were placed in the shipping containers;
- Number of the custody seal affixed to the shipping container;
- Name(s) of persons breaking the custody seal;
- Date and time the custody seal was broken;
- Date and time the sample was collected; and
- Sample identification number, number and volume of containers, preservative used, and analysis requested.

7.2.3 Laboratory Data Package

The contracted hazardous material laboratory will provide analytical reports which may consist of, but not be limited to, the following information:

- Narrative;
- Methodology;
- Laboratory Chronicles;
- Non-conformance Reports;
- Organic Extraction Logs;
- Analytical results including methods of blanks and sample detection limits;
- Matrix spike and matrix spike duplication recoveries;
- Surrogate recoveries;
- Spike and surrogate recovery quality control limits;
- Labeled chromatogram;
- Quantization reports;
- Mass spectra; and
- Library searches.

7.2.4 Contractor QA/QC Check

The contractor will review the laboratory report to determine the usefulness of the data. For organic analysis, some of the criteria considered are as follows:

- Holding times;
- Initial and continuing instrument calibration;
- Spectral performance and interpretation;
- Detection limits;
- Blank contamination;

- Surrogate spikes;
- Matrix spikes;
- Laboratory duplicates;
- Narrative; and
- Field duplicates.

For inorganic analysis, the criteria considered are as follows:

- Detection limits;
- Initial instrument calibration;
- Continuing instrument calibration;
- Preparation blanks;
- ICP interference check;
- Spike sample analysis;
- Duplication sample analysis;
- Laboratory control analysis;
- Furnace Atomic Absorption Analysis; and
- Narrative.

No Rad Review

8.0 DATA REDUCTION AND REPORTING

All usable data generated from the characterization effort will be summarized in tabular form. Sample numbers provided in the tables will relate to the sampling locations plotted on scaled site drawings. A discussion of the QA/QC evaluation of the data will be provided in order to identify which data are usable and which data are not.

The data will be compared with applicable DOE, EG&G/MAT and other federal environmental statutes to include the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Safe Drinking Water Act (SDWA), and the Clean Water Act (CWA).

An analysis and interpretation of potential reporting and/or other obligations based on sampling results will be made. Concentration of detectable material will be discussed in context of site operational features, site history and other sampling locations in order to provide a coherent and comprehensive characterization of the hazards associated with the Building 21 and Surrounding Soils site.

9.0 SAMPLE CUSTODY AND TRANSPORT

It should be noted that any samples containing known or suspected radioactive material warrant special packaging and labeling. Radiological samples may be shipped together with hazardous waste samples to the same off-site laboratory if each sample is segregated in a separate sealed container.

9.1 Sample Custody

All samples collected will be properly labeled with the date, time, location of the sample, and the name of the sampler. Pertinent information will be entered into the Field Sample Data Sheet.

Sample custody seals will be placed around all shipping container lids to detect unauthorized tampering with samples following collection and prior to the time of analysis. The seal must be attached so that it is necessary to break it in order to open the container. Seals must be affixed at the time of packaging. The seal should be self-adhesive paper and will include the following information:

- Signature of the sampler
- Date of sampling

Sample custody will begin at the time of sample collection by placing the sample in an ice chest, or other appropriate container, in the possession of the On-Site Leader. A line item on the Chain-of-Custody record form will be immediately filled out and signed by the On-Site Leader. The following descriptive information is included on the Chain-of-Custody record:

<u>PROJECT NO.</u>	Enter "Task Order #"
<u>PROJECT NAME</u>	Enter "Building 21 Characterization"
<u>SAMPLERS</u>	Enter signature and print name of person or person(s) who participated in the collection of the samples listed and who could be contacted if questions arise during sample log-in.
<u>FIELD SAMPLE NO.</u>	Enter the assigned sample numbers for each sample collected. Sample numbers will be identified during the detailed engineering study.
<u>DATE</u>	Enter date of sample collection.
<u>TIME</u>	Enter time of actual sample collection.
<u>COMPOSITE/GRAB</u>	Indicate by a check under grab.
<u>SAMPLE LOCATION</u>	Enter the location of the sample, as well as grid coordinates.

OF CONTAINERS

Enter the number of containers to be shipped for a sample.

PARAMETERS

Indicate parameters to be analyzed. See Tables 7-1, 7-2, and 7-3 for analysis matrix.

REMARKS

To be used to list special considerations for a sample.

Upon completion of all line items, or upon sample pickup, the On-Site Leader will sign, date, enter the time, and confirm completeness of all descriptive information contained on the Chain-of-Custody record. Each individual who subsequently assumes responsibility for the sample will sign the Chain-of-Custody record and indicate the reason for assuming custody. The field Chain-of-Custody record will terminate upon laboratory receipt of samples. The On-Site Leader will provide a copy of the Chain-of-Custody record to the Project Engineer for the project files.

9.2 Sample Transport

Samples must be packaged and labeled for shipment in compliance with current U.S. Department of Transportation (DOT) regulations. Any additional requirements stipulated by the overnight carrier will also be followed.

Only a metal or plastic ice chest should be used as the shipping container for samples unless otherwise specified by the shipping regulations. Each ice chest will be lined with two 6-mil thick plastic bags. Styrofoam or bubble wrap will be used to absorb shock. Additional packaging, as required by 49 CFR 173, for the samples will be predicated upon the determination of radiological activity by EG&G/MAT Health Physics personnel.

After sample containers are sufficiently packaged, the 6-mil thick plastic bags will be sealed around the samples by twisting the top and securely taping the bag closed to prevent leakage. Ice will be placed between the inner and outer plastic bags, with the latter also taped shut.

Chain-of-Custody records and any other shipping/sample documentation accompanying the shipment will be enclosed in a waterproof plastic bag and taped to the underside of the ice chest lid.

Each ice chest prepared for shipment will be securely taped shut. This can be accomplished with reinforced or other suitable tape (e.g., strapping tape) wrapped at least twice around the ice chest near each end where the hinges are located. Custody seals will be affixed across the joint between the top and bottom (both in front and in back) of each ice chest prepared for shipment.

Sample shipping containers will be marked in accordance with DOT Regulations for Shipping Small Quantities (49 CFR 173.4). In addition to the complete mailing address, each ice chest must be clearly marked with "This End Up" arrows on two sides and a label that contains the originator's address. The cooler will be marked on the outside with the

statement, "This package conforms to conditions and limitations specified in 49 CFR 173.4."

When sample shipment modes are selected, care will be taken not to exceed allowable holding times for individual analytes. All samples will be shipped "Priority One/Overnight" via a commercial carrier. Samples can be shipped through a reliable commercial carrier, such as Federal Express, Emery, Purolator, or their equivalent. Airbills will be completed and attached to the exterior lids of the containers. Each container must have a separate shipment labels when shipping more than one container.

The On-Site Leader will supply the following information, by telephone, to the laboratory coordinator:

1. the date on which the samples were shipped;
2. the name of the commercial carrier;
3. the airbill number;
4. the number of shipping containers (e.g., ice chests) shipped; and
5. the expected date of arrival at the laboratory.

Samples will arrive at the laboratory via delivery by an overnight commercial carrier service. After the ice chests are checked for intact custody seals, the samples will be unpacked and the information on the accompanying Chain-of-Custody records will be examined. If the samples shipped match those described on the Chain-of-Custody record, the laboratory sample custodian will sign the form and assume responsibility for the samples. If problems are noted with the sample shipment, the laboratory custodian will sign the form and record problems in the "Remarks" box. The laboratory should have a Standard Operating Procedure (SOP) for laboratory sample custody.

Any missing samples, missing sample tags, broken sample bottles, or unpreserved samples will be noted on the Chain-of-Custody record. If there are problems with any individual samples, the sample custodian will inform the laboratory coordinator of such problems. The laboratory coordinator will then contact the Project Engineer or contract On-Site Leader to determine a viable solution to the problem. The EG&G/MAT Project Engineer, or his designated representative, should document and approve the solution to the problem.

J. EPA REGION III RISK-BASED GUIDELINES



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III
841 Chestnut Street
Philadelphia, Pennsylvania 19107

March 7, 1995

SUBJECT: Risk-Based Concentration Table, January - June 1995

FROM: Roy L. Smith, Ph.D., Senior Toxicologist
Technical Support Section (3HW13)

TO: RBC Table Mailing List

A handwritten signature in dark ink, appearing to read "R. L. Smith", written over the "FROM:" line.

Attached is the EPA Region III Risk-Based Concentration (RBC) table, which we have distributed quarterly to all interested parties since 1991. Please see below for some important announcements concerning changes in the Table and administrative issues with our mailing list.

Major Changes in this Issue of the RBC

1. IRIS and HEAST have matured, and EPA has revised them at a decreasing rate over the last few years. Lately, each quarterly RBC update has been virtually the same as its predecessor. Meanwhile, the mailing list for the RBC table has expanded exponentially and the quarterly mailings have become a substantial burden to the Region. Upon reflection, we've decided to change to semi-annual distribution. We think this change will extend our ability to keep producing the RBC table, while having little effect on the table's usefulness. (For example, there have been *no* changes to toxicity constants in IRIS or HEAST in the three months since the 4th quarter table was published.)
2. The RBC table now includes soil screening levels (SSLs) for protection of groundwater and air. Most of the new entries were taken directly from EPA/OSWER's newly proposed SSL guidance document. We've added some additional SSLs based on the same proposed methodology. Sources of SSLs are noted in the table. SSLs incorporate all the same exposure assumptions as RBCs, plus many additional assumptions needed for inter-media extrapolation. SSLs are therefore distinct from RBCs, and should be used only in the framework proposed in the OSWER document. If you have not yet seen this proposal, you can obtain it from NTIS (703-487-4650, as document numbers 9355.4-1, PB95-963530, or EPA540/R-94/105).

Administrative Issues

Our situation on the administrative front can be summarized in one word--"HELP"!! The RBC mailing list now includes more than 1300 recipients and we are experiencing significant problems with our current "delivery system." We would appreciate your suggestions for making our future mailings more efficient. We are also exploring the possibility of providing access to the RBC through an electronic bulletin board and would like your feedback on that idea. In the meantime, we will be examining our current mailing list and limiting future mailings to one individual per organization; we need your help in distributing the RBC within your organization if there are others who would like copies.

2. A single contaminant contributes nearly all of the health risk;
3. Volatilization or leaching of that contaminant from soil is expected not to be significant;
4. The exposure scenarios used in the RBC table are appropriate for the site;
5. The fixed risk levels used in the RBC table are appropriate for the site; and
6. Risk to ecological receptors is expected not to be significant;

the risk-based concentrations would probably be protective as no-action levels or cleanup goals. However, to the extent that a site deviates from this description, as most do, the RBCs would not necessarily be appropriate.

To summarize, the table should generally not be used to (1) set cleanup or no-action levels at CERCLA or RCRA Corrective Action sites, (2) substitute for EPA guidance for preparing baseline risk assessments, or (3) determine if a waste is hazardous under RCRA.

Attachment

EPA Region III Risk-Based Concentration Table

Background Information



*Roy L. Smith, Ph.D.
Senior Toxicologist
February 9, 1995*

Development of Risk-Based Concentrations

General

Separate carcinogenic and non-carcinogenic risk-based concentrations were calculated for each compound for each pathway. The concentration in the table is the lower of the two, rounded to two significant figures. The following terms and values were used in the calculations:

Exposure variables	Value	Symbol
<i>General:</i>		
Carcinogenic potency slope oral (risk per mg/kg/d):	*	CPSo
Carcinogenic potency slope inhaled (risk per mg/kg/d):	*	CPSi
Reference dose oral (mg/kg/d):	*	RfDo
Reference dose inhaled (mg/kg/d):	*	RfDi
Target cancer risk:	1e-06	TR
Target hazard quotient:	1	THQ
Body weight, adult (kg):	70	BWa
Body weight, age 1-6 (kg):	15	BWc
Averaging time carcinogens (d):	25550	ATc
Averaging time non-carcinogens (d):	ED*365	ATn
Inhalation, adult (m3/d):	20	IRAAa
Inhalation, child (m3/d):	12	IRAc
Inhalation factor, age-adjusted (m3-y/kg-d):	11.66	IFAadj
Tap water ingestion, adult (L/d):	2	IRWa
Tap water ingestion, age 1-6 (L/d):	1	IRWc
Tap water ingestion factor, age-adjusted (L-y/kg-d):	1.09	IFWadj
Fish ingestion (g/d):	54	IRF
Soil ingestion, adult (mg/d):	100	IRSa
Soil ingestion, age 1-6 (mg/d):	200	IRSc
Soil ingestion factor, age adjusted (mg-y/kg-d):	114.29	IFSadj
<i>Residential:</i>		
Exposure frequency (d/y):	350	EFr
Exposure duration, total (y):	30	EDtot
Exposure duration, age 1-6 (y):	6	EDc
Volatilization factor (L/m3):	0.5	K

oral RfDs for both volatile and non-volatile compounds. RBCs for carcinogens were based on combined childhood and adult exposure; for non-carcinogens RBCs were based on adult exposure.

Carcinogens

$$RBC \frac{\mu g}{L} = \frac{TR \cdot ATc \cdot 1000 \frac{\mu g}{mg}}{EFr \cdot ([K \cdot IFAadj \cdot CPSi] + [IFWadj \cdot CPSo])}$$

Non-carcinogens

$$RBC \frac{\mu g}{L} = \frac{THQ \cdot BWa \cdot ATn \cdot 1000 \frac{\mu g}{mg}}{EFr \cdot EDtot \cdot \left(\frac{K \cdot IRAa}{RfDi} + \frac{IRWa}{RfDo} \right)}$$

Ambient air

Oral potency slopes and references were used where inhalation values were not available. RBCs for carcinogens were based on combined childhood and adult exposure; for non-carcinogens RBCs were based on adult exposure.

Carcinogens

$$RBC \frac{\mu g}{m^3} = \frac{TR \cdot ATc \cdot 1000 \frac{\mu g}{mg}}{EFr \cdot IFAadj \cdot CPSi}$$

Non-carcinogens

$$RBC \frac{\mu g}{m^3} = \frac{THQ \cdot RfDi \cdot BWa \cdot ATn \cdot 1000 \frac{\mu g}{mg}}{EFr \cdot EDtot \cdot IRAa}$$

Edible fish

All RBCs were based on adult exposure.

Carcinogens

$$RBC \frac{mg}{kg} = \frac{TR \cdot BWa \cdot ATc}{EFr \cdot EDtot \cdot \frac{IRF}{1000 \frac{g}{kg}} \cdot CPSo}$$

Non-carcinogens

$$RBC \frac{mg}{kg} = \frac{THQ \cdot RfDo \cdot BWa \cdot ATn}{EFr \cdot EDtot \cdot \frac{IRF}{1000 \frac{g}{kg}}}$$

new table. The table clearly distinguishes the OSWER SSLs from the "unofficial" ones.

These SSLs provide reasonable maximum estimates of transfers of contaminants from soil to other media. One column contains soil concentrations protective of groundwater quality; the other contains soil concentrations protective of air quality. "Protective" is defined in the same terms as the risk-based concentrations for tap water and air -- that residential contact scenarios will yield a fixed upper bound risk of 10^{-6} or a fixed hazard quotient of 1 (whichever occurs at the lower concentration).

OSWER's SSLs should be used only within the framework proposed in the guidance document. The additional SSLs included in the RBC table are intended for the same uses (although they obviously carry less weight than the formally proposed numbers).

The SSLs are based on the following assumptions:

Input variables	Value	Symbol*
Surface soil moisture content (g/g)	0.1	W_s
Vadose zone soil moisture content (kg/kg)	0.2	W_v
Surface soil bulk density (g/cm ³)	1.5	ρ_{bs}
Vadose zone soil bulk density (kg/L)	1.5	ρ_{bv}
Surface soil particle density (g/cm ³)	2.65	ρ_m
Vadose zone soil particle density (g/cm ³)	2.65	ρ_{mv}
Total surface soil porosity (L pore /L soil)	0.43	N_s
Total vadose zone soil porosity (L pore/L soil)	0.43	N_v
Air-filled surface soil porosity (L air/L soil)	0.28	θ_{sa}
Water-filled surface soil porosity (L water/L soil)	0.15	θ_{ws}
Air-filled vadose zone soil porosity (L air/L soil)	0.13	θ_{sv}
Water-filled vadose zone soil porosity (L water/L soil)	0.30	θ_{wv}
Organic carbon fraction of surface soil (g/g)	0.006	FOC_s
Organic carbon fraction of vadose zone soil (g/g)	0.002	FOC_v
Dispersion factor for 0.5 acres (g/m ² s per kg/m ³)	35.1	Q/C
Particulate emission factor (m ³ /kg)	6.79e+08	PEF
Exposure interval (s)	9.50e+08	T
Dilution-attenuation factor (unitless)	10	DAF

*: Symbols were adjusted, variables were rearranged, and derived and chemical-specific variables were omitted for simplicity and clarity. Presentation of the input variables in a single table using the same terms as in the OSWER SSL document would have been confusing. The terms used here are generally similar to OSWER's, and can easily be compared with the SSL guidance document.

With two exceptions described in the following section, SSL calculations were based on the same algorithms presented in the OSWER draft SSL guidance document. For details of the calculations (and for general background information on SSLs), I strongly recommend

Sources: I=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST E=EPA-ECAO Regional Support provisional value O=Other EPA documents.						Basis: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level S=soil saturation concentration.							
Contaminant	CAS	Risk-Based Concentrations				V O C	Risk-Based Concentrations					Soil Screening Levels- Transfers from Soil to:	
		RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg		Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion		Air mg/kg	Groundwater mg/kg
										Industrial	Residential		
Acephate	30560191	4.00E-03 I		8.70E-03 I		7.7 C	0.72 C	0.36 C	660 C	73 C			
Acetaldehyde	75070		2.57E-03 I		7.70E-03 I	94 N	0.81 C						
Acetochlor	34256821	2.00E-02 I				730 N	73 N	27 N	41000 N	1600 N			
Acetone	67641	1.00E-01 I				3700 N	370 N	140 N	200000 N	7800 N	62000 E	8 E	
Acetone cyanohydrin	75865	7.00E-02 H	4.00E-02 A			2600 N	150 N	95 N	140000 N	5500 N			
Acetonitrile	75078	6.00E-03 I	1.43E-02 A			220 N	52 N	8.1 N	12000 N	470 N			
Acetophenone	98862	1.00E-01 I	5.71E-06 W			0.042 N	0.021 N	140 N	200000 N	7800 N			
Acifluorfen	62476599	1.30E-02 I				470 N	47 N	18 N	27000 N	1000 N			
Acrolein	107028	2.00E-02 H	5.71E-06 I			730 N	0.021 N	27 N	41000 N	1600 N			
Acrylamide	79061	2.00E-04 I		4.50E+00 I	4.55E+00 I	0.015 C	0.0014 C	0.0007 C	1.3 C	0.14 C			
Acrylic acid	79107	5.00E-01 I	1.00E-03 I			18000 N	3.7 N	680 N	1E+06 N	39000 N			
Acrylonitrile	107131	1.00E-03 H	5.71E-04 I	5.40E-01 I	2.38E-01 I	0.12 C	0.026 C	0.0058 C	11 C	1.2 C			
Alachlor	15972608	1.00E-02 I		8.00E-02 H		0.84 C	0.078 C	0.039 C	72 C	8 C			
Alar	1596845	1.50E-01 I				5500 N	550 N	200 N	310000 N	12000 N			
Aldicarb	116063	1.00E-03 I				37 N	3.7 N	1.4 N	2000 N	78 N	570 S	0.036 M	
Aldicarb sulfone	1646884	1.00E-03 I				37 N	3.7 N	1.4 N	2000 N	78 N			
Aldrin	309002	3.00E-05 I		1.70E+01 I	1.71E+01 I	0.004 C	0.00037 C	0.00019 C	0.34 C	0.038 C	0.5 E	0.005 E	
Allyl	74223646	2.50E-01 I				9100 N	910 N	340 N	510000 N	20000 N			
Allyl alcohol	107186	5.00E-03 I				180 N	18 N	6.8 N	10000 N	390 N			
Allyl chloride	107051	5.00E-02 W	2.86E-04 I			1800 N	1 N	68 N	100000 N	3900 N			
Aluminum	7429905	1.00E+00 E				37000 N	3700 N	1400 N	1E+06 N	78000 N			
Aluminum phosphide	20859738	4.00E-04 I				15 N	1.5 N	0.54 N	820 N	31 N			
Amdro	67485294	3.00E-04 I				11 N	1.1 N	0.41 N	610 N	23 N			
Ametryn	834128	9.00E-03 I				330 N	33 N	12 N	18000 N	700 N			
m-Aminophenol	591275	7.00E-02 H				2600 N	260 N	95 N	140000 N	5500 N			
4-Aminopyridine	504245	2.00E-05 H				0.73 N	0.073 N	0.027 N	41 N	1.6 N			
Amitraz	33089611	2.50E-03 I				91 N	9.1 N	3.4 N	5100 N	200 N			
Ammonia	7664417		2.86E-02 I			1000 N	100 N						
Ammonium sulfamate	7773060	2.00E-01 I				7300 N	730 N	270 N	410000 N	16000 N			
Aniline	62533		2.86E-04 I	5.70E-03 I		10 N	1 N	0.55 C	1000 C	110 C	45 N	0.031 M	
Antimony and compounds	7440360	4.00E-04 I				15 N	1.5 N	0.54 N	820 N	31 N			
Antimony pentoxide	1314609	5.00E-04 H				18 N	1.8 N	0.68 N	1000 N	39 N			
Antimony potassium tartrate	304610	9.00E-04 H				33 N	3.3 N	1.2 N	1800 N	70 N			
Antimony tetroxide	1332316	4.00E-04 H				15 N	1.5 N	0.54 N	820 N	31 N			
Antimony trioxide	1309644	4.00E-04 H				15 N	1.5 N	0.54 N	820 N	31 N			
Apollo	74115245	1.30E-02 I				470 N	47 N	18 N	27000 N	1000 N			
Aramite	140578	5.00E-02 H		2.50E-02 I	2.49E-02 I	2.7 C	0.25 C	0.13 C	230 C	26 C			
Arsenic	7440382	3.00E-04 I				11 N	1.1 N	0.41 N	610 N	23 N	380 E	15 E	
Arsenic (as carcinogen)	7440382			1.75E+00 I	1.51E+01 I	0.038 C	0.00041 C	0.0018 C	3.3 C	0.37 C	380 E	15 E	
Arsine	7784421		1.43E-05 I			0.52 N	0.052 N						
Assure	76578148	9.00E-03 I				330 N	33 N	12 N	18000 N	700 N			
Asulam	3337711	5.00E-02 I				1800 N	180 N	68 N	100000 N	3900 N			

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSi kg-d/mg	V O C	Risk-Based Concentrations					Soil Screening Levels- Transfers from Soil to	
							Tap Water	Ambient Air	Fish	Soil Ingestion		Air mg/kg	Groundwater mg/kg
							µg/L	µg/m3	mg/kg	Industrial mg/kg	Residential mg/kg		
sec-Butylbenzene	135988	1.00E-02 E				☑	61 N	37 N	14 N	20000 N	780 N	80 S	0.27 N
tert-Butylbenzene	104518	1.00E-02 E				☑	61 N	37 N	14 N	20000 N	780 N		
Butylphthalyl butylglycolate	85701	1.00E+00 I					37000 N	3700 N	1400 N	1E+06 N	78000 N		
Cacodylic acid	75605	3.00E-03 H					110 N	11 N	4.1 N	6100 N	230 N		
Cadmium and compounds	7440439	5.00E-04 I			6.30E+00 I		18 N	0.00099 C	0.68 N	1000 N	39 N	920 E	6 E
Caprolactam	105602	5.00E-01 I					18000 N	1800 N	680 N	1E+06 N	39000 N		
Captafol	2425061	2.00E-03 I		8.60E-03 H			7.8 C	0.73 C	0.37 C	670 C	74 C		
Captan	133062	1.30E-01 I		3.50E-03 H			19 C	1.8 C	0.9 C	1600 C	180 C		
Carbaryl	63252	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0.34 S	23 N
Carbofuran	1563662	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N		
Carbon disulfide	75150	1.00E-01 I	2.86E-03 H			☑	21 N	10 N	140 N	200000 N	7800 N	11 E	14 E
Carbon tetrachloride	56235	7.00E-04 I	5.71E-04 E	1.30E-01 I	5.25E-02 I	☑	0.16 C	0.12 C	0.024 C	44 C	4.9 C	0.2 E	0.03 E
Carbosulfan	55285148	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N		
Carboxin	5234684	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N		
Chloral	75876	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N		
Chloramben	133904	1.50E-02 I					550 N	55 N	20 N	31000 N	1200 N		
Chloranil	118752			4.03E-01 H			0.17 C	0.016 C	0.0078 C	14 C	1.6 C		
Chlordane	57749	6.00E-05 I		1.30E+00 I	1.29E+00 I		0.052 C	0.0049 C	0.0024 C	4.4 C	0.49 C	10 E	2 E
Chlorimuron-ethyl	90982324	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N		
Chlorine	7782505	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N		
Chlorine dioxide	10049044		5.71E-05 I				2.1 N	0.21 N					
Chloroacetaldehyde	107200	6.90E-03 O					250 N	25 N	9.3 N	14000 N	540 N		
Chloroacetic acid	79118	2.00E-03 H					73 N	7.3 N	2.7 N	4100 N	160 N		
2-Chloroacetophenone	532274		8.57E-06 I				0.31 N	0.031 N					
4-Chloroaniline	106478	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	1200 S	0.3 E
Chlorobenzene	108907	2.00E-02 I	5.71E-03 A			☑	39 N	21 N	27 N	41000 N	1600 N	94 E	0.6 E
Chlorobenzilate	510156	2.00E-02 I		2.70E-01 H	2.70E-01 H		0.25 C	0.023 C	0.012 C	21 C	2.4 C		
p-Chlorobenzoic acid	74113	2.00E-01 H					7300 N	730 N	270 N	410000 N	16000 N		
4-Chlorobenzotrifluoride	98566	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	86 N	7.5 N
2-Chloro-1,3-butadiene	126998	2.00E-02 A	2.00E-03 H			☑	14 N	7.3 N	27 N	41000 N	1600 N		
1-Chlorobutane	109693	4.00E-01 H				☑	2400 N	1500 N	540 N	820000 N	31000 N		
Chlorodibromomethane	124481	2.00E-02 I		8.40E-02 I		☑	0.13 C	0.075 C	0.038 C	68 C	7.6 C	1900 E	0.2 E
Chlorodifluoromethane	75456		1.43E+01 I			☑	87000 N	52000 N					
Chloroethane	75003	4.00E-01 E	2.86E+00 I			☑	8600 N	10000 N	540 N	820000 N	31000 N	2600 S	33 N
2-Chloroethyl vinyl ether	110758	2.50E-02 O				☑	150 N	91 N	34 N	51000 N	2000 N		
Chloroform	67663	1.00E-02 I		6.10E-03 I	8.05E-02 I	☑	0.15 C	0.078 C	0.52 C	940 C	100 C	0.2 E	0.3 E
Chloromethane	74873			1.30E-02 H	6.30E-03 H	☑	1.4 C	0.99 C	0.24 C	440 C	49 C	0.063 C	0.0066 C
4-Chloro-2,2-methylaniline hydrochloride	3165933			4.60E-01 H			0.15 C	0.014 C	0.0069 C	12 C	1.4 C		
4-Chloro-2-methylaniline	95692			5.80E-01 H			0.12 C	0.011 C	0.0054 C	9.9 C	1.1 C		
beta-Chloronaphthalene	91587	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N	2.8 S	140 N
o-Chloronitrobenzene	88733			2.50E-02 H		☑	0.42 C	0.25 C	0.13 C	230 C	26 C		
p-Chloronitrobenzene	100005			1.80E-02 H		☑	0.59 C	0.35 C	0.18 C	320 C	35 C		

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSi kg-d/mg	V O C	Risk-Based Concentrations					Soil Screening Levels- Transfers from Soil to:	
							Tap Water	Ambient Air	Fish	Soil Ingestion		Air	Groundwater
										Industrial	Residential		
							µg/L	µg/m ³	mg/kg	mg/kg	mg/kg	mg/kg	
DDT	50293	5.00E-04 I		3.40E-01 I	3.40E-01 I		0.2 C	0.018 C	0.0093 C	17 C	1.9 C	80 E	1 E
Decabromodiphenyl ether	1163195	1.00E-02 I				☒	61 N	37 N	14 N	20000 N	780 N		
Demeton	8065483	4.00E-05 I					1.5 N	0.15 N	0.054 N	82 N	3.1 N		
Diallate	2303164			6.10E-02 H		☒	0.17 C	0.1 C	0.052 C	94 C	10 C		
Diazinon	333415	9.00E-04 H					33 N	3.3 N	1.2 N	1800 N	70 N	5400 S	2.8 N
Dibenzofuran	132649	4.00E-03 E					150 N	15 N	5.4 N	8200 N	310 N	120 S	120 N
1,4-Dibromobenzene	106376	1.00E-02 I				☒	61 N	37 N	14 N	20000 N	780 N		
1,2-Dibromo-3-chloropropane	96128		5.71E-05 I	1.40E+00 H	2.42E-03 H	☒	0.048 C	0.21 N	0.0023 C	4.1 C	0.46 C	1.9 N	0.00061 N
1,2-Dibromoethane	106934		5.71E-05 H	8.50E+01 I	7.70E-01 I	☒	0.00075 C	0.0081 C	0.00004 C	0.067 C	0.0075 C	0.0058 C	0.00018 N
Dibutyl phthalate	84742	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	100 E	120 E
Dicamba	1918009	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N		
1,2-Dichlorobenzene	95501	9.00E-02 I	4.00E-02 A			☒	270 N	150 N	120 N	180000 N	7000 N	300 E	6 E
1,3-Dichlorobenzene	541731	8.90E-02 O				☒	540 N	320 N	120 N	180000 N	7000 N		
1,4-Dichlorobenzene	106467		2.29E-01 I	2.40E-02 H		☒	0.44 C	0.26 C	0.13 C	240 C	27 C	7700 E	1 E
3,3'-Dichlorobenzidine	91941			4.50E-01 I			0.15 C	0.014 C	0.007 C	13 C	1.4 C	52 S	0.01 E
1,4-Dichloro-2-butene	764410				9.30E+00 H	☒	0.0011 C	0.00067 C					
Dichlorodifluoromethane	75718	2.00E-01 I	5.71E-02 A			☒	390 N	210 N	270 N	410000 N	16000 N	37 N	7.5 N
1,1-Dichloroethane	75343	1.00E-01 H	1.43E-01 A			☒	810 N	520 N	140 N	200000 N	7800 N	980 E	11 E
1,2-Dichloroethane (EDC)	107062		2.86E-03 E	9.10E-02 I	9.10E-02 I	☒	0.12 C	0.069 C	0.035 C	63 C	7 C	0.3 E	0.01 E
1,1-Dichloroethylene	75354	9.00E-03 I		6.00E-01 I	1.75E-01 I	☒	0.044 C	0.036 C	0.0053 C	9.5 C	1.1 C	0.04 E	0.03 E
1,2-Dichloroethylene (cis)	156592	1.00E-02 H				☒	61 N	37 N	14 N	20000 N	780 N	1500 E	0.2 E
1,2-Dichloroethylene (trans)	156605	2.00E-02 I				☒	120 N	73 N	27 N	41000 N	1600 N	3600 E	0.3 E
1,2-Dichloroethylene (mixture)	540590	9.00E-03 H				☒	55 N	33 N	12 N	18000 N	700 N		
2,4-Dichlorophenol	120832	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	4800 S	0.5 E
2,4-Dichlorophenoxyacetic Acid (2,4-D)	94757	1.00E-02 I				☒	61 N	37 N	14 N	20000 N	780 N	7000 S	1.7 N
4-(2,4-Dichlorophenoxy)butyric Acid	94826	8.00E-03 I					290 N	29 N	11 N	16000 N	630 N		
1,2-Dichloropropane	78875		1.14E-03 I	6.80E-02 H		☒	0.16 C	0.092 C	0.046 C	84 C	9.4 C	11 E	0.02 E
2,3-Dichloropropanol	616239	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N		
1,3-Dichloropropene	542756	3.00E-04 I	5.71E-03 I	1.75E-01 H	1.30E-01 H	☒	0.077 C	0.048 C	0.018 C	33 C	3.7 C	0.1 E	0.001 E
Dichlorvos	62737	5.00E-04 I	1.43E-04 I	2.90E-01 I			0.23 C	0.022 C	0.011 C	20 C	2.2 C	3.5 C	0.00072 C
Dicofol	115322			4.40E-01 W			0.15 C	0.014 C	0.0072 C	13 C	1.5 C		
Dicyclopentadiene	77736	3.00E-02 H	5.71E-05 A			☒	0.42 N	0.21 N	41 N	61000 N	2300 N		
Dieldrin	60571	5.00E-05 I		1.60E+01 I	1.61E+01 I		0.0042 C	0.00039 C	0.0002 C	0.36 C	0.04 C	2 E	0.001 E
Diesel emissions			1.43E-03 I				52 N	5.2 N					
Diethyl phthalate	84662	8.00E-01 I					29000 N	2900 N	1100 N	1E+06 N	63000 N	520 E	110 E
Diethylene glycol, monobutyl ether	112345		5.71E-03 H				210 N	21 N					
Diethylene glycol, monoethyl ether	111900	2.00E+00 H					73000 N	7300 N	2700 N	1E+06 N	160000 N		
Diethylformamide	617845	1.10E-02 H					400 N	40 N	15 N	22000 N	860 N		
Di(2-ethylhexyl)adipate	103231	6.00E-01 I		1.20E-03 I			56 C	5.2 C	2.6 C	4800 C	530 C		
Diethylstilbestrol	56531			4.70E+03 H			0.00001 C	1E-06 C	7E-07 C	0.0012 C	0.00014 C		
Difenzoquat (Avenge)	43222486	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N		
Diflubenzuron	35367385	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N		

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSi kg-d/mg	V O C	Risk-Based Concentrations					Soil Screening Levels- Transfers from Soil to:	
							Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion		Air mg/kg	Groundwater mg/kg
										Industrial mg/kg	Residential mg/kg		
Endrin	72208	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	16 S	0.4 E
Epichlorohydrin	106898	2.00E-03 H	2.86E-04 I	9.90E-03 I	4.20E-03 I		6.8 C	1 N	0.32 C	580 C	65 C		
1,2-Epoxybutane	106887		5.71E-03 I				210 N	21 N					
Ethephon (2-chloroethyl phosphonic acid)	16672870	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N		
Ethion	563122	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N		
2-Ethoxyethanol acetate	111159	3.00E-01 A					11000 N	1100 N	410 N	610000 N	23000 N		
2-Ethoxyethanol	110805	4.00E-01 H	5.71E-02 I				15000 N	210 N	540 N	820000 N	31000 N		
Ethyl acrylate	140885			4.80E-02 H			1.4 C	0.13 C	0.066 C	120 C	13 C		
EPTC (S-Ethyl dipropylthiocarbamate)	759944	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N		
Ethyl ether	60297	2.00E-01 I				☒	1200 N	730 N	270 N	410000 N	16000 N		
Ethyl methacrylate	97632	9.00E-02 H					3300 N	330 N	120 N	180000 N	7000 N		
Ethyl acetate	141786	9.00E-01 I					33000 N	3300 N	1200 N	1E+06 N	70000 N		
Ethylbenzene	100414	1.00E-01 I	2.86E-01 I			☒	1300 N	1000 N	140 N	200000 N	7800 N	260 E	5 E
Ethylene cyanohydrin	109784	3.00E-01 H					11000 N	1100 N	410 N	610000 N	23000 N		
Ethylene diamine	107153	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N		
Ethylene glycol	107211	2.00E+00 I					73000 N	7300 N	2700 N	1E+06 N	160000 N		
Ethylene glycol, monobutyl ether	111762		5.71E-03 H				210 N	21 N					
Ethylene oxide	75218			1.02E+00 H	3.50E-01 H		0.066 C	0.018 C	0.0031 C	5.6 C	0.63 C		
Ethylene thiourea (ETU)	96457	8.00E-05 I		1.19E-01 H			0.57 C	0.053 C	0.027 C	48 C	5.4 C		
Ethyl p-nitrophenyl phenylphosphorothioate	2104645	1.00E-05 I					0.37 N	0.037 N	0.014 N	20 N	0.78 N		
Ethyl nitrosourea	759739			1.40E+02 W			0.00048 C	0.00005 C	0.00002 C	0.041 C	0.0046 C		
Ethylphthalyl ethyl glycolate	84720	3.00E+00 I					110000 N	11000 N	4100 N	1E+06 N	230000 N		
Express	10120	8.00E-03 I					290 N	29 N	11 N	16000 N	630 N		
Fenamiphos	22224926	2.50E-04 I					9.1 N	0.91 N	0.34 N	510 N	20 N		
Fluometuron	2164172	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N		
Fluoride	7782414	6.00E-02 I					2200 N	220 N	81 N	120000 N	4700 N		
Fluoridone	59756604	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N		
Flurprimidol	56425913	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N		
Flutolanil	66332965	6.00E-02 I					2200 N	220 N	81 N	120000 N	4700 N		
Fluvalinate	69409945	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N		
Folpet	133073	1.00E-01 I		3.50E-03 I			19 C	1.8 C	0.9 C	1600 C	180 C		
Fomesafen	72178020			1.90E-01 I			0.35 C	0.033 C	0.017 C	30 C	3.4 C		
Fonofos	944229	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N		
Formaldehyde	50000	2.00E-01 I			4.55E-02 I		7300 N	0.14 C	270 N	410000 N	16000 N		
Formic Acid	64186	2.00E+00 H					73000 N	7300 N	2700 N	1E+06 N	160000 N		
Fosetyl-al	39148248	3.00E+00 I					110000 N	11000 N	4100 N	1E+06 N	230000 N		
Furan	110009	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N		
Furazolidone	67458			3.80E+00 H			0.018 C	0.0016 C	0.00083 C	1.5 C	0.17 C		
Furfural	98011	3.00E-03 I	1.43E-02 A				110 N	52 N	4.1 N	6100 N	230 N		
Furium	531828			5.00E+01 H			0.0013 C	0.00013 C	0.00006 C	0.11 C	0.013 C		
Furmecycloz	60568050			3.00E-02 I			2.2 C	0.21 C	0.11 C	190 C	21 C		
Glufosinate-ammonium	77182822	4.00E-04 I					15 N	1.5 N	0.54 N	820 N	31 N		

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Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSi kg-d/mg	V O C	Risk-Based Concentrations					Soil Screening Levels- Transfers from Soil to:	
							Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion		Air mg/kg	Groundwater mg/kg
										Industrial mg/kg	Residential mg/kg		
Mancozeb	8018017	3.00E-02 H					1100 N	110 N	41 N	61000 N	2300 N		
Maneb	12427382	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N		
Manganese and compounds	7439965	5.00E-03 I	1.43E-05 I				180 N	0.052 N	6.8 N	10000 N	390 N		
Mephosfolan	950107	9.00E-05 H					3.3 N	0.33 N	0.12 N	180 N	7 N		
Mepiquat chloride	24307264	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N		
Mercury (inorganic)	7439976	3.00E-04 H	8.57E-05 H				11 N	0.31 N	0.41 N	610 N	23 N	7 E	3 E
Mercury (methyl)	22967926	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N		
Merphos	150505	3.00E-05 I					1.1 N	0.11 N	0.041 N	61 N	2.3 N		
Merphos oxide	78488	3.00E-05 I					1.1 N	0.11 N	0.041 N	61 N	2.3 N		
Metalaxyl	57837191	6.00E-02 I					2200 N	220 N	81 N	120000 N	4700 N		
Methacrylonitrile	126987	1.00E-04 I	2.00E-04 A				3.7 N	0.73 N	0.14 N	200 N	7.8 N		
Methamidophos	10265926	5.00E-05 I					1.8 N	0.18 N	0.068 N	100 N	3.9 N		
Methanol	67561	5.00E-01 I					18000 N	1800 N	680 N	1E+06 N	39000 N		
Methidathion	950378	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N		
Methomyl	16752775	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N		
Methoxychlor	72435	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	41 S	62 E
2-Methoxyethanol acetate	110496	2.00E-03 A					73 N	7.3 N	2.7 N	4100 N	160 N		
2-Methoxyethanol	109864	1.00E-03 H	5.71E-03 I				37 N	21 N	1.4 N	2000 N	78 N		
2-Methoxy-5-nitroaniline	99592			4.60E-02 H			1.5 C	0.14 C	0.069 C	120 C	14 C		
Methyl acetate	79209	1.00E+00 H					37000 N	3700 N	1400 N	1E+06 N	78000 N		
Methyl acrylate	96333	3.00E-02 A					1100 N	110 N	41 N	61000 N	2300 N		
2-Methylaniline hydrochloride	636215			1.80E-01 H			0.37 C	0.035 C	0.018 C	32 C	3.5 C		
2-Methylaniline	95534			2.40E-01 H			0.28 C	0.026 C	0.013 C	24 C	2.7 C		
Methyl chlorocarbonate	79221	1.00E+00 W					37000 N	3700 N	1400 N	1E+06 N	78000 N		
4-(2-Methyl-4-chlorophenoxy) butyric acid	94815	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N		
2-Methyl-4-chlorophenoxyacetic acid	94746	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N		
2-(2-Methyl-14-chlorophenoxy)propionic aci	93652	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N		
Methylcyclohexane	108872		8.57E-01 H				31000 N	3100 N				60 S	1500 N
Methylene bromide	74953	1.00E-02 A					61 N	37 N	14 N	20000 N	780 N		
Methylene chloride	75092	6.00E-02 I	8.57E-01 H	7.50E-03 I	1.64E-03 I		4.1 C	3.8 C	0.42 C	760 C	85 C	7 E	0.01 E
4,4'-Methylene bis(2-chloroaniline)	101144	7.00E-04 H		1.30E-01 H	1.30E-01 H		0.52 C	0.048 C	0.024 C	44 C	4.9 C		
4,4'-Methylenebisbenzeneamine	101779			2.50E-01 W			0.27 C	0.025 C	0.013 C	23 C	2.6 C		
4,4'-Methylene bis(N,N'-dimethyl)aniline	101611			4.60E-02 I			1.5 C	0.14 C	0.069 C	120 C	14 C		
4,4'-Methylenediphenyl isocyanate	101688		5.71E-06 I				0.035 N	0.021 N					
Methyl ethyl ketone	78933	6.00E-01 I	2.86E-01 I				1900 N	1000 N	810 N	1E+06 N	47000 N		
Methyl hydrazine	60344			1.10E+00 W			0.061 C	0.0057 C	0.0029 C	5.2 C	0.58 C		
Methyl isobutyl ketone	108101	8.00E-02 H	2.29E-02 A				2900 N	84 N	110 N	160000 N	6300 N		
Methyl methacrylate	80626	8.00E-02 H					2900 N	290 N	110 N	160000 N	6300 N		
2-Methyl-5-nitroaniline	99558			3.30E-02 H			2 C	0.19 C	0.096 C	170 C	19 C		
Methyl parathion	298000	2.50E-04 I					9.1 N	0.91 N	0.34 N	510 N	20 N	28 S	0.041 N
2-Methylphenol (o-cresol)	95487	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	12000 S	6 E
3-Methylphenol (m-cresol)	103394	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N		

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							Tap Water	Ambient Air	Fish	Soil Ingestion		Air mg/kg	Groundwater mg/kg
							µg/L	µg/m3	mg/kg	Industrial mg/kg	Residential mg/kg		
NuStar	85509199	7.00E-04					26 N	2.6 N	0.95 N	1400 N	55 N		
Octabromodiphenyl ether	32536520	3.00E-03					110 N	11 N	4.1 N	6100 N	230 N		
Octahydro-1357-tetranitro-1357-tetrazocine	2691410	5.00E-02					1800 N	180 N	68 N	100000 N	3900 N		
Octamethylpyrophosphoramide	152169	2.00E-03					73 N	7.3 N	2.7 N	4100 N	160 N		
Oryzalin	19044883	5.00E-02					1800 N	180 N	68 N	100000 N	3900 N		
Oxadiazon	19666309	5.00E-03					180 N	18 N	6.8 N	10000 N	390 N		
Oxamyl	23135220	2.50E-02					910 N	91 N	34 N	51000 N	2000 N		
Oxyfluorfen	42874033	3.00E-03					110 N	11 N	4.1 N	6100 N	230 N		
Paclobutrazol	76738620	1.30E-02					470 N	47 N	18 N	27000 N	1000 N		
Paraquat	1910425	4.50E-03					160 N	16 N	6.1 N	9200 N	350 N		
Parathion	56382	6.00E-03					220 N	22 N	8.1 N	12000 N	470 N	110 s	3.9 N
Pebulate	1114712	5.00E-02					1800 N	180 N	68 N	100000 N	3900 N		
Pendimethalin	40487421	4.00E-02					1500 N	150 N	54 N	82000 N	3100 N		
Pentabromo-6-chloro cyclohexane	87843			2.30E-02			2.9 C	0.27 C	0.14 C	250 C	28 C		
Pentabromodiphenyl ether	32534819	2.00E-03					73 N	7.3 N	2.7 N	4100 N	160 N		
Pentachlorobenzene	608935	8.00E-04				☒	4.9 N	2.9 N	1.1 N	1600 N	63 N	570 N	48 N
Pentachloronitrobenzene	82688	3.00E-03		2.60E-01		☒	0.041 C	0.024 C	0.012 C	22 C	2.5 C		
Pentachlorophenol	87865	3.00E-02		1.20E-01			0.56 C	0.052 C	0.026 C	48 C	5.3 C	7.9 C	0.2 E
Permethrin	52645531	5.00E-02					1800 N	180 N	68 N	100000 N	3900 N		
Phenmedipham	13684634	2.50E-01					9100 N	910 N	340 N	510000 N	20000 N		
Phenol	108952	6.00E-01					22000 N	2200 N	810 N	1E+06 N	47000 N	21000 s	49 E
m-Phenylenediamine	108452	6.00E-03					220 N	22 N	8.1 N	12000 N	470 N		
p-Phenylenediamine	106503	1.90E-01					6900 N	690 N	260 N	390000 N	15000 N		
Phenylmercuric acetate	62384	8.00E-05					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
2-Phenylphenol	90437			1.94E-03			35 C	3.2 C	1.6 C	3000 C	330 C		
Phorate	298022	2.00E-04					7.3 N	0.73 N	0.27 N	410 N	16 N		
Phosmet	732116	2.00E-02					730 N	73 N	27 N	41000 N	1600 N		
Phosphine	7803512	3.00E-04	8.57E-06				11 N	0.031 N	0.41 N	610 N	23 N		
Phosphorus (white)	7723140	2.00E-05					0.73 N	0.073 N	0.027 N	41 N	1.6 N		
p-Phthalic acid	100210	1.00E+00					37000 N	3700 N	1400 N	1E+06 N	78000 N		
Phthalic anhydride	85449	2.00E+00	3.43E-02				73000 N	130 N	2700 N	1E+06 N	160000 N		
Picloram	1918021	7.00E-02					2600 N	260 N	95 N	140000 N	5500 N		
Pirimiphos-methyl	29232937	1.00E-02					370 N	37 N	14 N	20000 N	780 N		
Polybrominated biphenyls		7.00E-06		8.90E+00			0.0076 C	0.0007 C	0.00035 C	0.64 C	0.072 C		
Polychlorinated biphenyls (PCBs)	1336363			7.70E+00			0.0087 C	0.00081 C	0.00041 C	0.74 C	0.083 C		8.2 E
Aroclor 1016	12674112	7.00E-05					2.6 N	0.26 N	0.095 N	140 N	5.5 N		
Aroclor 1254	11097691	2.00E-05					0.73 N	0.073 N	0.027 N	41 N	1.6 N		
Polychlorinated terphenyls (PCTs)				4.50E+00			0.015 C	0.0014 C	0.0007 C	1.3 C	0.14 C		
Polynuclear aromatic hydrocarbons													
Acenaphthene	83329	6.00E-02					2200 N	220 N	81 N	120000 N	4700 N	120 s	200 E
Anthracene	120127	3.00E-01					11000 N	1100 N	410 N	610000 N	23000 N	6.8 s	4300 E
Benzo[a]anthracene	56553			7.30E-01	6.10E-01		0.092 C	0.01 C	0.0043 C	7.8 C	0.88 C	27 s	0.7 E

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Sodium azide	26628228	4.00E-03					150 N	15 N	5.4 N	8200 N	310 N		
Sodium diethyldithiocarbamate	148185	3.00E-02		2.70E-01 H			0.25 C	0.023 C	0.012 C	21 C	2.4 C		
Sodium fluoroacetate	62748	2.00E-05					0.73 N	0.073 N	0.027 N	41 N	1.6 N		
Sodium metavanadate	13718268	1.00E-03 H					37 N	3.7 N	1.4 N	2000 N	78 N		
Strontium, stable	7440246	6.00E-01					22000 N	2200 N	810 N	1E+06 N	47000 N		
Strychnine	57249	3.00E-04					11 N	1.1 N	0.41 N	610 N	23 N		
Styrene	100425	2.00E-01	2.86E-01			☒	1600 N	1000 N	270 N	410000 N	16000 N	1400 E	2 E
Systhane	88671890	2.50E-02					910 N	91 N	34 N	51000 N	2000 N		
2,3,7,8-TCDD (dioxin)	1746016			1.56E+05 H	1.16E+05 H		4E-07 C	5E-08 C	C	4E-05 C	4E-06 C		
Tebuthiuron	34014181	7.00E-02					2600 N	260 N	95 N	140000 N	5500 N		
Temephos	3383968	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N		
Terbacil	5902512	1.30E-02					470 N	47 N	18 N	27000 N	1000 N		
Terbufos	13071799	2.50E-05 H					0.91 N	0.091 N	0.034 N	51 N	2 N		
Terbutryn	886500	1.00E-03					37 N	3.7 N	1.4 N	2000 N	78 N		
1,2,4,5-Tetrachlorobenzene	95943	3.00E-04				☒	1.8 N	1.1 N	0.41 N	610 N	23 N	91 N	0.69 N
1,1,1,2-Tetrachloroethane	630206	3.00E-02		2.60E-02	2.59E-02	☒	0.41 C	0.24 C	0.12 C	220 C	25 C		
1,1,2,2-Tetrachloroethane	79345			2.00E-01	2.03E-01	☒	0.052 C	0.031 C	0.016 C	29 C	3.2 C	0.4 E	0.001 E
Tetrachloroethylene (PCE)	127184	1.00E-02		5.20E-02 E	2.03E-03 E	☒	1.1 C	3.1 C	0.061 C	110 C	12 C	11 E	0.04 E
2,3,4,6-Tetrachlorophenol	58902	3.00E-02					1100 N	110 N	41 N	61000 N	2300 N		
p,a,a,a-Tetrachlorotoluene	5216251			2.00E+01 H		☒	0.00053 C	0.00031 C	0.00016 C	0.29 C	0.032 C		
Tetrachlorovinphos	961115	3.00E-02		2.40E-02 H			2.8 C	0.26 C	0.13 C	240 C	27 C		
Tetraethyldithiopyrophosphate	3689245	5.00E-04					18 N	1.8 N	0.68 N	1000 N	39 N		
Lead (tetraethyl)	78002	1.00E-07					0.0037 N	0.00037 N	0.00014 N	0.2 N	0.0078 N	0.00068 N	0.000034 N
Thallic oxide	1314325	7.00E-05 W					2.6 N	0.26 N	0.095 N	140 N	5.5 N		
Thallium													0.4 E
Thallium acetate	563688	9.00E-05					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium carbonate	6533739	8.00E-05					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thallium chloride	7791120	8.00E-05					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thallium nitrate	10102451	9.00E-05					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium selenite	12039520	9.00E-05 W					3.3 N	0.33 N	0.12 N	180 N	7 N		
Thallium sulfate	7446186	8.00E-05					2.9 N	0.29 N	0.11 N	160 N	6.3 N		
Thiobencarb	28249776	1.00E-02					370 N	37 N	14 N	20000 N	780 N		
2-(Thiocyanomethylthio)-benzothiazole	21564170	3.00E-02 H					1100 N	110 N	41 N	61000 N	2300 N		
Thiofanox	39196184	3.00E-04 H					11 N	1.1 N	0.41 N	610 N	23 N		
Thiophanate-methyl	23564058	8.00E-02					2900 N	290 N	110 N	160000 N	6300 N		
Thiram	137268	5.00E-03					180 N	18 N	6.8 N	10000 N	390 N		
Tin and compounds		6.00E-01 H					22000 N	2200 N	810 N	1E+06 N	47000 N		
Toluene	108883	2.00E-01	1.14E-01			☒	750 N	420 N	270 N	410000 N	16000 N	520 E	5 E
Toluene-2,4-diamine	95807			3.20E+00 H			0.021 C	0.002 C	0.00099 C	1.8 C	0.2 C		
Toluene-2,5-diamine	95705	6.00E-01 H					22000 N	2200 N	810 N	1E+06 N	47000 N		
Toluene-2,6-diamine	823405	2.00E-01 H					7300 N	730 N	270 N	410000 N	16000 N		
p-Toluidine	106490			1.90E-01 H			0.35 C	0.033 C	0.017 C	30 C	3.4 C		

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							Tap Water	Ambient Air	Fish	Soil Ingestion		Air	Groundwater
										Industrial	Residential		
							µg/L	µg/m3	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
p-Xylene	106423		8.57E-02 w			☒	520 n	310 n				1000 s	220 m
Xylene (mixed)	1330207	2.00E+00 i				☒	12000 n	7300 n	2700 n	1E+06 n	160000 n	320 e	74 e
Zinc	7440666	3.00E-01 i					11000 n	1100 n	410 n	610000 n	23000 n		42000 e
Zinc phosphide	1314847	3.00E-04 i					11 n	1.1 n	0.41 n	610 n	23 n		
Zineb	12122677	5.00E-02 i					1800 n	180 n	68 n	100000 n	3900 n		

K. SUPPLEMENTAL DATA

K.1. Field Log Book

**K.2. EG&G Mound Health Physics
Soil Screening Results**

K.3. Chain of Custody Forms

K.3.1. Chemical Analysis

K.3.2. Radiological Analysis

K.1. FIELD LOG BOOK

EG&G MOUND

BUILDING 21 AND SURROUNDING SOILS

LOGBOOK PROPERTY OF:

ROY F. WESTON, INC.

11840-D KEMPERLEND DR.

CINCINNATI, OH 45240

CONTACT LIST:

3620	JEFF TACKET - HEALTH PHYSICS TECH
4410	MIKE O'DONNAN - HEALTH PHYSICS SUPERVISOR
5052	ERIC HORSTMAN - D&D PROJECT MANAGER
4364	ROD LONG - CONSTRUCTION INSPECTOR
3756	DENNES DANIEL - CONSTRUCTION INSPECTION SUPERVISOR

EMERGENCY : 865-4040 (TRAILER OR MOBILE PHONE)
911 (MOUND PHONE)

A. SPERRY 16 AUGUST 94

- 0700 ARRIVE ON SITE, PREPARE FOR TODAY'S ACTIVITIES
- 0710 MEET WITH ERIC HORSTMAN (DID PROJECT MANAGER) AND MARK DAUBENBERG (DID) TO REVIEW DID WORK PERMIT.
- 0750 MEETING ADJOURNED. SAIC WILL BE GETTING HEALTH & SAFETY SIGN OFF ON THE DID WORK PERMIT BEFORE WE CAN BEGIN
- 0800 MEET WITH JEFF TACKETT (HEALTH PHYSICS) TO REVIEW RADIATION WORK PERMIT (RWP)
- 0815 MEETING ADJOURNED. WE ARE PREPARED FOR FIELD WORK WITH THE ACCEPTANCE OF THE FINAL DID WORK PERMIT.
- 0900 CONDUCT DAILY HHS BRIEFING - TOPICS:
1. HAZARD, SAFETY GLASSES, STEEL TOES
 2. HEAT STRESS
 3. BIOLOGICAL HAZARDS
 4. PHYSICAL HAZARDS
- NOTE: REVIEW OF HASP WAS CONDUCTED ON 11 AUGUST 94. ALL ASPECTS OF THE PLAN WERE COVERED THOROUGHLY AND COMPLETELY. ATTENDEES WERE DON SCHILLING, SCOT PETERSON, JERRY GILL. MEETING WAS CONDUCTED BY ANDREW SPERRY - ACTING SHSC. THE FIELD COPY OF THE HASP WAS SIGNED AT THIS TIME BY ALL ATTENDEES.
- 0940 ARRIVE BLDG #1. BEGIN STAKE/STAKE ACTIVITIES
- 0950 AFTER MEETING WITH ROY MOWEN, THE FOLLOWING ITEMS NEED TO BE ADDRESSED
1. TRAILER TIE DOWNS
 2. ELECTRIC TO TRAILER
 3. PHONE TO TRAILER
 4. BLOW TO CLOSURE UP TRAILER
- 1000 BEGIN LOCATION OF SOIL GRIDS AND DRIVING STAKES
- 1040 STOP GRADING. RETURN TO TRAILER.
- 1710 WORK COMPLETE FOR TODAY.

Andrew R. Sperry
16 Aug 94

A. SPERRY 17 AUGUST 74

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0730 HIS TAILGATE MEETING CONDUCTED BY A. SPERRY

1. TACKS, CHISGERS

2. SURF FOOTING ON SLOPES

3. HEAT STRESS

4. UV PROTECTION

5. HARD HAT, STEEL TOE, SAFETY GLASSES

0750
0800 BEGIN GRIDGING ACTIVITIES FOR TODAY1700 GRIDGING WORK COMPLETE FOR TODAY. $\frac{2}{3}$ OF TOTAL GRIDS HAVE
BEEN STAKED. GRIDS WILL BE COMPLETED 18 AUGUST 74.

A. SPERRY

R.S.

17 AUGUST 74

A. SPERRY 18 AUGUST 74

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES

0720 HIS TAILGATE MEETING CONDUCTED BY A. SPERRY

1. TACKS, CHISGERS

2. SLEDS, TRAPS & FALLS / USE OF SURF FOOTING

3. HEAT STRESS

4. LEVEL D PPE: HARD HAT, SAFETY GLASSES, STEEL TOE

5. LOCATION OF SAFETY EQUIPMENT

0745 CONTINUE GRIDGING ACTIVITIES

1430 completed the physical gridding (only some labeling left to do)

1445 started the micro-R readings with the eastern grids

1630 stopped micro-R for the day ~ $\frac{1}{5}$ completed. DJS

A. SPERRY

R.S.

18 AUGUST 74

A. SPARK: 22 August 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0715 H&S BRIEFING:

① H&S STRESS

② LEVEL D PPE REMINDER - HARD HAT, STEEL TOES, SAFETY GLASSES

③ Ticks, Chiggers, Wasps

④ BIOLOGICAL HAZARDS

0930 We will continue Micro-R scan of soil cores today.

1700 WORK COMPLETED FOR TODAY. MICRO-R SCAN COMPLETED ON ALL CORES. STAKES DRIVEN TO MARK CENTERS OF EACH CORE TO BE SAMPLED. ALL CORNERS AND CENTER PAINTED OR FLAGGED BLUE.

A. SPARK: 23 August 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0710 H&S BRIEFING

① H&S STRESS

② PROPER USE OF LADDERS

③ LEVEL D PPE

④ LOCATION OF EMERGENCY EQUIPMENT

⑤ EMERGENCY ROUTE E

0730 BEGIN WORK FOR TODAY. WE WILL BE GRIDDING BLDG 21 EXTERIOR.

1000 ROY MOWEN TAKES MEASUREMENT FROM TOP TO BOTTOM INSIDE BLDG 21 AND DETERMINES A 14 FT HEIGHT

1015 HEALTH AND SAFETY INSPECTORS SANDY GIBLER AND DANIEL GARRESON STOP BY FOR A SAFETY AUDIT. THEY WERE ACCOMPANIED BY BLDG 21 MANAGER CHESTER SMITH. ALL ASPECTS OF H&S WERE GOOD. THERE WAS A REQUEST THAT A "HARD HAT / SAFETY GLASSES REQUIRED BEYOND THIS POINT" SIGN BE POSTED. ALSO, SANDY WILL TAKE UP THE ISSUE OF ~~US~~ ^{THE} US BEING REQUIRED TO WEAR MOUND-ISSUE PPE (GREENS) FOR LEVEL D (MODIFIED) WORK WITH ERIC HORSTMAN AND MENE O'DONAHUE

1035 CONTINUE EXTERIOR BUILDING 21 GRIDDING. BEGINNING WITH WEST END OF BLDG 21.

1215 MEET WITH GORDON HORN TO DISCUSS PROJECT STATUS. HE REQUESTED THE FOLLOWING:

- WRITTEN STATUS CHANGES
- TABULATION OF ALL SAMPLES (SOIL) WHICH FALL ON ASPHALT, FLOORS, IN DRAINAGE DITCH AND CAN BE REACHED WITH GEDRAGE

NOTE: I WILL ADDRESS ~~THESE~~ ^{THESE} POSSIBLE STATUS CHANGE ISSUES HERE ① MOUND WILL REQUIRE US TO WEAR MOUND P.P.E., INCLUDING RESPIRATORS, GLOVES, BOOTS, AND POSSIBLY TWO SETS OF GARMENTS -

A. SARTY 23 AUGUST 94

"PRIVATE CLOTHING" UNDERWEAR AND PAPER SUITS ON THE EXTERIOR. ALL CLOTHING WILL BE PROVIDED BY MOUNA. HOWEVER, PRIVATE CLOTHING WILL NOT BE AVAILABLE UNTIL NEXT WEEK (END OF) AND COULD DELAY FIELD WORK IF WE FINISH EXTERIOR BUILDING SAMPLING.

② IN ORDER TO MAKE THESE CHANGES OF CLOTHING, MOUNA HAS PROVIDED A SMALL TRAILER AS AN ON-SITE CHANGE ROOM. THIS WILL FACILITATE THE DAILY CLOTHING CHANGES AND DECONTAMINATION (PERSONNEL). ③ DURING THE HES AUDIT THIS MORNING, SARTY GUTER SAID WE WOULD NOT TO WEAR MOUNA "GREENS" OR PAPER SUITS DURING EXTERNAL BUILDING WORK FOR SOIL SAMPLING. THOSE WILL BE PROVIDED BY MOUNA FOR OUR DAILY USE, BUT MAY REQUIRE ADDITIONAL TIME EACH DAY TO CHANGE IN AND OUT OF.

1700 2 SIDES OF BUILDING 21 GRIDDING, COMPLETE - THE WEST AND SOUTH WALLS. BOTH WALLS HAVE BEEN LABELED AND NUMBERED.

A. SARTY 24 AUGUST 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES
0720 HES BRIEFING

- ① LEVEL D PPE - HARD HAT, SAFETY GLASSES, SHOE TIES
- ② SAFE USE OF LADDERS
- ③ BIOLOGICAL HAZARDS
- ④ HEAT STRESS - FLUIDS & BREAKS

0740 BEGIN GRIDDING, ACTIVATED FOR THE DAY.

1200 GRIDDING COMPLETE FOR ENTIRE BUILDING. ALL LOCATIONS HAVE BEEN MARKED AND NUMBERED. BEGIN MICRO-R SCAN OF BUILDING EXTERIOR.

1700 MICRO-R COMPLETED ON SOUTH & WEST WALLS OF BUILDING 21. REMAINING WALLS WILL BE COMPLETED 25 AUGUST 94.

Audrey R. Sarty

A. SPERRY 25 AUGUST 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0715 HHS BRIEFING

- ① LANDERS USED SAFETY LEVEL GROUND
- ② BIOLOGICAL HAZARDS - BUGS, WASPS
- ③ HEAT STRESS - MARK, ORANGE
- ④ UV PROTECTION
- ⑤ SLIPS, TRIPS AND FALLS

0730 GO TO SITE FOR VISUAL SKETCHES OF NORTH AND EAST WALLS.

0830 LEAVE SITE FOR BASE. WAGGONER SUMNER & CANNON MEETING CALLED BY ERIC HORSTMAN.

0900 MEETING ATTENDEES: ERIC HORSTMAN (DSD), RICH BAUER (DSD), AMY SNYDER (BWSIC), JOE ZIMMERMAN (BWSIC), KERBY BURTON (BWSIC), JERRY GELS (BWSIC), ANDY SPERRY (WESTON). MEETING NOTES AND SUMMARY SUMMARIZED BY JERRY GELS TO BE SUBMITTED TO EGIG AND KEPT IN PROJECT FILES.

1050 RETURN TO PLANT FOR MEETING FOLLOW-UP WORK

1400 START MICRO-R SCANNING ON THE NORTH AND EAST WALLS

1700 MICRO-R SCAN COMPLETE FOR INTERIOR BUILDING EXTERIOR WORK COMPLETE FOR WEEK.

Andrew R. Sperry

25 AUGUST 94

A. SPERRY 29 AUGUST 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0730 HHS BRIEFING

- ① LEVEL D PPE - HARD HATS, SAFETY GURSELS, STEEL TOES
- ② LOCATION OF SAFETY AND FIRST AID EQUIPMENT
- ③ HEAT STRESS - BREAKS, FLUIDS
- ④ LADDER USE
- ⑤ CAUTION IN ROADWAYS

0800 BEGIN WORK FOR TODAY. WORK WILL CONSIST OF SAMPLING BUILDING 21 EXTERIOR USING ALPHA SCINTILLATOR AND G-M PANCAKE.

1700 BUILDING 21 EXTERIOR SAMPLING COMPLETE. WE ARE NOW ON HOLD FOR FURTHER NOTICE FROM ERIC HORSTMAN AS TO THE ARRIVAL OF THE APPROPRIATE PPE FOR WORK IN SIDE BUILDING 21.

Andrew R. Sperry

29 AUGUST 94

A. SPERRY 06 SEPTEMBER 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S FIELD ACTIVITIES.
0730 H'S BRIEFING:

- ① LEVEL C PROTECTION - RESPIRATORS, MODEST CLOTHING, TYVEK, BOOTS, DOUBLE GLOVES, DUCT TAPE
- ② LADDERS - SAFE USE
- ③ FOLLOW HP DIRECTIONS
- ④ SAFE RESPIRATOR USE

0900 PRE-ENTRY MEETING WITH FRANK HORTSMAN AND STEVE COLINS, DERRA DODDS, JEFF TACKETT, RAY MOSS.

- DED WORK PERMIT COMPLETE
- RESPIRATORS THERE
- RWP COMPLETE

10X PICK UP MODEST CLOTHING FROM HAZCO.

1200 BEGIN CHANGE OUT INTO LEVEL C PROTECTION.

1250 ENTER BUILDING 21 TO BEGIN GROUNDING WORK. WE WILL START WITH THE ROOM 2 WALLS.

1430 EXIT BLDG 21. ALMOST ALL OF ROOM 2 WALLS HAVE BEEN GROUNDED. COMPLETE GROUNDING ON BLDG 21 INTERIOR REMOVED.

Andrew

06 SEP 94

A. SPERRY 07 SEPTEMBER 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0715 H'S BRIEFING

- ① LEVEL C PROTECTION
- ② EXHAUSTION / HEAT STRESS
- ③ SAFE LADDER USE
- ④ USE OF GESTURES & HAND SIGNALS

0745 READY TO WORK, WAITING FOR PROPER RESPIRATORS

0815 CONTINUE BLDG 21 GROUNDING

1315 WAITING FOR SECOND SET OF RESPIRATORS

1400 CONTINUE GROUNDING ACTIVITIES.

1630 GROUNDING OF ENTIRE BLDG 21 AREA COMPLETE (INTERIOR).
TOMORROW WE WILL BEGIN SAMPLING.

1700 LEAVE SITE

Andrew

A. SPERRY 08 SEPTEMBER 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES

0715 H'S BRIEFING

- ① LEVEL C PPE
- ② LOCATION OF SAFETY EQUIPMENT
- ③ HEAT STRESS
- ④ SAFE DECON PRACTICES

0730 BEGIN SAMPLING BLDG 21 INTERIOR

1630 SAMPLING COMPLETE FOR THE DAY THROUGH 1/F (075).

SAMPLING WILL RESUME MONDAY MORNING WITH 1/F (076).

1700 COMPLETE WORK FOR THE WEEK

A. Sperry

9.8.94

A. SPERRY 12 SEPTEMBER 94

0700 ARRIVE ON SITE. PREPARE FOR TODAY'S ACTIVITIES.

0715 H'S BRIEFING:

- ① LEVEL C PPE
- ② CHECK TOOLS BEFORE USE
- ③ HEAT STRESS
- ④ SAFETY EQUIPMENT

0730 BEGIN / RESUME BLDG 21 SAMPLING WITH 1/F (076).

1700 SAMPLING COMPLETE THROUGH 1/F (165). APPROXIMATELY

1HR WAS LOST TODAY DUE TO RESPIRATORS NOT BEING
DELIVERED ON TIME.

A. Sperry

9.12.94

ANDREW R. SPERRY 9.13.94

0700 ARRIVE ON SITE.

0715 H/S BRIEFING

① LEVEL C PPE

② HEAT STRESS

③ PROPER USE OF TOOLS

④ SWITCH OUT MORE OFTEN

0800 RESUME SAMPLING WITH 1/F (166).

1700 SAMPLING COMPLETE FOR TODAY. 1/F COMPLETED.

TOTAL OF 260 SAMPLES.

Andrew R. Sperry
9.13.94

ANDREW R. SPERRY 9.14.94

0700 ARRIVE ON SITE

0715 H/S BRIEFING

① LEVEL C PPE

② HEAT STRESS

③ SAFE LADDER USE

④ PROPER ENTRY/EXIT FROM DUG 21: BUFFER ZONE.

0800 RESUME SAMPLING WITH 2/F (001)

1700 2/F COMPLETED 1/N COMPLETED THROUGH 020.

RESUME SAMPLING TOMORROW WITH 1/N.

Andrew R. Sperry
9.14.94

ANDREW R. SPERRY 9-15-94

0700 ARRIVE ON SITE

0715 HES BRIEFING

① SAFE USE OF LADDERS

② LEVEL C PPE

③ HEAT STRESS - BREAKS, WATER

④ LOCATION OF PPE

0800 RESUME SAMPLING WITH 1/N (021)

1700 COMPLETE SAMPLING THROUGH 1/N (885) PLUS
1/N 100 TO 1/N (110).

Andrew R. Sperry

9-15-94

ANDREW R. SPERRY 9-19-94

0700 ARRIVE AT SITE

0715 HES BRIEFING

① SAFE LADDER USE

② LEVEL C PPE

③ HEAT STRESS

④ CAREFUL USE OF NIGHT SCOPER

0800 RESUME SAMPLING WITH 1/N (686) AND 1/N (110).

1700 1/N COMPLETED. 1/5 COMPLETED THROUGHOUT 1/5 (040)
LEAVE SITE.

Andrew R. Sperry

9-19-94

A. SPERRY 9-20-94

0700 ARRIVE ON SITE

0715 QC DATA ENTRY

0725 H/S BRIEFING:

- ① Location of Safety Equipment
- ② Ladders Safety
- ③ Razor Blades Safety
- ④ Level C

0800 RESUME SAMPLING OF 1/S.

1700 1/S COMPLETED. TOMMOROW BEGIN 1/E.

A. SPERRY

9-20-94

A. SPERRY 9-21-94

0700 ARRIVE ON SITE

0715 H/S BRIEFING:

- ① USE OF RAZOR KNIVES
- ② LADDER USE
- ③ EMERGENCY EXIT
- ④ LEVEL C PPE

0800 RESUME SAMPLING WITH 1/E (COI)

1700 1/E & 1/W COMPLETED. THIS COMPLETES ROOM 1
EXCEPT FOR THE CEILING

A. SPERRY

9-21-94

A. SPATLEY 9-22-94

0700 ARRIVE ON SITE

0715 H/S BRIEFING

- ① HEAT STRESS
- ② LEVEL C PPE
- ③ LADDER SAFETY
- ④ CHECK TOOLS NP USE
- ⑤ LOCATION OF SAFETY EQUIPMENT

0800 RESUME SAMPLING WITH ROOM 2 (2/N).

1700 COMPLETED 2/N AND 2/E. FISH ROOM
2 MONDAY

A. Spatley

9-22-94

D. SCHILLING 9-23-94

0700 ARRIVE ON SITE

0720 H+S BRIEFING

- ① Heat Stress
- ② Uneven Ground
- ③ Rain?
- ④ Biohazards
- ⑤ Location of Safety Eq.

0740 Repainting/Marking of grid locations

0945 1/3 Data Entry + QC

1300 Finished with data entry

D. Schilling
9-23-94

A. SPERRY 9-26-94

0700 ARRIVE ON SITE

0715 H'S BRIEFING

- ① SAFE USE OF SCRAPERS
- ② LOCATION OF SAFETY EQUIPMENT
- ③ LEVEL C PPE
- ④ Cold STROGS

0730 RESUME SAMPLING WITH J/S & 2/W.

1700 ROOM 2 COMPLETE. FINISHED J/S & 2/W. BEGIN
CEILING 9-27-94.A. SPERRY
9-26-94

9-27-94

A. SPERRY 9-27-94

0700 ARRIVE AT SITE

0705 POWER SHUT OFF TO TRAILERS

0715 H'S BRIEFING

- ① PROPER LIFTING TECHNIQUES
- ② LADDER SAFETY
- ③ LEVEL C PPE

0730 BEGIN MOVING EQUIPMENT FROM TRAILERS FOR
TRAILER MOVEMENT.

0900 MEETING FOR ROOF SAMPLING - H'S SPECIFICATIONS.

- ANCHOR MUST WITHSTAND 5400 LB
- FALL PROTECTION W/IN 3 FT OF EDGE
- WSN REQUIRE JSHA
- WE WSN STAY 6 FT FROM EDGE OF ROOF
- MARK OFF 6 FT BOUNDARY

0915 MEETING COMPLETE - RETURN TO BLOC 21.

1100 SAMPLE 1/C & 2/C

1700 DONE FOR DCU

A. SPERRY

9-27-94

ANDREW SPERRY 9-22-94

1300

ARRIVE ON SITE

1310

HIS BRIEFING

① LADDER SAFETY

② RESTRICTED AREA

③ LEVEL D

④ LOCATION OF FIRST AID EQUIPMENT

1330

BEGIN LOCATING RESTRICTED AREA ON

BLDG 21 ROOF TOP

1700

LEAVE SITE FOR DM

A-1

9-22-94

A. SPERRY 9-29-94

0700

ARRIVE ON SITE

0715

HIS BRIEFING

① LADDER SAFETY

② LEVEL D

③ STAY OUT OF RESTRICTED AREA

④ USE OF SHUTTER

⑤ FIRST AID EQUIPMENT LOCATION

0945

BEGIN SPREADING BLDG 21 ROOF TOP

0900

SPREADING COMPLETE. BEGIN SAMPLING ROOF.

1215

SAMPLING COMPLETE. THIS FINISHES ALL SAMPLING

ACTIVITY FOR THE STRUCTURE OF BUILDING 21. SOIL

SAMPLING WILL BEGIN NEXT

1700

REMAINDER OF DAY SPENT PREPARING FOR SOIL SAMPLING

A-1

9-29-94

S. Pitner 10-3-94

ARL

0700 Arrive on site

0730 H&S briefing

- 1) caution around stairway of trailer
- 2) lifting & moving equipment
- 3) safety w/ hand auger
- 4) low branches
- 5) slips & trips
- 6) lugs
- 7) levels

8) location First Aid Equipment

0800 Clean up area around trailer

ARL

0845 Organization of trailers (setting stuff up)

0930 Air sample counting and enter data into penbase

0945 call office (Cincinnati)

1045 Meet w/ Rod Long about digging permit

1700 REMAINDER OF DAY SPENT ON DATA QC AND PREP. WORK FOR SOIL SAMPLING.

Arl
10-3-94

Andrew Sperry 4 OCTOBER 94

0700 ARRIVE ON SITE

0715 H&S BRIEFING

1. LEVEL D PPE
2. SAFE DECOR PROCEDURES WHEN DEALING WITH SOIL
3. SLIPS, TRIPS & FALLS
4. PROPER LIFTING TECHNIQUES

0800 PREPARE TO COLLECT SOIL SAMPLES.

1700 SAMPLES COLLECTED TODAY INCLUDE:

NW (001)

SE (001)

NE (001)

NE (003)

NE (004)

SE (006)

Arl
10-4-94

ANDREW SAMET 05 OCTOBER 94

0700 ARRIVE ON SITE

0715 HIS BRIEFING

① WALKING ON SLOPED AREAS

② PROPER LIFTING

③ WATCHING FOR TRAFFIC IN ROADWAY

④ LEVEL D PPE

0815 BEGIN SAMPLE COLLECTION FOR TODAY

1700 Collected ALL SAMPLES THROUGH GRID 26 EXCEPT
CENTER LOCATIONS.

Andrew

05 OCTOBER 94

ANDREW SAMET 06 OCTOBER 94

0700

ARRIVE AT SITE

0715

HIS BRIEFING

① SLOPES

② LOCATION OF SAFETY EQUIPMENT

③ LEVEL D PPE

④ TRAFFIC

0830

BEGIN SAMPLING

1000

COMPLETED ALL SAMPLES FOR GRIDS 1, 3, 4, 6, 7, 9, 11, 15,
17, 26. WE WILL SPEND REMAINDER OF DAY SHIPPING
SAMPLES.

1700

ALL SAMPLES STEPPED. DONE FOR TODAY.

Andrew

W. Scott Pinner 10-10-94

0700

Arrive on Site

0730

H+S briefing

- slips trips and falls
- use caution when using tools
- watch for traffic on the road
- use rubber gloves when handling soil
- Location of First Aid safety eqpt.
- Level D PPE

0745

Load equipment into van

1700

Collected 21 sample locations today on 9 grids.
Center points to be collected later

Analysis

P.S.

10-10-94

Darius J. Schilling 10-11-94

Arrive on Site

0700

0730

H+S briefing

- slips, trips, & falls (Rocks + slopes)
- care in using hand tools
- We are now closer to Bldg #21 so potential is greater of finding something, thus gloves are a must.
- First Aid equipment are in the Van
- Level D PPE

0800

Begin work for day

1100

Discuss entire shortage w/ Regina Preston & Gordon
Norm. Norm will go to Gordon tonight on
lab negligence

1700

21 sample locations completed today.

Analysis

P.S.

10-11-94

ANDREW SPERRY 10-12-94

0700

ARRIVE ON SITE

0715

HIS BRIEFING

① WORK ON SLOPED AREAS

② USE OF HAND TOOLS

③ LEVEL C PROTECTION

④ LOCATION OF SAFETY EQUIPMENT

0800

BEGIN SAMPLING

1030

MEETING WITH ROY MOWEN - WE WILL BE SAMPLING INSIDE THE ROPED-OFF AREA IN LEVEL C.

1200

BREAK FOR LUNCH. RWP IS BEING WORKED ON BY DATED DOGS FOR FIRST PART OF NEXT WEEK.

1700

COMPLETED GRIDS 40, 44, 47, 52, 53, 54, 61, 65, 66, 70, 71, 74, 76, 79

1830

INFORMED BY K. BATE THAT WE ARE SHUT DOWN FOR ALL SAMPLING FROM NOW UNTIL FURTHER NOTICE

Andrew Sperry

10-12-94

ANDREW SPERRY 10-13-94

0700

ARRIVE ON SITE

0715

HIS BRIEFING

① PROPER LIFTING TECHNIQUES

② SLIPS & FALLS - RAIN, PARKING LOT

③ SAFETY EQUIP. LOCATION

0730

WE WILL NOT BE SAMPLING TODAY. WE WILL ONLY BE PACKING & SHIPPING COOLERS

1300

5 COOLERS TO QUARTERS AND 4 COOLERS TO TMA PACKED. WAITING FOR HP REQUEST TO RELEASE

SAMPLES. ALSO, PER CONVERSATION WITH K. BATE,

I AM SHIPPING ALL RAD AND CISM. MOST OF THE SAMPLES BACK - OVM, CGI, METERAM, ALPHA SCINT, GM PANCAKE, MICRO-R, RAS I, RAS I COUNTER.

1500

SHIPMENT COMPLETE. WORK DONE FOR WEEK.

Andrew Sperry

10-13-94

Andrew Sperry 10-17-94

0700 ARRIVE ON SITE. NO WORK IN THE FIELD WILL BE CONDUCTED FOR BUILDING 21 UNTIL THE URINALYSIS LABORATORY IS RE-OPENED. TODAY WILL BE SPENT ON DATA QC AND PRESENTS.

0715 HHS BRIFFING

- SLIPS, TRIPS & FALLS
- LOCATION OF SAFETY EQUIPMENT / EXITS
- PROPER LIFTING TECHNIQUES

Continue demob work.

1700 Demob complete, return to office for stand-by

Andrew
10-17-94

W. Scott Pinner 11-28-94

0700

~~Stop~~ Arrive on site and begin to mobilize to continue Bldg 21 project

0745

Go to Fed Ex and pick up OVM and bloodborne pathogens kit

0815

Return to Trailer

- Fax A. Sperry a copy of Bldg 21 bottle inv.
- Call A. Sperry - still in Mon Morning meeting
- continue working w/ bottle sets

0945

Leave for hardware store and to pick up tools to mount fire extinguishers

1100

Return to site & talk to A. Sperry about bottle sets

1200

lunch

1230

return to site and begin to mount fire extinguishers & Sperry arrives on site and we continue to mobilize

1400

1700

Leave Site for Day

W. Scott Pinner

W. Scott Fetter 11-29-94

0700

Arrive on site

- John Walter in Orientation

0745

Bring John Walter up to speed on project workplan; HASP, Normal procedures.

0800

Call Fed Ex and Do HOS briefing

- level D PPE

- slips trips and falls

- bottle breakage possibilities

- crossing road

- lifting techniques

0830

begin gathering bottle sets together

0900

Call FedEx - Scott to FedEx

0930

Orion Doad stops by trailer to deliver document from Barge, Waggoner, Sumner & Cannon requesting paint/concrete samples to be shipped to laboratory for analysis. Rest of morning spent working on samples from interior of Building 21.

1300

Spoke with Lee Scott from Quantera Richland, we will be shipping samples requesting analyses for Full Spectrum Gamma Analysis.

1400

Sample dropped off at Federal Express to Quantera Richland - to Andy Kopriva.

Andy

11-29-94

Andrew Sperry 11-30-94

0700

Arrive on site

0715

HIS BRIEFING

① PROTECTIVE USE OF ARMED

② PROTECTIVE LIFTING TECHNIQUES

③ LEVEL D PROTECTORS: STEEL TOES, HARD HAT, SAFETY Goggles

④ WALKING ON ROUGH TERRAIN

0730

WE WILL SPEND TODAY ON DOWN TIME DUE TO WORD FROM ERIC HARTMAN. HP will not give us support until confirmatory Samples (4) are cleared.

0815

Begin clearing & cleaning swissed trailer.

1350

Swissed trailer clean. Begin work on storage trailer

1645

Both storage & swissed trailers meet OSHA & Mound Safety standards. Work needs Mound requests from Joyce Geister

1700

Complete work for the day

Andy

30 Nov 94

Andrew Sperry 01 Dec 94

0700 Arrive on site

0715 H/S Briefing

① Cold Stress

② Proper Lifting Techniques

③ Working: NOC ROADWAYS SAFETY

④ Proper Use of Hand Tools

⑤ Level D - Hard Hat, Steel Toes, Safety Glasses

0725 On Stand-by for @ Ahead from D.D.

0900 Meeting with Rich Bauer & Kathy Koehler. Mound will be laying gravel between the LSA storage box area and the Drum Storage Area. This will cover 6 to 7 grids previously staked by WESTON. This re-staking will be additional time/cost for WESTON.

0915 Meeting with Jeff Tackett, Marty Hensley, Rod Long, Orion Dault - RWP is in place, Digging Permit is in place. It looks like all is ready to sample. Waiting on final word for sampling go ahead from HP.

1000 Given go-ahead to work, begin sampling activities.

1700 Done for day. Completed 3 grids plus 9 individual locations today. Shipped 3 Chemical samples to TMA for analysis.

Avalanche

12-1-94

Andrew Sperry 05 Dec 94

0700 Arrive on site

0715 H/S Briefing

① Slips, Trips & Falls - wet working conditions

② Level D - Hard Hat, Safety Glasses, Steel Toes

③ Wear gloves when handling samples/sample bottles

④ Proper lifting techniques

0740 Prepared to begin sampling

0800 Begin sampling today - lead samples only

1620 Complete sampling today. Collected lead samples from 31 locations. Complete packing and shipping samples from 12 Dec 94 afternoon and 05 Dec 95 morning.

1700 Samples to FedEx, complete work for today.

Avalanche

12-05-94

... Andrew Sperry 06 Dec 74

0650 ARRIVE ON SITE. PREPARE FOR CONTINUED SOIL SAMPLING.

0715 H'S BRIEFING:

- ① SLIPS, TRIPS, FALLS
- ② PROPER LIFTING TECHNIQUES
- ③ LEVEL D.P.P.E - Hard Hat, Safety Glasses, Steel Toes
- ④ Cold Strokes
- ⑤ SAFETY IN COMPACTS

0800 BEGIN sampling today

1615 Completed grids 231, 220, 221, 209, 196, 187, 185, 174, 163, 161, 151, 138, 107, 90.

PREPARE samples for shipment.

1700 Drop samples at Redex. Done for day.

06 Dec 74

... Andrew Sperry 07 Dec 74

0650 ARRIVE ON SITE. PREPARE FOR CONTINUED SOIL SAMPLING

0715 H'S BRIEFING:

- ① SLIPS, TRIPS, FALLS
- ② Cold Strokes
- ③ Safe Use of Auer
- ④ Follow WESTON HazCom PROCEDURES

0800 BEGIN TODAY'S sampling effort.

1600 COMPLETE SAMPLING FOR TODAY - COMPLETED
GRIDS 178, 202, 170, 182, worked on
an additional 16 points.

1700 Ship samples, done for today

07 Dec 74

08 Dec 94 Andrew R. Smeets

0700 Arrive on site

0715 H/S BRIEFING

- ① LOCATION OF SAFETY GROUP.
- ② REVIEW LOCATION OF HAZ/MSDS's
- ③ PROPER USE OF ACID APPAREL
- ④ LEVEL D PPE

0715 BEGIN SAMPLING TODAY. JOHN WILL ACK & SHIP
YESTERDAY AFTERNOON'S SAMPLES.

1600 Completed grids 148, 125, 124, 106, 97

1700 All samples packed and shipped FedEx to
laboratories Done for week.

Andrew

08 Dec 94

08 Dec 94 Andrew R. Smeets

0700 Arrive on site

0715 H/S BRIEFING

- ① LOCATION OF SAFETY EQUIPMENT /HAZ/MSDS's
- ② COLD STRESS
- ③ LEVEL D PPE - street clothes, Hard hat, steel toes, safety
Glasses
- ④ Proper lifting techniques

0800 Begin sampling.

1600 Grids 78, 85, 87 completed, 16 other points
sampled. No samples shipped today. All
will be ~~sampled~~ shipped 13 Dec 94.

Andrew

A.R.S.

13 Dec 94 Andrew Sporn

0700 Arrive at site

0715 H/S Briefing:

- ① Cold stress
- ② Slips, Trips, Falls
- ③ Location of Safety Equipment
- ④ Proper lifting techniques

0800 Begin sampling -

1300 Finished sampling remaining grids. Spend remainder of day packing samples for shipment.

1700 Drop samples at FedEx. Done for day

Andrew

12-13-94

14 Dec 94 Andrew Sporn

0700 Arrive on site

0715 H/S Briefing:

- ① Cold stress
- ② Slips, Trips & Falls
- ③ Proper Lifting Techniques
- ④ Handling of ILM Waste
- ⑤ Location of Safety Equipment, HSP, MSDS's.

0800 Begin sampling at VOA locations which will be collected for the second time due to trip blank deficiencies.

1055 VOA collection complete. Begin demobilization effort and shipment of VOA's.

1700 Done for day. Samples shipped to lab.

Andrew

12-14-94

15 Dec 94 Andrew R. Sinker

0700 ARRIVE ON SITE

0715 MLS BRIEFING

- ① Proper Lifting Techniques
- ② Slips, Trips, Falls
- ③ Housekeeping

0800 Clean up and decon all remaining equipment for the project. This includes disposal and/or storage of remaining bottles.

1130 John Walter leaves site. His work is completed for the project. He has left an exit bioassay sample as required by Mound. Spend remainder of day in demobilization phase/trailer clean up. Files will be completed for all field work.

1700 Done for today. This completes all field work for the Building 21 and Surrounding Soils Project. All required EOC personnel have been notified that we are leaving site.

Andrew
R
Sinker

15 Dec 94

K.2. EG&G MOUND HEALTH PHYSICS SOIL SCREENING RESULTS

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410816	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	2.2	32	N	WESTON BLDG 21 SOILS CC-0/1 (086)	C
9410813	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.9	14	N	WESTON BLDG 21 SOILS CC-0/1 (087)	A
9410812	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.4	2	N	WESTON BLDG 21 SOILS CC-0/1 (091)	B
9410811	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	7.6	61	N	WESTON BLDG 21 SOILS CC-0/1 (093)	C
9410809	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.5	0	N	WESTON BLDG 21 SOILS CC-0/1 (100)	B
9410806	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	2.5	12	N	WESTON BLDG 21 SOILS CC-0/1 (102)	A
9410804	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.9	245	N	WESTON BLDG 21 SOILS CC-0/1 (108)	C
9410808	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	1.4	4	N	WESTON BLDG 21 SOILS CC-0/1 (111)	C
9410799	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.8	28	N	WESTON BLDG 21 SOILS CC-0/1 (118)	C
9410800	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	2.1	39	N	WESTON BLDG 21 SOILS CC-0/1 (119)	B
9410807	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.7	9	N	WESTON BLDG 21 SOILS CC-0/1 (120)	C
9410815	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	1.2	17	N	WESTON BLDG 21 SOILS CC-0/2 (086)	A
9410805	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	0.8	0	N	WESTON BLDG 21 SOILS CC-0/2 (087)	B
9410802	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	1.9	10	N	WESTON BLDG 21 SOILS CC-0/2 (091)	A
9410796	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	3.8	13	N	WESTON BLDG 21 SOILS CC-0/2 (100)	C

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2/12/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410810	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	9.0	32	N	WESTON BLDG 21 SOILS CC-0/2 (102)	A
9410798	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	1.6	32	N	WESTON BLDG 21 SOILS CC-0/2 (108)	A
9410814	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	1.0	0	N	WESTON BLDG 21 SOILS CC-0/2 (111)	B
9410797	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	10.9	0	N	WESTON BLDG 21 SOILS CC-0/2 (118)	B
9410803	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	8.5	0	N	WESTON BLDG 21 SOILS CC-0/2 (119)	B
9410801	12/12/94	12/12/94	J. TACKETT [REDACTED]	CONT	6.0	47	N	WESTON BLDG 21 SOILS CC-0/2 (120)	A

Page No. 1
12/13/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410822	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	3.5	35	N	WESTON BLDG 21 SOILS CC-0/1 (078)	C
9410836	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.1	2	N	WESTON BLDG 21 SOILS CC-0/1 (083)	B
9410840	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.2	9	N	WESTON BLDG 21 SOILS CC-0/1 (084)	B
9410833	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.1	4	N	WESTON BLDG 21 SOILS CC-0/1 (092)	A
9410832	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.4	4	N	WESTON BLDG 21 SOILS CC-0/1 (141)	B
21	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	20.2	40	N	WESTON BLDG 21 SOILS CC-0/2 (078)	C
9410830	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.1	8	N	WESTON BLDG 21 SOILS CC-0/2 (083)	C
9410838	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.7	3	N	WESTON BLDG 21 SOILS CC-0/2 (084)	C
9410835	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.9	7	N	WESTON BLDG 21 SOILS CC-0/2 (092)	B
9410828	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.3	14	N	WESTON BLDG 21 SOILS CC-0/2 (141)	A
9410825	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.6	12	N	WESTON BLDG 21 SOILS NE-0/1 (087)	A
9410839	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.6	12	N	WESTON BLDG 21 SOILS NE-0/2 (087)	A
9410837	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	4.4	357	N	WESTON BLDG 21 SOILS NW-0/1 (084)	C
9410834	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.7	12	N	WESTON BLDG 21 SOILS NW-0/1 (087)	A
9410824	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.3	133	N	WESTON BLDG 21 SOILS NW-0/2 (084)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
9410823	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.4	19	N	WESTON BLDG 21 SOILS NW-0/2 (087)	B
9410827	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	11.6	0	N	WESTON BLDG 21 SOILS SE-0/1 (085)	B
9410829	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	3.7	124	N	WESTON BLDG 21 SOILS SE-0/1 (087)	C
9410831	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.3	15	N	WESTON BLDG 21 SOILS SE-0/2 (085)	A
9410826	12/12/94	12/13/94	J. TACKETT [REDACTED]	CONT	3.2	65	N	WESTON BLDG 21 SOILS SE-0/2 (087)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410861	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.0	6	N	WESTON BLDG 21 SOILS NW-0/1 (118)	C
9410865	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	7.0	14	N	WESTON BLDG 21 SOILS NW-0/1 (141)	B
9410841	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.6	8	N	WESTON BLDG 21 SOILS NW-0/2 (091)	C
9410852	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.7	18	N	WESTON BLDG 21 SOILS NW-0/2 (100)	C
9410843	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	18.8	15	N	WESTON BLDG 21 SOILS NW-0/2 (102)	B
9410844	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	3.3	21	N	WESTON BLDG 21 SOILS NW-0/2 (108)	C
9410858	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.8	18	N	WESTON BLDG 21 SOILS NW-0/2 (118)	A
9410869	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	5.7	0	N	WESTON BLDG 21 SOILS NW-0/2 (141)	B
9410862	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	12.2	0	N	WESTON BLDG 21 SOILS SE-0/1 (111)	B
9410854	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.7	24	N	WESTON BLDG 21 SOILS SE-0/1 (118)	A
9410866	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	9.1	51	N	WESTON BLDG 21 SOILS SE-0/2 (111)	A
9410853	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.7	21	N	WESTON BLDG 21 SOILS SE-0/2 (118)	B
9410848	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.9	22	N	WESTON BLDG 21 SOILS SW-0/1 (111)	B
9410849	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	17.8	17	N	WESTON BLDG 21 SOILS SW-0/2 (111)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPE	GRID LOCATION	WELL
9410857	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	9.1	179	N	WESTON BLDG 21 SOILS NE-0/1 (102)	A
9410867	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.3	23	N	WESTON BLDG 21 SOILS NE-0/1 (111)	A
9410864	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	8.0	70	N	WESTON BLDG 21 SOILS NE-0/1 (118)	C
9410868	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.6	11	N	WESTON BLDG 21 SOILS NE-0/1 (119)	C
9410846	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.4	10	N	WESTON BLDG 21 SOILS NE-0/1 (120)	B
851	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	161.5	495	N	WESTON BLDG 21 SOILS NE-0/2 (102)	C
9410856	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.7	0	N	WESTON BLDG 21 SOILS NE-0/2 (111)	C
9410860	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.4	0	N	WESTON BLDG 21 SOILS NE-0/2 (118)	B
9410863	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.1	20	N	WESTON BLDG 21 SOILS NE-0/2 (119)	A
9410859	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	1.9	14	N	WESTON BLDG 21 SOILS NE-0/2 (120)	C
9410847	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.3	2	N	WESTON BLDG 21 SOILS NW-0/1 (091)	A
9410850	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	5.8	231	N	WESTON BLDG 21 SOILS NW-0/1 (092)	C
9410842	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	2.1	12	N	WESTON BLDG 21 SOILS NW-0/1 (100)	A
9410855	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	15.4	140	N	WESTON BLDG 21 SOILS NW-0/1 (102)	B
9410845	12/13/94	12/13/94	J. TACKETT [REDACTED]	CONT	0.8	5	N	WESTON BLDG 21 SOILS NW-0/1 (108)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410778	12/08/94	12/08/94	J. TACKETT	CONT	0.6	8	N	WESTON BLDG 21 SOILS NE-0/1 (106)	B
9410780	12/08/94	12/08/94	J. TACKETT	CONT	0.6	20	N	WESTON BLDG 21 SOILS NE-0/1 (124)	C
9410791	12/08/94	12/08/94	J. TACKETT	CONT	0.5	50	N	WESTON BLDG 21 SOILS NE-0/1 (125)	B
9410782	12/08/94	12/08/94	J. TACKETT	CONT	0.7	0	N	WESTON BLDG 21 SOILS NE-0/2 (106)	B
9410781	12/08/94	12/08/94	J. TACKETT	CONT	1.1	30	N	WESTON BLDG 21 SOILS NE-0/2 (124)	C
784	12/08/94	12/08/94	J. TACKETT	CONT	0.9	36	N	WESTON BLDG 21 SOILS NE-0/2 (125)	A
9410775	12/08/94	12/08/94	J. TACKETT	CONT	0.4	71	N	WESTON BLDG 21 SOILS NW-0/1 (124)	A
9410777	12/08/94	12/08/94	J. TACKETT	CONT	0.5	12	N	WESTON BLDG 21 SOILS NW-0/1 (125)	B
9410776	12/08/94	12/08/94	J. TACKETT	CONT	1.0	18	N	WESTON BLDG 21 SOILS NW-0/2 (124)	C
9410779	12/08/94	12/08/94	J. TACKETT	CONT	1.1	8	N	WESTON BLDG 21 SOILS NW-0/2 (125)	A
9410790	12/08/94	12/08/94	J. TACKETT	CONT	0.3	51	N	WESTON BLDG 21 SOILS SE-0/1 (106)	C
9410785	12/08/94	12/08/94	J. TACKETT	CONT	0.3	25	N	WESTON BLDG 21 SOILS SE-0/1 (124)	C
9410786	12/08/94	12/08/94	J. TACKETT	CONT	0.7	23	N	WESTON BLDG 21 SOILS SE-0/2 (106)	C
9410787	12/08/94	12/08/94	J. TACKETT	CONT	1.3	40	N	WESTON BLDG 21 SOILS SE-0/2 (124)	B
9410788	12/08/94	12/08/94	J. TACKETT	CONT	0.7	471	Y	WESTON BLDG 21 SOILS SW-0/1 (124)	A *

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
9410789	12/08/94	12/08/94	J. TACKETT	CONT	1.2	22	N	WESTON BLDG 21 SOILS SW-0/2 (124)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(HD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410762	12/08/94	12/08/94	J. TACKETT	CONT	1.2	10	N	WESTON BLDG 21 SOILS CC-0/1 (097)	B
9410769	12/08/94	12/08/94	J. TACKETT	CONT	0.7	19	N	WESTON BLDG 21 SOILS CC-0/1 (106)	B
9410764	12/08/94	12/08/94	J. TACKETT	CONT	0.3	19	N	WESTON BLDG 21 SOILS CC-0/1 (124)	C
9410768	12/08/94	12/08/94	J. TACKETT	CONT	0.3	15	N	WESTON BLDG 21 SOILS CC-0/1 (125)	C
9410757	12/08/94	12/08/94	J. TACKETT	CONT	1.8	13	N	WESTON BLDG 21 SOILS CC-0/2 (097)	B
9410771	12/08/94	12/08/94	J. TACKETT	CONT	1.0	109	N	WESTON BLDG 21 SOILS CC-0/2 (106)	A
9410773	12/08/94	12/08/94	J. TACKETT	CONT	1.4	42	N	WESTON BLDG 21 SOILS CC-0/2 (124)	C
9410774	12/08/94	12/08/94	J. TACKETT	CONT	0.6	119	N	WESTON BLDG 21 SOILS CC-0/2 (125)	C
9410753	12/08/94	12/08/94	J. TACKETT	CONT	1.3	9	N	WESTON BLDG 21 SOILS NE-0/1 (097)	C
9410758	12/08/94	12/08/94	J. TACKETT	CONT	0.8	4	N	WESTON BLDG 21 SOILS NE-0/2 (097)	C
9410763	12/08/94	12/08/94	J. TACKETT	CONT	1.0	11	N	WESTON BLDG 21 SOILS NW-0/1 (097)	A
9410765	12/08/94	12/08/94	J. TACKETT	CONT	1.1	24	N	WESTON BLDG 21 SOILS NW-0/1 (148)	C
9410759	12/08/94	12/08/94	J. TACKETT	CONT	1.0	3	N	WESTON BLDG 21 SOILS NW-0/2 (097)	C
9410770	12/08/94	12/08/94	J. TACKETT	CONT	1.3	6	N	WESTON BLDG 21 SOILS NW-0/2 (148)	A
9410756	12/08/94	12/08/94	J. TACKETT	CONT	0.7	19	N	WESTON BLDG 21 SOILS SE-0/1 (097)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
9410760	12/08/94	12/08/94	J. TACKETT	CONT	1.2	24	N	WESTON BLDG 21 SOILS SE-0/2 (097)	A
9410754	12/08/94	12/08/94	J. TACKETT	CONT	1.4	23	N	WESTON BLDG 21 SOILS SW-0/1 (097)	B
9410755	12/08/94	12/08/94	J. TACKETT	CONT	1.2	23	N	WESTON BLDG 21 SOILS SW-0/2 (097)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410751	12/07/94	12/08/94	J. TACKETT	CONT	1.1	20	N	WESTON BLDG 21 SOILS CC 0/1 (148)	C
9410748	12/07/94	12/08/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG 21 SOILS CC-0/1 (170)	B
9410731	12/07/94	12/08/94	J. TACKETT	CONT	1.4	17	N	WESTON BLDG 21 SOILS CC-0/2 (148)	A
9410741	12/07/94	12/08/94	J. TACKETT	CONT	1.6	21	N	WESTON BLDG 21 SOILS CC-0/2 (170)	A
9410737	12/07/94	12/08/94	J. TACKETT	CONT	1.0	9	N	WESTON BLDG 21 SOILS NE-0/1 (148)	B
9410749	12/07/94	12/08/94	J. TACKETT	CONT	0.7	13	N	WESTON BLDG 21 SOILS NE-0/1 (182)	C
9410736	12/07/94	12/08/94	J. TACKETT	CONT	1.3	7	N	WESTON BLDG 21 SOILS NE-0/2 (148)	A
9410738	12/07/94	12/08/94	J. TACKETT	CONT	1.3	1	N	WESTON BLDG 21 SOILS NE-0/2 (182)	C
9410746	12/07/94	12/08/94	J. TACKETT	CONT	0.6	15	N	WESTON BLDG 21 SOILS NW-0/1 (170)	B
9410742	12/07/94	12/08/94	J. TACKETT	CONT	0.5	13	N	WESTON BLDG 21 SOILS NW-0/1 (182)	A
9410744	12/07/94	12/08/94	J. TACKETT	CONT	1.3	12	N	WESTON BLDG 21 SOILS NW-0/2 (170)	C
9410729	12/07/94	12/08/94	J. TACKETT	CONT	1.0	6	N	WESTON BLDG 21 SOILS NW-0/2 (182)	A
9410745	12/07/94	12/08/94	J. TACKETT	CONT	0.4	7	N	WESTON BLDG 21 SOILS SE-0/1 (148)	A
9410747	12/07/94	12/08/94	J. TACKETT	CONT	0.3	0	N	WESTON BLDG 21 SOILS SE-0/1 (182)	C
9410734	12/07/94	12/08/94	J. TACKETT	CONT	1.2	15	N	WESTON BLDG 21 SOILS SE-0/2 (148)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410739	12/07/94	12/08/94	J. TACKETT	CONT	0.7	0	N	WESTON BLDG 21 SOILS SE-0/2 (182)	C
9410752	12/07/94	12/08/94	J. TACKETT	CONT	0.5	24	N	WESTON BLDG 21 SOILS SW 0/1 (148)	C
9410735	12/07/94	12/08/94	J. TACKETT	CONT	0.3	0	N	WESTON BLDG 21 SOILS SW-0/1 (170)	C
9410740	12/07/94	12/08/94	J. TACKETT	CONT	0.9	10	N	WESTON BLDG 21 SOILS SW-0/1 (182)	B
9410730	12/07/94	12/08/94	J. TACKETT	CONT	1.1	3	N	WESTON BLDG 21 SOILS SW-0/2 (148)	A
43	12/07/94	12/08/94	J. TACKETT	CONT	1.6	9	N	WESTON BLDG 21 SOILS SW-0/2 (170)	B
9410732	12/07/94	12/08/94	J. TACKETT	CONT	1.5	9	N	WESTON BLDG 21 SOILS SW-0/2 (182)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
9410701	12/07/94	12/07/94	J. TACKETT	CONT	3.3	8	N	WESTON BLDG 21 SOILS CC-0/1 (178)	A
9410709	12/07/94	12/07/94	J. TACKETT	CONT	0.3	0	N	WESTON BLDG 21 SOILS CC-0/1 (182)	C
9410694	12/07/94	12/07/94	J. TACKETT	CONT	0.6	0	N	WESTON BLDG 21 SOILS CC-0/1 (202)	B
9410711	12/07/94	12/07/94	J. TACKETT	CONT	1.9	23	N	WESTON BLDG 21 SOILS CC-0/2 (178)	C
9410692	12/07/94	12/07/94	J. TACKETT	CONT	0.4	7	N	WESTON BLDG 21 SOILS CC-0/2 (182)	B
9410690	12/07/94	12/07/94	J. TACKETT	CONT	1.4	22	N	WESTON BLDG 21 SOILS CC-0/2 (202)	A
9410710	12/07/94	12/07/94	J. TACKETT	CONT	1.1	12	N	WESTON BLDG 21 SOILS NE-0/1 (178)	B
9410693	12/07/94	12/07/94	J. TACKETT	CONT	0.3	3	N	WESTON BLDG 21 SOILS NE-0/1 (202)	A
9410702	12/07/94	12/07/94	J. TACKETT	CONT	3.2	3	N	WESTON BLDG 21 SOILS NE-0/2 (178)	B
9410705	12/07/94	12/07/94	J. TACKETT	CONT	5.7	6	N	WESTON BLDG 21 SOILS NE-0/2 (202)	A
9410708	12/07/94	12/07/94	J. TACKETT	CONT	1.4	8	N	WESTON BLDG 21 SOILS NW-0/1 (178)	A
9410706	12/07/94	12/07/94	J. TACKETT	CONT	0.6	1	N	WESTON BLDG 21 SOILS NW-0/1 (202)	C
9410699	12/07/94	12/07/94	J. TACKETT	CONT	1.5	21	N	WESTON BLDG 21 SOILS NW-0/2 (178)	A
9410707	12/07/94	12/07/94	J. TACKETT	CONT	1.2	0	N	WESTON BLDG 21 SOILS NW-0/2 (202)	B
9410696	12/07/94	12/07/94	J. TACKETT	CONT	0.2	12	N	WESTON BLDG 21 SOILS SE-0/1 (178)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPE	GRID LOCATION	WELL
9410698	12/07/94	12/07/94	J. TACKETT	CONT	0.4	0	N	WESTON BLDG 21 SOILS SE-0/1 (202)	B
9410703	12/07/94	12/07/94	J. TACKETT	CONT	0.7	17	N	WESTON BLDG 21 SOILS SE-0/2 (178)	B
9410691	12/07/94	12/07/94	J. TACKETT	CONT	1.4	12	N	WESTON BLDG 21 SOILS SE-0/2 (202)	C
9410697	12/07/94	12/07/94	J. TACKETT	CONT	0.2	0	N	WESTON BLDG 21 SOILS SW-0/1 (178)	C
9410700	12/07/94	12/07/94	J. TACKETT	CONT	0.5	1	N	WESTON BLDG 21 SOILS SW-0/1 (202)	C
704	12/07/94	12/07/94	J. TACKETT	CONT	1.7	2	N	WESTON BLDG 21 SOILS SW-0/2 (178)	C
9410695	12/07/94	12/07/94	J. TACKETT	CONT	1.5	8	N	WESTON BLDG 21 SOILS SW-0/2 (202)	C

Note: Some of these samples were wet.

PL

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410681	12/06/94	12/07/94	J. TACKETT	CONT	1.8	16	N	WESTON BLDG 21 SOILS CC-0/1 (090)	C
9410677	12/06/94	12/07/94	J. TACKETT	CONT	0.3	9	N	WESTON BLDG 21 SOILS CC-0/1 (107)	A
9410683	12/06/94	12/07/94	J. TACKETT	CONT	0.4	0	N	WESTON BLDG 21 SOILS CC-0/1 (138)	C
9410678	12/06/94	12/07/94	J. TACKETT	CONT	0.4	12	N	WESTON BLDG 21 SOILS CC-0/1 (151)	B
9410676	12/06/94	12/07/94	J. TACKETT	CONT	1.0	19	N	WESTON BLDG 21 SOILS CC-0/1 (161)	B
9410685	12/06/94	12/07/94	J. TACKETT	CONT	1.1	5	N	WESTON BLDG 21 SOILS CC-0/1 (163)	B
9410684	12/06/94	12/07/94	J. TACKETT	CONT	0.5	4	N	WESTON BLDG 21 SOILS CC-0/1 (174)	A
9410686	12/06/94	12/07/94	J. TACKETT	CONT	2.4	13	N	WESTON BLDG 21 SOILS CC-0/2 (090)	B
9410682	12/06/94	12/07/94	J. TACKETT	CONT	2.1	16	N	WESTON BLDG 21 SOILS CC-0/2 (107)	A
410675	12/06/94	12/07/94	J. TACKETT	CONT	7.2	1	N	WESTON BLDG 21 SOILS CC-0/2 (109)	A
110679	12/06/94	12/07/94	J. TACKETT	CONT	2.4	18	N	WESTON BLDG 21 SOILS CC-0/2 (138)	C
10674	12/06/94	12/07/94	J. TACKETT	CONT	1.4	23	N	WESTON BLDG 21 SOILS CC-0/2 (151)	A
10680	12/06/94	12/07/94	J. TACKETT	CONT	1.6	7	N	WESTON BLDG 21 SOILS CC-0/2 (163)	B

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
- 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
- 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.

SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410638	12/05/94	12/06/94	M. HENSLEY	CONT	0.2	8	N	WESTON BLDG 21 SOILS NE-0/1 (185)	A
9410645	12/05/94	12/06/94	M. HENSLEY	CONT	0.5	10	N	WESTON BLDG 21 SOILS NE-0/1 (209)	B
9410637	12/05/94	12/06/94	M. HENSLEY	CONT	0.2	0	N	WESTON BLDG 21 SOILS NE-0/1 (221)	C
9410641	12/05/94	12/06/94	M. HENSLEY	CONT	0.1	0	N	WESTON BLDG 21 SOILS NE-0/1 (222)	A
9410631	12/05/94	12/06/94	M. HENSLEY	CONT	0.5	11	N	WESTON BLDG 21 SOILS NE-0/1 (231)	A
0640	12/05/94	12/06/94	M. HENSLEY	CONT	0.4	2	N	WESTON BLDG 21 SOILS NE-0/2 (221)	B
9410644	12/05/94	12/06/94	M. HENSLEY	CONT	0.7	7	N	WESTON BLDG 21 SOILS NW-0/1 (209)	A
9410643	12/05/94	12/06/94	M. HENSLEY	CONT	2.9	21	N	WESTON BLDG 21 SOILS NW-0/1 (221)	C
9410642	12/05/94	12/06/94	M. HENSLEY	CONT	0.1	0	N	WESTON BLDG 21 SOILS NW-0/1 (222)	C
9410636	12/05/94	12/06/94	M. HENSLEY	CONT	0.5	8	N	WESTON BLDG 21 SOILS NW-0/1 (231)	A
9410646	12/05/94	12/06/94	M. HENSLEY	CONT	0.1	0	N	WESTON BLDG 21 SOILS SE-0/1 (209)	B
9410633	12/05/94	12/06/94	M. HENSLEY	CONT	0.0	0	N	WESTON BLDG 21 SOILS SE-0/1 (221)	C
9410632	12/05/94	12/06/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG 21 SOILS SE-0/1 (231)	B
9410630	12/05/94	12/06/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG 21 SOILS SW-0/1 (185)	B
9410647	12/05/94	12/06/94	M. HENSLEY	CONT	0.2	0	N	WESTON BLDG 21 SOILS SW-0/1 (209)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPEs	GRID LOCATION	WELL
9410639	12/05/94	12/06/94	M. HENSLEY	CONT	2.2	13	N	WESTON BLDG 21 SOILS SW-0/1 (221)	B
9410635	12/05/94	12/06/94	M. HENSLEY	CONT	0.5	5	N	WESTON BLDG 21 SOILS SW-0/1 (231)	B
9410649	12/05/94	12/06/94	M. HENSLEY	CONT	3.1	31	N	WESTON BLDG 21 SOILS SW-0/2 (185)	C
9410648	12/05/94	12/06/94	M. HENSLEY	CONT	1.8	12	N	WESTON BLDG 21 SOILS SW-0/2 (221)	B

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410664	12/06/94	12/06/94	J. TACKETT	CONT	0.2	15	N	WESTON BLDG 21 SOILS CC-0/1 (185)	B
9410657	12/06/94	12/06/94	J. TACKETT	CONT	1.0	5	N	WESTON BLDG 21 SOILS CC-0/1 (187)	B
9410662	12/06/94	12/06/94	J. TACKETT	CONT	0.1	0	N	WESTON BLDG 21 SOILS CC-0/1 (196)	C
9410656	12/06/94	12/06/94	J. TACKETT	CONT	0.4	5	N	WESTON BLDG 21 SOILS CC-0/1 (209)	A
9410666	12/06/94	12/06/94	J. TACKETT	CONT	0.1	4	N	WESTON BLDG 21 SOILS CC-0/1 (221)	B
9410658	12/06/94	12/06/94	J. TACKETT	CONT	0.4	0	N	WESTON BLDG 21 SOILS CC-0/1 (222)	C
9410655	12/06/94	12/06/94	J. TACKETT	CONT	0.3	8	N	WESTON BLDG 21 SOILS CC-0/1 (231)	B
9410650	12/06/94	12/06/94	J. TACKETT	CONT	0.9	7	N	WESTON BLDG 21 SOILS CC-0/2 (187)	B
9410660	12/06/94	12/06/94	J. TACKETT	CONT	1.3	8	N	WESTON BLDG 21 SOILS CC-0/2 (209)	C
9410654	12/06/94	12/06/94	J. TACKETT	CONT	2.1	0	N	WESTON BLDG 21 SOILS CC-0/2 (221)	C
9410651	12/06/94	12/06/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG 21 SOILS CC-0/2 (222)	C
9410652	12/06/94	12/06/94	J. TACKETT	CONT	1.0	4	N	WESTON BLDG 21 SOILS CC-0/2 (231)	A
9410659	12/06/94	12/06/94	J. TACKETT	CONT	1.1	14	N	WESTON BLDG 21 SOILS NE-0/1 (196)	B
9410665	12/06/94	12/06/94	J. TACKETT	CONT	1.3	0	N	WESTON BLDG 21 SOILS NW-0/1 (196)	C
9410663	12/06/94	12/06/94	J. TACKETT	CONT	1.1	0	N	WESTON BLDG 21 SOILS SE-0/1 (196)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410667	12/06/94	12/06/94	J. TACKETT	CONT	1.6	24	N	WESTON BLDG 21 SOILS SE-0/2 (196)	A
9410661	12/06/94	12/06/94	J. TACKETT	CONT	1.5	19	N	WESTON BLDG 21 SOILS SW-0/1 (196)	A
9410653	12/06/94	12/06/94	J. TACKETT	CONT	1.0	17	N	WESTON BLDG 21 SOILS SW-0/2 (196)	A

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
- 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
- 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.

SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410575	12/01/94	12/05/94	M. HENSLEY	CONT	1.3	21	N	WESTON BLDG 21 SOILS NE-0/1 (090)	A
9410577	12/01/94	12/05/94	M. HENSLEY	CONT	1.3	18	N	WESTON BLDG 21 SOILS NE-0/1 (107)	B
9410565	12/01/94	12/05/94	M. HENSLEY	CONT	0.6	10	N	WESTON BLDG 21 SOILS NE-0/1 (141)	B
9410570	12/01/94	12/05/94	M. HENSLEY	CONT	2.8	9	N	WESTON BLDG 21 SOILS NE-0/2 (090)	B
9410568	12/01/94	12/05/94	M. HENSLEY	CONT	1.4	16	N	WESTON BLDG 21 SOILS NE-0/2 (107)	B
9410569	12/01/94	12/05/94	M. HENSLEY	CONT	1.2	11	N	WESTON BLDG 21 SOILS NE-0/2 (141)	C
9410576	12/01/94	12/05/94	M. HENSLEY	CONT	0.5	7	N	WESTON BLDG 21 SOILS NW-0/1 (107)	B
9410563	12/01/94	12/05/94	M. HENSLEY	CONT	0.7	4	N	WESTON BLDG 21 SOILS NW-0/2 (107)	A
9410567	12/01/94	12/05/94	M. HENSLEY	CONT	1.1	6	N	WESTON BLDG 21 SOILS SE-0/1 (083)	C
9410571	12/01/94	12/05/94	M. HENSLEY	CONT	0.3	1	N	WESTON BLDG 21 SOILS SE-0/1 (090)	A
9410564	12/01/94	12/05/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG 21 SOILS SE-0/1 (107)	C
9410566	12/01/94	12/05/94	M. HENSLEY	CONT	0.5	11	N	WESTON BLDG 21 SOILS SE-0/1 (141)	A
9410573	12/01/94	12/05/94	M. HENSLEY	CONT	5.4	9	N	WESTON BLDG 21 SOILS SE-0/2 (090)	B
9410562	12/01/94	12/05/94	M. HENSLEY	CONT	2.3	9	N	WESTON BLDG 21 SOILS SE-0/2 (107)	A
9410561	12/01/94	12/05/94	M. HENSLEY	CONT	1.3	23	N	WESTON BLDG 21 SOILS SE-0/2 (141)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
410574	12/01/94	12/05/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG 21 SOILS SW-0/1 (141)	C

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	HORE ISO-TOPE	GRID LOCATION	WELL
9410624	12/05/94	12/05/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG 21 SOILS NE-0/1 (138)	C
9410622	12/05/94	12/05/94	M. HENSLEY	CONT	0.6	7	N	WESTON BLDG 21 SOILS NE-0/1 (151)	B
9410606	12/05/94	12/05/94	M. HENSLEY	CONT	0.5	9	N	WESTON BLDG 21 SOILS NE-0/1 (161)	A
9410600	12/05/94	12/05/94	M. HENSLEY	CONT	6.4	49	N	WESTON BLDG 21 SOILS NE-0/1 (163)	A
9410612	12/05/94	12/05/94	M. HENSLEY	CONT	0.2	0	N	WESTON BLDG 21 SOILS NE-0/1 (174)	C
9410603	12/05/94	12/05/94	M. HENSLEY	CONT	1.2	0	N	WESTON BLDG 21 SOILS NE-0/1 (187)	C
9410608	12/05/94	12/05/94	M. HENSLEY	CONT	11.3	19	N	WESTON BLDG 21 SOILS NE-0/2 (163)	B
9410601	12/05/94	12/05/94	M. HENSLEY	CONT	0.5	0	N	WESTON BLDG 21 SOILS NE-0/2 (174)	B
9410619	12/05/94	12/05/94	M. HENSLEY	CONT	2.1	19	N	WESTON BLDG 21 SOILS NW-0/1 (138)	B
9410615	12/05/94	12/05/94	M. HENSLEY	CONT	0.8	6	N	WESTON BLDG 21 SOILS NW-0/1 (151)	A
9410614	12/05/94	12/05/94	M. HENSLEY	CONT	0.5	7	N	WESTON BLDG 21 SOILS NW-0/1 (161)	B
9410602	12/05/94	12/05/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG 21 SOILS NW-0/1 (174)	C
9410621	12/05/94	12/05/94	M. HENSLEY	CONT	1.0	5	N	WESTON BLDG 21 SOILS NW-0/1 (187)	A
9410617	12/05/94	12/05/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG 21 SOILS NW-0/2 (138)	C
9410625	12/05/94	12/05/94	M. HENSLEY	CONT	1.3	17	N	WESTON BLDG 21 SOILS NW-0/2 (151)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(ND-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410611	12/05/94	12/05/94	M. HENSLEY	CONT	1.9	18	N	WESTON BLDG 21 SOILS NW-0/2 (161)	B
9410604	12/05/94	12/05/94	M. HENSLEY	CONT	1.5	11	N	WESTON BLDG 21 SOILS NW-0/2 (187)	B
9410623	12/05/94	12/05/94	M. HENSLEY	CONT	1.5	14	N	WESTON BLDG 21 SOILS SE-0/1 (138)	B
9410616	12/05/94	12/05/94	M. HENSLEY	CONT	1.2	9	N	WESTON BLDG 21 SOILS SE-0/1 (151)	B
9410610	12/05/94	12/05/94	M. HENSLEY	CONT	0.5	9	N	WESTON BLDG 21 SOILS SE-0/1 (161)	C
0618	12/05/94	12/05/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG 21 SOILS SE-0/1 (174)	A
9410609	12/05/94	12/05/94	M. HENSLEY	CONT	0.0	0	N	WESTON BLDG 21 SOILS SE-0/1 (187)	A
9410620	12/05/94	12/05/94	M. HENSLEY	CONT	1.1	14	N	WESTON BLDG 21 SOILS SE-0/2 (138)	C
9410607	12/05/94	12/05/94	M. HENSLEY	CONT	0.7	2	N	WESTON BLDG 21 SOILS SE-0/2 (151)	C
9410605	12/05/94	12/05/94	M. HENSLEY	CONT	1.2	14	N	WESTON BLDG 21 SOILS SE-0/2 (161)	A

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

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12/01/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410552	12/01/94	12/01/94	M. HENSLEY	CONT	1.1	9	N	WESTON BLDG 21 SOILS CC-0/1 (028)	C
9410553	12/01/94	12/01/94	M. HENSLEY	CONT	3.9	14	N	WESTON BLDG 21 SOILS CC-0/1 (031)	B
9410548	12/01/94	12/01/94	M. HENSLEY	CONT	0.8	24	N	WESTON BLDG 21 SOILS CC-0/1 (032)	C
9410549	12/01/94	12/01/94	M. HENSLEY	CONT	1.1	13	N	WESTON BLDG 21 SOILS CC-0/2 (028)	B
9410555	12/01/94	12/01/94	M. HENSLEY	CONT	4.3	25	N	WESTON BLDG 21 SOILS CC-0/2 (031)	B
551	12/01/94	12/01/94	M. HENSLEY	CONT	1.0	23	N	WESTON BLDG 21 SOILS CC-0/2 (032)	B

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

ge No. 1
/05/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9409395	10/04/94	10/05/94	J. TACKETT	CONT	1.1	21	N	WESTON BLDG-21 NE-0/1 (001)	A
9409397	10/04/94	10/05/94	J. TACKETT	CONT	0.2	13	N	WESTON BLDG-21 NE-0/1 (003)	B
9409398	10/04/94	10/05/94	J. TACKETT	CONT	1.5	10	N	WESTON BLDG-21 NE-0/1 (004) 0"-12"	C
9409396	10/04/94	10/05/94	J. TACKETT	CONT	0.7	6	N	WESTON BLDG-21 NE-0/2 (001)	C
9409399	10/04/94	10/05/94	J. TACKETT	CONT	1.1	8	N	WESTON BLDG-21 NE-0/2 (003) 12"-24"	A
9409403	10/04/94	10/05/94	J. TACKETT	CONT	0.7	0	N	WESTON BLDG-21 NW-0/1 (001)	C
9409404	10/04/94	10/05/94	J. TACKETT	CONT	2.4	15	N	WESTON BLDG-21 NW-0/2 (001) 12"-24"	B
9409402	10/04/94	10/05/94	J. TACKETT	CONT	1.1	25	N	WESTON BLDG-21 SE-0/1 (006) 0"-12"	B
9409400	10/04/94	10/05/94	J. TACKETT	CONT	1.1	15	N	WESTON BLDG-21 SW-0/1 (001) 0"-12"	A
9409401	10/04/94	10/05/94	J. TACKETT	CONT	1.1	19	N	WESTON BLDG-21 SW-0/2 (001) 12"-24"	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9409421	10/05/94	10/06/94	J. TACKETT	CONT	1.3	12	N	WESTON BLDG-21 SOILS NE-0/1 (007)	C
9409412	10/05/94	10/06/94	J. TACKETT	CONT	1.2	14	N	WESTON BLDG-21 SOILS NE-0/1 (009)	C
9409419	10/05/94	10/06/94	J. TACKETT	CONT	0.6	0	N	WESTON BLDG-21 SOILS NE-0/1 (011)	B
9409413	10/05/94	10/06/94	J. TACKETT	CONT	0.3	0	N	WESTON BLDG-21 SOILS NE-0/1 (015)	B
9409429	10/05/94	10/06/94	J. TACKETT	CONT	1.1	14	N	WESTON BLDG-21 SOILS NE-0/1 (017)	C
9427	10/05/94	10/06/94	J. TACKETT	CONT	1.6	11	N	WESTON BLDG-21 SOILS NE-0/1 (026)	B
9409425	10/05/94	10/06/94	J. TACKETT	CONT	0.9	9	N	WESTON BLDG-21 SOILS NE-0/2 (011)	B
9409428	10/05/94	10/06/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG-21 SOILS NE-0/2 (015)	A
9409418	10/05/94	10/06/94	J. TACKETT	CONT	1.1	11	N	WESTON BLDG-21 SOILS NE-0/2 (017)	C
9409417	10/05/94	10/06/94	J. TACKETT	CONT	1.0	11	N	WESTON BLDG-21 SOILS NE-0/2 (026)	B
9409414	10/05/94	10/06/94	J. TACKETT	CONT	1.3	18	N	WESTON BLDG-21 SOILS NW-0/1 (017)	A
9409411	10/05/94	10/06/94	J. TACKETT	CONT	0.6	10	N	WESTON BLDG-21 SOILS NW-0/2 (0017)	A
9409424	10/05/94	10/06/94	J. TACKETT	CONT	1.3	13	N	WESTON BLDG-21 SOILS SE-0/1 (007)	C
9409410	10/05/94	10/06/94	J. TACKETT	CONT	1.1	0	N	WESTON BLDG-21 SOILS SE-0/1 (009)	B
9409420	10/05/94	10/06/94	J. TACKETT	CONT	1.3	18	N	WESTON BLDG-21 SOILS SE-0/1 (017)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPE	GRID LOCATION	WELL
9409423	10/05/94	10/06/94	J. TACKETT	CONT	1.2	24	N	WESTON BLDG-21 SOILS SE-0/1 (026)	A
9409422	10/05/94	10/06/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG-21 SOILS SE-0/2 (007)	B
9409415	10/05/94	10/06/94	J. TACKETT	CONT	1.2	6	N	WESTON BLDG-21 SOILS SE-0/2 (017)	C
9409416	10/05/94	10/06/94	J. TACKETT	CONT	1.7	21	N	WESTON BLDG-21 SOILS SW-0/1 (006)	A
9409430	10/05/94	10/06/94	J. TACKETT	CONT	1.0	11	N	WESTON BLDG-21 SOILS SW-0/1 (026)	B
9426	10/05/94	10/06/94	J. TACKETT	CONT	1.0	25	N	WESTON BLDG-21 SOILS SW-0/2 (006)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPE	GRID LOCATION	WELL
9409439	10/06/94	10/06/94	M. HENSLEY	CONT	1.1	5	N	WESTON BLDG-21 SOILS CC-0/1 (001)	C
9409440	10/06/94	10/06/94	M. HENSLEY	CONT	1.2	14	N	WESTON BLDG-21 SOILS CC-0/1 (003)	C
9409436	10/06/94	10/06/94	M. HENSLEY	CONT	0.6	0	N	WESTON BLDG-21 SOILS CC-0/1 (004)	A
9409442	10/06/94	10/06/94	M. HENSLEY	CONT	0.4	3	N	WESTON BLDG-21 SOILS CC-0/1 (007)	A
9409438	10/06/94	10/06/94	M. HENSLEY	CONT	1.1	20	N	WESTON BLDG-21 SOILS CC-0/1 (009)	A
9431	10/06/94	10/06/94	M. HENSLEY	CONT	1.2	23	N	WESTON BLDG-21 SOILS CC-0/1 (011)	A
9409432	10/06/94	10/06/94	M. HENSLEY	CONT	0.9	10	N	WESTON BLDG-21 SOILS CC-0/1 (017)	C
9409433	10/06/94	10/06/94	M. HENSLEY	CONT	0.9	10	N	WESTON BLDG-21 SOILS CC-0/1 (026)	B
9409446	10/06/94	10/06/94	M. HENSLEY	CONT	1.2	10	N	WESTON BLDG-21 SOILS CC-0/2 (001)	B
9409441	10/06/94	10/06/94	M. HENSLEY	CONT	1.2	7	N	WESTON BLDG-21 SOILS CC-0/2 (003)	B
9409445	10/06/94	10/06/94	M. HENSLEY	CONT	0.7	0	N	WESTON BLDG-21 SOILS CC-0/2 (004)	C
9409444	10/06/94	10/06/94	M. HENSLEY	CONT	0.8	2	N	WESTON BLDG-21 SOILS CC-0/2 (007)	B
9409443	10/06/94	10/06/94	M. HENSLEY	CONT	1.3	18	N	WESTON BLDG-21 SOILS CC-0/2 (009)	A
9409437	10/06/94	10/06/94	M. HENSLEY	CONT	1.1	3	N	WESTON BLDG-21 SOILS CC-0/2 (011)	B
9409434	10/06/94	10/06/94	M. HENSLEY	CONT	1.4	3	N	WESTON BLDG-21 SOILS CC-0/2 (017)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	NORE ISO- TOPES	GRID LOCATION	WELL
9409435	10/06/94	10/06/94	M. HENSLEY [REDACTED]	CONT	1.5	8	N	WESTON BLDG-21 SOILS CC-0/2 (025)	C

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

je No. 1
11/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(HD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410124	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	14	N	WESTON BLDG-21 SOILS CC-0/1 (023)	C
9410154	10/10/94	10/11/94	M. HENSLEY	CONT	0.2	3	N	WESTON BLDG-21 SOILS NE-0/1 (023)	B
9410130	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	13	N	WESTON BLDG-21 SOILS NE-0/1 (027)	C
9410149	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	14	N	WESTON BLDG-21 SOILS NE-0/1 (028)	A
9410147	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	1	N	WESTON BLDG-21 SOILS NE-0/1 (032)	C
9410126	10/10/94	10/11/94	M. HENSLEY	CONT	0.8	6	N	WESTON BLDG-21 SOILS NE-0/1 (040)	B
9410136	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS NE-0/1 (044)	B
9410118	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	9	N	WESTON BLDG-21 SOILS NE-0/1 (047)	C
9410128	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/1 (052)	C
9410146	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	6	N	WESTON BLDG-21 SOILS NE-0/2 (023)	B
9410150	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	11	N	WESTON BLDG-21 SOILS NE-0/2 (027)	B
9410139	10/10/94	10/11/94	M. HENSLEY	CONT	0.8	15	N	WESTON BLDG-21 SOILS NE-0/2 (028)	C
9410145	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	9	N	WESTON BLDG-21 SOILS NE-0/2 (032)	A
9410140	10/10/94	10/11/94	M. HENSLEY	CONT	0.6	7	N	WESTON BLDG-21 SOILS NE-0/2 (040)	B
9410132	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	18	N	WESTON BLDG-21 SOILS NE-0/2 (047)	B

e No. 2
11/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(HD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPEs	GRID LOCATION	WELL
410114	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	2	N	WESTON BLDG-21 SOILS NE-0/2 (052)	B
410142	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	15	N	WESTON BLDG-21 SOILS NW-0/1 (023)	C
410151	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	10	N	WESTON BLDG-21 SOILS NW-0/1 (028)	B
410122	10/10/94	10/11/94	M. HENSLEY	CONT	1.8	18	N	WESTON BLDG-21 SOILS NW-0/1 (040)	A
410117	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	22	N	WESTON BLDG-21 SOILS NW-0/1 (047)	A
116	10/10/94	10/11/94	M. HENSLEY	CONT	2.9	19	N	WESTON BLDG-21 SOILS NW-0/1 (052)	A
410152	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	4	N	WESTON BLDG-21 SOILS NW-0/2 (023)	C
410156	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	15	N	WESTON BLDG-21 SOILS NW-0/2 (028)	C
410148	10/10/94	10/11/94	M. HENSLEY	CONT	1.6	8	N	WESTON BLDG-21 SOILS NW-0/2 (040)	C
410138	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	18	N	WESTON BLDG-21 SOILS NW-0/2 (047)	A
410120	10/10/94	10/11/94	M. HENSLEY	CONT	1.8	23	N	WESTON BLDG-21 SOILS NW-0/2 (052)	B
410155	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	2	N	WESTON BLDG-21 SOILS SE-0/1 (027)	A
410137	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	8	N	WESTON BLDG-21 SOILS SE-0/1 (031)	C
410143	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	21	N	WESTON BLDG-21 SOILS SE-0/1 (032)	A
410121	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	4	N	WESTON BLDG-21 SOILS SE-0/1 (040)	C

e No. 3
11/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
410141	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	4	N	WESTON BLDG-21 SOILS SE-0/1 (044)	A
410123	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	6	N	WESTON BLDG-21 SOILS SE-0/1 (047)	B
410115	10/10/94	10/11/94	M. HENSLEY	CONT	0.4	1	N	WESTON BLDG-21 SOILS SE-0/1 (052)	C
410144	10/10/94	10/11/94	M. HENSLEY	CONT	0.4	1	N	WESTON BLDG-21 SOILS SE-0/2 (027)	B
410133	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	12	N	WESTON BLDG-21 SOILS SE-0/2 (031)	C
53	10/10/94	10/11/94	M. HENSLEY	CONT	1.7	15	N	WESTON BLDG-21 SOILS SE-0/2 (032)	A
410131	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS SE-0/2 (040)	A
410135	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	20	N	WESTON BLDG-21 SOILS SE-0/2 (044)	A
410134	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	4	N	WESTON BLDG-21 SOILS SE-0/2 (047)	B
410119	10/10/94	10/11/94	M. HENSLEY	CONT	2.2	47	N	WESTON BLDG-21 SOILS SE-0/2 (052)	A
410125	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	12	N	WESTON BLDG-21 SOILS SE-0/3 (052)	A
410127	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS SW-0/1 (047)	B
410129	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS SW-0/2 (047)	A

je No. 1
'12/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410212	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	7	N	WESTON BLDG-21 SOILS NE-0/1 (053)	C
9410220	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/1 (054)	B
9410208	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS NE-0/1 (061)	A
9410206	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	22	N	WESTON BLDG-21 SOILS NE-0/1 (065)	C
9410191	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	18	N	WESTON BLDG-21 SOILS NE-0/1 (066)	C
9410201	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	0	N	WESTON BLDG-21 SOILS NE-0/1 (070)	A
9410197	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	4	N	WESTON BLDG-21 SOILS NE-0/1 (071)	C
9410183	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	2	N	WESTON BLDG-21 SOILS NE-0/1 (072)	C
9410182	10/11/94	10/12/94	M. HENSLEY	CONT	2.3	3	N	WESTON BLDG-21 SOILS NE-0/1 (073)	C
9410196	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	11	N	WESTON BLDG-21 SOILS NE-0/1 (074)	A
9410178	10/11/94	10/12/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS NE-0/1 (078)	B
9410177	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	7	N	WESTON BLDG-21 SOILS NE-0/1 (079)	C
9410207	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	0	N	WESTON BLDG-21 SOILS NE-0/2 (053)	B
9410202	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS NE-0/2 (054)	A
9410204	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	20	N	WESTON BLDG-21 SOILS NE-0/2 (061)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
410215	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	0	N	WESTON BLDG-21 SOILS NE-0/2 (065)	B
410216	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	8	N	WESTON BLDG-21 SOILS NE-0/2 (066)	C
410190	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	13	N	WESTON BLDG-21 SOILS NE-0/2 (070)	B
410200	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	0	N	WESTON BLDG-21 SOILS NE-0/2 (071)	B
410188	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	3	N	WESTON BLDG-21 SOILS NE-0/2 (072)	C
410192	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS NE-0/2 (073)	A
410194	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	12	N	WESTON BLDG-21 SOILS NE-0/2 (074)	B
410184	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	5	N	WESTON BLDG-21 SOILS NE-0/2 (078)	A
410187	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/2 (079)	C
410205	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	8	N	WESTON BLDG-21 SOILS NW-0/1 (053)	B
410211	10/11/94	10/12/94	M. HENSLEY	CONT	0.7	16	N	WESTON BLDG-21 SOILS NW-0/1 (054)	A
410209	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	6	N	WESTON BLDG-21 SOILS NW-0/1 (061)	B
410198	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	11	N	WESTON BLDG-21 SOILS NW-0/1 (074)	B
410203	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	16	N	WESTON BLDG-21 SOILS NW-0/2 (054)	C
410193	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	17	N	WESTON BLDG-21 SOILS NW-0/2 (061)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (ND-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
410195	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	22	N	WESTON BLDG-21 SOILS NW-0/2 (074)	C
410214	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	23	N	WESTON BLDG-21 SOILS NW-0/3 (061)	A
410186	10/11/94	10/12/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG-21 SOILS SE-0/1 (061)	B
410217	10/11/94	10/12/94	M. HENSLEY	CONT	0.5	0	N	WESTON BLDG-21 SOILS SE-0/1 (065)	C
410181	10/11/94	10/12/94	M. HENSLEY	CONT	0.5	9	N	WESTON BLDG-21 SOILS SE-0/1 (076)	A
410213	10/11/94	10/12/94	M. HENSLEY	CONT	6.5	4	N	WESTON BLDG-21 SOILS SE-0/2 (061)	B
410199	10/11/94	10/12/94	M. HENSLEY	CONT	1.5	0	N	WESTON BLDG-21 SOILS SE-0/2 (065)	C
410179	10/11/94	10/12/94	M. HENSLEY	CONT	1.6	8	N	WESTON BLDG-21 SOILS SE-0/2 (076)	A
410189	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	5	N	WESTON BLDG-21 SOILS SE-0/3 (065)	B
410185	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	3	N	WESTON BLDG-21 SOILS SE-0/3 (076)	B
410210	10/11/94	10/12/94	M. HENSLEY	CONT	1.5	19	N	WESTON BLDG-21 SOILS SW-0/1 (061)	C
410219	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	8	N	WESTON BLDG-21 SOILS SW-0/1 (074)	B
410218	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	31	N	WESTON BLDG-21 SOILS SW-0/2 (061)	A
410180	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS SW-0/2 (074)	B

je No. 1
/13/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410269	10/12/94	10/13/94	M. HENSLEY	CONT	1.9	12	N	WESTON BLDG-21 SOILS CC-0/1 (040)	A
9410264	10/12/94	10/13/94	M. HENSLEY	CONT	1.7	2	N	WESTON BLDG-21 SOILS CC-0/1 (044)	B
9410259	10/12/94	10/13/94	M. HENSLEY	CONT	1.2	3	N	WESTON BLDG-21 SOILS CC-0/1 (047)	B
9410266	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS CC-0/1 (052)	A
9410268	10/12/94	10/13/94	M. HENSLEY	CONT	0.7	8	N	WESTON BLDG-21 SOILS CC-0/1 (053)	C
9410263	10/12/94	10/13/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS CC-0/1 (054)	A
9410260	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	12	N	WESTON BLDG-21 SOILS CC-0/1 (061)	A
9410276	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS CC-0/1 (065)	C
9410275	10/12/94	10/13/94	M. HENSLEY	CONT	1.2	18	N	WESTON BLDG-21 SOILS CC-0/1 (066)	A
9410277	10/12/94	10/13/94	M. HENSLEY	CONT	0.9	4	N	WESTON BLDG-21 SOILS CC-0/1 (070)	C
9410271	10/12/94	10/13/94	M. HENSLEY	CONT	0.9	9	N	WESTON BLDG-21 SOILS CC-0/1 (071)	C
9410283	10/12/94	10/13/94	M. HENSLEY	CONT	1.3	13	N	WESTON BLDG-21 SOILS CC-0/1 (074)	A
9410280	10/12/94	10/13/94	M. HENSLEY	CONT	0.5	0	N	WESTON BLDG-21 SOILS CC-0/1 (076)	B
9410285	10/12/94	10/13/94	M. HENSLEY	CONT	0.7	3	N	WESTON BLDG-21 SOILS CC-0/1 (079)	C
9410258	10/12/94	10/13/94	M. HENSLEY	CONT	1.0	9	N	WESTON BLDG-21 SOILS CC-0/2 (044)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

AMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
10261	10/12/94	10/13/94	H. HENSLEY	CONT	1.2	21	N	WESTON BLDG-21 SOILS CC-0/2 (047)	C
10267	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	10	N	WESTON BLDG-21 SOILS CC-0/2 (052)	C
10262	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	5	N	WESTON BLDG-21 SOILS CC-0/2 (053)	B
10270	10/12/94	10/13/94	H. HENSLEY	CONT	1.6	21	N	WESTON BLDG-21 SOILS CC-0/2 (054)	B
10287	10/12/94	10/13/94	H. HENSLEY	CONT	2.6	7	N	WESTON BLDG-21 SOILS CC-0/2 (061)	C
10262	10/12/94	10/13/94	H. HENSLEY	CONT	1.9	8	N	WESTON BLDG-21 SOILS CC-0/2 (065)	A
10265	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	12	N	WESTON BLDG-21 SOILS CC-0/2 (066)	C
10281	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS CC-0/2 (070)	A
10274	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	16	N	WESTON BLDG-21 SOILS CC-0/2 (071)	B
10272	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	18	N	WESTON BLDG-21 SOILS CC-0/2 (074)	A
10284	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	7	N	WESTON BLDG-21 SOILS CC-0/2 (076)	B
10279	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	7	N	WESTON BLDG-21 SOILS CC-0/2 (079)	C
10273	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	6	N	WESTON BLDG-21 SOILS CC-0/3 (076)	B
10286	10/12/94	10/13/94	H. HENSLEY	CONT	2.0	18	N	WESTON BLDG-21 SOILS NE-0/1 (076)	B
10278	10/12/94	10/13/94	H. HENSLEY	CONT	1.4	10	N	WESTON BLDG-21 SOILS NE-0/2 (076)	B

HEALTH PHYSICS DATA SHEET

AN MARTIN HENSLEY

P NO. [REDACTED]

PG: 1 OF 2

VERHOFF	INST./PROBE ID #	NEXT CAL.DUE DATE	INST. OPERATOR NAME AND HP NO.
AC	5248/5139	12-14-94	HENSLEY [REDACTED]
RM 200			
C-5			
ETA/GAMMA	3643/5069	11-12-94	HENSLEY
IDLER	3645/3660	10-13-94	HENSLEY

DATE	DESCRIPTION	AREA	COUNT RESULTS						
			PAC	SRM 200	PC-5	BETA GAMMA	FIDLER		
			DPM	DPM	CPM	MR	CPM		
			100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2
0-5-94	BLD: 21 SURROUNDING (SPOILS AREA) SOILS WESTON								
0-5-94	INSTRUMENT CHECK	BLD: 88	14K			45			
	SOIL SAMPLE SW 0/1 (006)	SPOILS AREA				N/D	N/D	N/D	
	SS # SW 0/2 (006)								
	SS # NE 0/1 (009)								
	SS # SE 0/1 (009)								
	SS # NE 0/1 (007)								
	SS # SE 0/1 (007)								
	SS # SE 0/2 (007)								
	SS # NE 0/1 (011)								
	SS # NE 0/2 (011)								
	SS # NW 0/1 (017)								
	SS # NE 0/1 (017)								
	SS # NE 0/2 (017)								
	SS # SE 0/1 (017)								
	SS # SE 0/2 (017)								
	SS # NE 0/1 (015)								
	SS # NE 0/2 (015)								
	SS # NE 0/1 (026)								
	SS # NE 0/2 (026)								

Reviewed by: _____ HP# _____ DATE _____

COMMENTS:

N/D = NON-DETECTABLE PAC = 7 K CPM SS = SOIL SAMPLE

DATE	DESCRIPTION	AREA	COUNT RESULTS					Page 2 of 2		
			PAC	SRM	PC-5	BETA GAMMA	FIDLER			
10-5-94	BLD: 21 SURROUNDING SOILS (SPOILS AREA) WESTON		DPM	DPM	CPM	MR	CPM			
			100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2	
			14K			85 10 45th	130	14K	3K	
10-5-94	SS# NE 0/1 (026)	SPOILS AREA				N/D	N/D	N/D		
	SS# NE 0/2 (026)									
	SS# SE 0/1 (026)									
	SS# SW 0/1 (026)									
	SS# NW 0/1 (026)									
WESTON	* PERSONNEL CHECK		N/D							
	ANDY SPERRY		N/D							
	SCOTT PITNER		N/D							
	DONALD SCHILLING		N/D							

Reviewed by: _____ HPD _____ DATE _____

COMMENTS: ND = NON DETECTABLE

Page No. 1
0/06/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9409421	10/05/94	10/06/94	J. TACKETT	CONT	1.3	12	N	WESTON BLDG-21 SOILS NE-0/1 (007)	C
9409412	10/05/94	10/06/94	J. TACKETT	CONT	1.2	14	N	WESTON BLDG-21 SOILS NE-0/1 (009)	C
9409419	10/05/94	10/06/94	J. TACKETT	CONT	0.6	0	N	WESTON BLDG-21 SOILS NE-0/1 (011)	B
9409413	10/05/94	10/06/94	J. TACKETT	CONT	0.3	0	N	WESTON BLDG-21 SOILS NE-0/1 (015)	B
9409429	10/05/94	10/06/94	J. TACKETT	CONT	1.1	14	N	WESTON BLDG-21 SOILS NE-0/1 (017)	C
27	10/05/94	10/06/94	J. TACKETT	CONT	1.6	11	N	WESTON BLDG-21 SOILS NE-0/1 (026)	B
9409425	10/05/94	10/06/94	J. TACKETT	CONT	0.9	9	N	WESTON BLDG-21 SOILS NE-0/2 (011)	B
9409428	10/05/94	10/06/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG-21 SOILS NE-0/2 (015)	A
9409418	10/05/94	10/06/94	J. TACKETT	CONT	1.1	11	N	WESTON BLDG-21 SOILS NE-0/2 (017)	C
9409417	10/05/94	10/06/94	J. TACKETT	CONT	1.0	11	N	WESTON BLDG-21 SOILS NE-0/2 (026)	B
9409414	10/05/94	10/06/94	J. TACKETT	CONT	1.3	18	N	WESTON BLDG-21 SOILS NW-0/1 (017)	A
9409411	10/05/94	10/06/94	J. TACKETT	CONT	0.6	10	N	WESTON BLDG-21 SOILS NW-0/2 (0017)	A
9409424	10/05/94	10/06/94	J. TACKETT	CONT	1.3	13	N	WESTON BLDG-21 SOILS SE-0/1 (007)	C
9409410	10/05/94	10/06/94	J. TACKETT	CONT	1.1	0	N	WESTON BLDG-21 SOILS SE-0/1 (009)	B
9409420	10/05/94	10/06/94	J. TACKETT	CONT	1.3	18	N	WESTON BLDG-21 SOILS SE-0/1 (017)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MOORE ISO-TOPIES	GRID LOCATION	WELL
409423	10/05/94	10/06/94	J. TACKETT	CONT	1.2	24	N	WESTON BLDG-21 SOILS SE-0/1 (026)	A
409422	10/05/94	10/06/94	J. TACKETT	CONT	0.8	12	N	WESTON BLDG-21 SOILS SE-0/2 (007)	B
409415	10/05/94	10/06/94	J. TACKETT	CONT	1.2	6	N	WESTON BLDG-21 SOILS SE-0/2 (017)	C
409416	10/05/94	10/06/94	J. TACKETT	CONT	1.7	21	N	WESTON BLDG-21 SOILS SW-0/1 (006)	A
409430	10/05/94	10/06/94	J. TACKETT	CONT	1.0	11	N	WESTON BLDG-21 SOILS SW-0/1 (026)	B
94	10/05/94	10/06/94	J. TACKETT	CONT	1.0	25	N	WESTON BLDG-21 SOILS SW-0/2 (006)	A

Ave = 1.26 12
 MAX = 1.7 21

HEALTH PHYSICS DATA SHEET

E MARTIN HENSLEY

PG: 1 OF 2

NO. [REDACTED]

ERHOFF	INST./PROBE ID #	NEXT CAL.DUE DATE	INST. OPERATOR NAME AND HP NO.
	5010/2783	11-18-94	HENSLEY [REDACTED]
1200			
-5			
PA/GAMMA	3643/5069	11-12-94	HENSLEY [REDACTED]
DLER	3716/3432	12-28-94	HENSLEY [REDACTED]

TE	DESCRIPTION	AREA	COUNT RESULTS						
			PAC	SRM	PC-5	BETA	FIDLER		
			DPM	DPM	CPM	MR	CPM		
			100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2
12-94	BLD:21 SURROUNDING SOILS (SPOILS AREA) WESTON								
12-94	INSTRUMENT CHECK	BLD:88	17K			45	130	4K	4K
	SOIL SAMPLE NE 0/1 (076)	SPOILS AREA				N/D	24K	33K	5K
	SS# NE 0/2 (076)						4K	46K	36K
	SS# CC 0/1 (076)								
	SS# CC 0/2 (076)								
	SS# CC 0/3 (076)								
	SS# CC 0/1 (079)								
	SS# CC 0/2 (079)								
	SS# CC 0/1 (070)								
	SS# CC 0/2 (070)								
	SS# CC 0/1 (071)								
	SS# CC 0/2 (071)								
	SS# CC 0/1 (074)								
	SS# CC 0/2 (074)								
	SS# CC 0/1 (065)								
	SS# CC 0/2 (065)								
	SS# CC 0/1 (066)								
	SS# CC 0/2 (066)								
	SS# CC 0/1 (061)								
	SS# CC 0/2 (061)								

Reviewed by: _____ HP# _____ DATE _____

COMMENTS:

100 - 100% DETECTABLE DAP = 9 K V CPM SS = SOIL SAMPLE

DESCRIPTION		AREA	COUNT RESULTS						Page 2 of 2
94	BLD: 21 SURROUNDING (SPORTS AREA) SOILS WESTON			PAC	SRM 200	PC-5	BETA GAMMA	FIDLER	
				DPM	DPM	CPM	HR	CPM	
				100 cm ²	100 cm ²	100 cm ²	HR	CH-1	CH-2
				17K			Bk 45TH 130 24K 4K	4K 33K 46K	4K 5K 36K
	SS# CC 0/1 (052)						N/D	N/D	N/D
	SS# CC 0/2 (052)								
	SS# CC 0/1 (053)								
	SS# CC 0/2 (053)								
	SS# CC 0/1 (054)								
	SS# CC 0/2 (054)								
	SS# CC 0/1 (044)								
	SS# CC 0/2 (044)								
	SS# CC 0/1 (047)								
	SS# CC 0/2 (047)								
	SS# CC 0/1 (040)								
	SS# CC 0/2 (040)						✓	✓	✓
ESTON	* PERSONNEL CHECK			N/D					
	ANDY SPERRY			N/D					
	TANYA PEAFEE			N/D					
	SCOTT PITNER			N/D					
	DONALD SCHELLING			N/D					
	* CC (078) 20K ABOVE BKG								
	* All personnel & EQUIPMENT CHECK FREE OF CONTAMINATION								

Reviewed by: _____ HPD _____ DATE _____

COMMENTS: N/D = NON DETECTABLE

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO- TOPES	GRID LOCATION	WELL
9410269	10/12/94	10/13/94	M. HENSLEY	CONT	1.9	12	N	WESTON BLDG-21 SOILS CC-0/1 (040)	A
9410264	10/12/94	10/13/94	M. HENSLEY	CONT	1.7	2	N	WESTON BLDG-21 SOILS CC-0/1 (044)	B
9410259	10/12/94	10/13/94	M. HENSLEY	CONT	1.2	3	N	WESTON BLDG-21 SOILS CC-0/1 (047)	B
9410266	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS CC-0/1 (052)	A
9410268	10/12/94	10/13/94	M. HENSLEY	CONT	0.7	8	N	WESTON BLDG-21 SOILS CC-0/1 (053)	C
9410263	10/12/94	10/13/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS CC-0/1 (054)	A
9410260	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	12	N	WESTON BLDG-21 SOILS CC-0/1 (061)	A
9410276	10/12/94	10/13/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS CC-0/1 (065)	C
9410275	10/12/94	10/13/94	M. HENSLEY	CONT	1.2	18	N	WESTON BLDG-21 SOILS CC-0/1 (066)	A
9410277	10/12/94	10/13/94	M. HENSLEY	CONT	0.9	4	N	WESTON BLDG-21 SOILS CC-0/1 (070)	C
9410271	10/12/94	10/13/94	M. HENSLEY	CONT	0.9	9	N	WESTON BLDG-21 SOILS CC-0/1 (071)	C
9410283	10/12/94	10/13/94	M. HENSLEY	CONT	1.3	13	N	WESTON BLDG-21 SOILS CC-0/1 (074)	A
9410280	10/12/94	10/13/94	M. HENSLEY	CONT	0.5	0	N	WESTON BLDG-21 SOILS CC-0/1 (076)	B
9410285	10/12/94	10/13/94	M. HENSLEY	CONT	0.7	3	N	WESTON BLDG-21 SOILS CC-0/1 (079)	C
9410258	10/12/94	10/13/94	M. HENSLEY	CONT	1.0	9	N	WESTON BLDG-21 SOILS CC-0/2 (044)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410261	10/12/94	10/13/94	H. HENSLEY	CONT	1.2	21	N	WESTON BLDG-21 SOILS CC-0/2 (047)	C
9410267	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	10	N	WESTON BLDG-21 SOILS CC-0/2 (052)	C
9410262	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	5	N	WESTON BLDG-21 SOILS CC-0/2 (053)	B
9410270	10/12/94	10/13/94	H. HENSLEY	CONT	1.6	21	N	WESTON BLDG-21 SOILS CC-0/2 (054)	B
9410287	10/12/94	10/13/94	H. HENSLEY	CONT	2.6	7	N	WESTON BLDG-21 SOILS CC-0/2 (061)	C
9410282	10/12/94	10/13/94	H. HENSLEY	CONT	1.9	8	N	WESTON BLDG-21 SOILS CC-0/2 (065)	A
9410265	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	12	N	WESTON BLDG-21 SOILS CC-0/2 (066)	C
9410281	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS CC-0/2 (070)	A
9410274	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	16	N	WESTON BLDG-21 SOILS CC-0/2 (071)	B
9410272	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	18	N	WESTON BLDG-21 SOILS CC-0/2 (074)	A
9410284	10/12/94	10/13/94	H. HENSLEY	CONT	1.3	7	N	WESTON BLDG-21 SOILS CC-0/2 (076)	B
9410279	10/12/94	10/13/94	H. HENSLEY	CONT	1.1	7	N	WESTON BLDG-21 SOILS CC-0/2 (079)	C
9410273	10/12/94	10/13/94	H. HENSLEY	CONT	0.8	6	N	WESTON BLDG-21 SOILS CC-0/3 (076)	B
9410286	10/12/94	10/13/94	H. HENSLEY	CONT	2.0	18	N	WESTON BLDG-21 SOILS NE-0/1 (076)	B
9410278	10/12/94	10/13/94	H. HENSLEY	CONT	1.4	10	N	WESTON BLDG-21 SOILS NE-0/2 (076)	B

Ave = 1.2 10
 Max = 2.6 21

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

HEALTH PHYSICS DATA SHEET

E MARTIN HENSLEY

PG: 1 OF 2

NO. [REDACTED]

RHOFF	INST./PROBE ID #	NEXT CAL.DUE DATE	INST. OPERATOR NAME AND HP NO.
	5010/2783	11-18-94	HENSLEY [REDACTED]
200			
5			
A/GAMMA	3643/5069	11-12-94	HENSLEY [REDACTED]
OLER	3716/3432	12-28-94	HENSLEY [REDACTED]

DATE	DESCRIPTION	AREA	COUNT RESULTS							
				PAC	SRM	PC-5	BETA GAMMA	FIDLER		
				DPM	DPM	CPM	MR	CPM		
				100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2
11-94	BLD 21 SURROUNDING SOILS (SPOILS AREA) WESTON									
-11-94	INSTRUMENT CHECK	BLD: 88		17K			44	130	4K	4K
								24K	35K	5K
								4K	46K	35K
	SOIL SAMPLE NE 0/1 (053)	SPOILS AREA					N/D	N/D	N/D	
	SS# NE 0/2 (053)									
	SS# NW 0/1 (053)									
	SS# NE 0/1 (054)									
	SS# NE 0/2 (054)									
	SS# NW 0/1 (054)									
	SS# NW 0/2 (054)									
	SS# NW 0/1 (061)									
	SS# NW 0/2 (061)									
	SS# NW 0/3 (061)									
	SS# NE 0/1 (061)									
	SS# NE 0/2 (061)									
	SS# SW 0/1 (061)									
	SS# SW 0/2 (061)									
	SS# SE 0/1 (061)									
	SS# SE 0/2 (061)									
	SS# SE 0/1 (065)									
	SS# SE 0/2 (065)									
	SS# SE 0/3 (065)									

Reviewed by: _____ HP# _____ DATE _____

REMARKS: N/D = NOW - DETECTABLE PAC = 8.5 K CPM SS = SOIL SAMPLE

DESCRIPTION		AREA	COUNT RESULTS			Page 2 of 2	
-1-94 BLD: 21 SURROUNDING SOILS (SPOILS AREA) WESTON			PAC	SRM 200	PC-5	BETA SAMMA	FIDLER
			DPM	DPM	CPM	MR	CPM
			100 cm ²	100.2 cm ²	100.2 cm ²	HR	CH-1 OUT CH-2
			17K			85 1. 44th	130 4K 4K 24K 35K 5K 4K 46K 35K
-11-94	SS# NE 0/1 (065)					N/D	N/D N/D
	SS# NE 0/2 (065)						
	SS# NE 0/1 (066)						
	SS# NE 0/2 (066)						
	SS# NE 0/1 (070)						
	SS# NE 0/2 (070)						
	SS# NE 0/1 (071)						
	SS# NE 0/2 (071)						
	SS# NE 0/1 (072)						
	SS# NE 0/2 (072)						
	SS# NE 0/1 (073)						
	SS# NE 0/2 (073)						
	SS# NE 0/1 (074)						
	SS# NE 0/2 (074)						
	SS# NW 0/1 (074)						
	SS# NW 0/2 (074)						
	SS# SW 0/1 (074)						
	SS# SW 0/2 (074)						
	SS# NE 0/1 (079)						
	SS# NE 0/2 (079)						
	SS# NE 0/1 (078)						
	SS# NE 0/2 (078)						
	SS# SE 0/1 (076)						
	SS# SE 0/2 (076)						
	SS# SE 0/3 (076)					✓	✓ ✓
	* PERSONNEL CHECK		N/D				
	ANDY SPERRY		N/D				
	TANYA PFAFF		N/D				
	SCOTT PITNER		N/D				
	DONALD SCHILLING		N/D				

Reviewed by: _____ HPD _____ DATE _____

COMMENTS: N/D = NON-DETECTABLE

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410212	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	7	N	WESTON BLDG-21 SOILS NE-0/1 (053)	C
9410220	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/1 (054)	B
9410208	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS NE-0/1 (061)	A
9410206	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	22	N	WESTON BLDG-21 SOILS NE-0/1 (065)	C
9410191	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	18	N	WESTON BLDG-21 SOILS NE-0/1 (066)	C
9410201	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	0	N	WESTON BLDG-21 SOILS NE-0/1 (070)	A
9410197	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	4	N	WESTON BLDG-21 SOILS NE-0/1 (071)	C
9410183	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	2	N	WESTON BLDG-21 SOILS NE-0/1 (072)	C
9410182	10/11/94	10/12/94	M. HENSLEY	CONT	2.3	3	N	WESTON BLDG-21 SOILS NE-0/1 (073)	C
9410196	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	11	N	WESTON BLDG-21 SOILS NE-0/1 (074)	A
9410178	10/11/94	10/12/94	M. HENSLEY	CONT	0.4	0	N	WESTON BLDG-21 SOILS NE-0/1 (078)	B
9410177	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	7	N	WESTON BLDG-21 SOILS NE-0/1 (079)	C
9410207	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	0	N	WESTON BLDG-21 SOILS NE-0/2 (053)	B
9410202	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS NE-0/2 (054)	A
9410204	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	20	N	WESTON BLDG-21 SOILS NE-0/2 (061)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410215	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	0	N	WESTON BLDG-21 SOILS NE-0/2 (065)	B
9410216	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	8	N	WESTON BLDG-21 SOILS NE-0/2 (066)	C
9410190	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	13	N	WESTON BLDG-21 SOILS NE-0/2 (070)	B
9410200	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	0	N	WESTON BLDG-21 SOILS NE-0/2 (071)	B
9410188	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	3	N	WESTON BLDG-21 SOILS NE-0/2 (072)	C
9410192	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS NE-0/2 (073)	A
9410194	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	12	N	WESTON BLDG-21 SOILS NE-0/2 (074)	B
9410184	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	5	N	WESTON BLDG-21 SOILS NE-0/2 (078)	A
9410187	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/2 (079)	C
9410205	10/11/94	10/12/94	M. HENSLEY	CONT	0.9	8	N	WESTON BLDG-21 SOILS NW-0/1 (053)	B
9410211	10/11/94	10/12/94	M. HENSLEY	CONT	0.7	16	N	WESTON BLDG-21 SOILS NW-0/1 (054)	A
9410209	10/11/94	10/12/94	M. HENSLEY	CONT	1.0	6	N	WESTON BLDG-21 SOILS NW-0/1 (061)	B
9410198	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	11	N	WESTON BLDG-21 SOILS NW-0/1 (074)	B
9410203	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	16	N	WESTON BLDG-21 SOILS NW-0/2 (054)	C
9410193	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	17	N	WESTON BLDG-21 SOILS NW-0/2 (061)	A

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410195	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	22	N	WESTON BLDG-21 SOILS NW-0/2 (074)	C
9410214	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	23	N	WESTON BLDG-21 SOILS NW-0/3 (061)	A
9410186	10/11/94	10/12/94	M. HENSLEY	CONT	0.3	0	N	WESTON BLDG-21 SOILS SE-0/1 (061)	B
9410217	10/11/94	10/12/94	M. HENSLEY	CONT	0.5	0	N	WESTON BLDG-21 SOILS SE-0/1 (065)	C
9410181	10/11/94	10/12/94	M. HENSLEY	CONT	0.5	9	N	WESTON BLDG-21 SOILS SE-0/1 (076)	A
9410213	10/11/94	10/12/94	M. HENSLEY	CONT	6.5	4	N	WESTON BLDG-21 SOILS SE-0/2 (061)	B
9410199	10/11/94	10/12/94	M. HENSLEY	CONT	1.5	0	N	WESTON BLDG-21 SOILS SE-0/2 (065)	C
9410179	10/11/94	10/12/94	M. HENSLEY	CONT	1.6	8	N	WESTON BLDG-21 SOILS SE-0/2 (076)	A
9410189	10/11/94	10/12/94	M. HENSLEY	CONT	1.1	5	N	WESTON BLDG-21 SOILS SE-0/3 (065)	B
9410185	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	3	N	WESTON BLDG-21 SOILS SE-0/3 (076)	B
9410210	10/11/94	10/12/94	M. HENSLEY	CONT	1.5	19	N	WESTON BLDG-21 SOILS SW-0/1 (061)	C
9410219	10/11/94	10/12/94	M. HENSLEY	CONT	1.4	8	N	WESTON BLDG-21 SOILS SW-0/1 (074)	B
9410218	10/11/94	10/12/94	M. HENSLEY	CONT	1.3	31	N	WESTON BLDG-21 SOILS SW-0/2 (061)	A
9410180	10/11/94	10/12/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS SW-0/2 (074)	B

Ave = 1.2 9
 Max = 6.5 31

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

HEALTH PHYSICS DATA SHEET

APL MARTIN HENSLEY

P NO. [REDACTED]

Pg: 1 OF 2

VERHOFF	INST./PROBE ID #	NEXT CAL.DUE DATE	INST. OPERATOR NAME AND HP NO.
AC	5010/2783	11-18-94	HENSLEY [REDACTED]
RM-200			
C-5			
ETA/GAMMA	3643/5069	11-12-94	HENSLEY [REDACTED]
IDLER	3432/3716	12-28-94	HENSLEY [REDACTED]

DATE	DESCRIPTION	AREA	COUNT RESULTS						
			PAC	SRM 200	PC-5	BETA GAMMA	FIDLER		
			DPM	DPM	CPM	MR	CPM		
			100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2
0-10-94	BLD: 21 SURROUNDING (SPOILS AREA) SOILS WESTON								
0-10-94	INSTRUMENT CHECK	BLD: 88	17K			45	130	4K	4K
	SOIL SAMPLE CC 0/1 (023)	SPOILS AREA				N/P	25K	34K	5K
	SS# NW 0/1 (023)						5K	46K	35K
	SS# NW 0/2 (023)								
	SS# NE 0/1 (023)								
	SS# NE 0/2 (023)								
	SS# SE 0/1 (027)								
	SS# SE 0/2 (027)								
	SS# NE 0/1 (027)								
	SS# NE 0/2 (027)								
	SS# NE 0/1 (028)								
	SS# NE 0/2 (028)								
	SS# NW 0/1 (028)								
	SS# NW 0/2 (028)								
	SS# NE 0/1 (032)								
	SS# NE 0/2 (032)								
	SS# SE 0/1 (032)								
	SS# SE 0/2 (032)								
	SS# SE 0/1 (031)								
	SS# SE 0/2 (031)								

Reviewed by: _____ HP# _____ DATE _____

COMMENTS: PAC = 8.5 K CPM N/D = NON-DETECTABLE SS = SOIL SAMPLES

DESCRIPTION		AREA	COUNT RESULTS				Page 2 of 2		
-10-94	B&D: 21 SURROUNDING SOILS (SPOILS AREA) WESTON			PAC	SRM 200	PC-5	BETA GAMMA	FIDLER	
				DPM	DPM	CPM	MR	CPM	
				100 cm ²	100 cm ²	100 cm ²	HR	CH-1	CH-2
				17K			85 45 TH	130 25K 5K	4K 34K 46K 35K
-10-94	SS# NW 0/1 (040)						N/D	N/D	N/D
	SS# NW 0/2 (040)								
	SS# NE 0/1 (040)								
	SS# NE 0/2 (040)								
	SS# SE 0/1 (040)								
	SS# SE 0/2 (040)								
	SS# SE 0/1 (044)								
	SS# SE 0/2 (044)								
	SS# NE 0/1 (047)								
	SS# NE 0/2 (047)								
	SS# NW 0/1 (047)								
	SS# NW 0/2 (047)								
	SS# SW 0/1 (047)								
	SS# SW 0/2 (047)								
	SS# SE 0/1 (047)								
	SS# SE 0/2 (047)								
	SS# SE 0/1 (052)								
	SS# SE 0/2 (052)								
	SS# SE 0/3 (052)								
	SS# NE 0/1 (052)								
	SS# NE 0/2 (052)								
	SS# NW 0/1 (052)								
	SS# NW 0/2 (052)								
							↓	↓	↓
	* PERSONNEL CHECK			N/D					
	ANDY SPERRY			N/D					
	TANYA PFAFF			N/D					
	SCOTT PITNER			N/D					
	DONALD SCHILLING			N/D					

Reviewed by: _____ HPD _____ DATE _____

COMMENTS: ND = NON-DETECTABLE PAC SOURCE = 8.5K CPM SS = SOIL SAMPLE

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410124	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	14	N	WESTON BLDG-21 SOILS CC-0/1 (023)	C
9410154	10/10/94	10/11/94	M. HENSLEY	CONT	0.2	3	N	WESTON BLDG-21 SOILS NE-0/1 (023)	B
9410130	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	13	N	WESTON BLDG-21 SOILS NE-0/1 (027)	C
9410149	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	14	N	WESTON BLDG-21 SOILS NE-0/1 (028)	A
9410147	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	1	N	WESTON BLDG-21 SOILS NE-0/1 (032)	C
9410126	10/10/94	10/11/94	M. HENSLEY	CONT	0.8	6	N	WESTON BLDG-21 SOILS NE-0/1 (040)	B
9410136	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	17	N	WESTON BLDG-21 SOILS NE-0/1 (044)	B
9410118	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	9	N	WESTON BLDG-21 SOILS NE-0/1 (047)	C
9410128	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS NE-0/1 (052)	C
9410146	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	6	N	WESTON BLDG-21 SOILS NE-0/2 (023)	B
9410150	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	11	N	WESTON BLDG-21 SOILS NE-0/2 (027)	B
9410139	10/10/94	10/11/94	M. HENSLEY	CONT	0.8	15	N	WESTON BLDG-21 SOILS NE-0/2 (028)	C
9410145	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	9	N	WESTON BLDG-21 SOILS NE-0/2 (032)	A
9410140	10/10/94	10/11/94	M. HENSLEY	CONT	0.6	7	N	WESTON BLDG-21 SOILS NE-0/2 (040)	B
9410132	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	18	N	WESTON BLDG-21 SOILS NE-0/2 (047)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410114	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	2	N	WESTON BLDG-21 SOILS NE-0/2 (052)	B
9410142	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	15	N	WESTON BLDG-21 SOILS NW-0/1 (023)	C
9410151	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	10	N	WESTON BLDG-21 SOILS NW-0/1 (028)	B
9410122	10/10/94	10/11/94	M. HENSLEY	CONT	1.8	18	N	WESTON BLDG-21 SOILS NW-0/1 (040)	A
9410117	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	22	N	WESTON BLDG-21 SOILS NW-0/1 (047)	A
9410116	10/10/94	10/11/94	M. HENSLEY	CONT	2.9	19	N	WESTON BLDG-21 SOILS NW-0/1 (052)	A
9410152	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	4	N	WESTON BLDG-21 SOILS NW-0/2 (023)	C
9410156	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	15	N	WESTON BLDG-21 SOILS NW-0/2 (028)	C
9410148	10/10/94	10/11/94	M. HENSLEY	CONT	1.6	8	N	WESTON BLDG-21 SOILS NW-0/2 (040)	C
9410138	10/10/94	10/11/94	M. HENSLEY	CONT	0.9	18	N	WESTON BLDG-21 SOILS NW-0/2 (047)	A
9410120	10/10/94	10/11/94	M. HENSLEY	CONT	1.8	23	N	WESTON BLDG-21 SOILS NW-0/2 (052)	B
9410155	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	2	N	WESTON BLDG-21 SOILS SE-0/1 (027)	A
9410137	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	8	N	WESTON BLDG-21 SOILS SE-0/1 (031)	C
9410143	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	21	N	WESTON BLDG-21 SOILS SE-0/1 (032)	A
9410121	10/10/94	10/11/94	M. HENSLEY	CONT	0.5	4	N	WESTON BLDG-21 SOILS SE-0/1 (040)	C

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9410141	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	4	N	WESTON BLDG-21 SOILS SE-0/1 (044)	A
9410123	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	6	N	WESTON BLDG-21 SOILS SE-0/1 (047)	B
9410115	10/10/94	10/11/94	M. HENSLEY	CONT	0.4	1	N	WESTON BLDG-21 SOILS SE-0/1 (052)	C
9410144	10/10/94	10/11/94	M. HENSLEY	CONT	0.4	1	N	WESTON BLDG-21 SOILS SE-0/2 (027)	B
9410133	10/10/94	10/11/94	M. HENSLEY	CONT	1.4	12	N	WESTON BLDG-21 SOILS SE-0/2 (031)	C
9410153	10/10/94	10/11/94	M. HENSLEY	CONT	1.7	15	N	WESTON BLDG-21 SOILS SE-0/2 (032)	A
9410131	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	1	N	WESTON BLDG-21 SOILS SE-0/2 (040)	A
9410135	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	20	N	WESTON BLDG-21 SOILS SE-0/2 (044)	A
9410134	10/10/94	10/11/94	M. HENSLEY	CONT	1.3	4	N	WESTON BLDG-21 SOILS SE-0/2 (047)	B
9410119	10/10/94	10/11/94	M. HENSLEY	CONT	2.2	47	N	WESTON BLDG-21 SOILS SE-0/2 (052)	A
9410125	10/10/94	10/11/94	M. HENSLEY	CONT	1.2	12	N	WESTON BLDG-21 SOILS SE-0/3 (052)	A
9410127	10/10/94	10/11/94	M. HENSLEY	CONT	1.1	12	N	WESTON BLDG-21 SOILS SW-0/1 (047)	B
9410129	10/10/94	10/11/94	M. HENSLEY	CONT	1.0	15	N	WESTON BLDG-21 SOILS SW-0/2 (047)	A

15.4 150

Ave = 1.13 11.2
Max = 2.9 47

- TEST CRITERIA -

- 1.) ACTIVITY IN THE 88 KEV WINDOW CALIBRATED FOR TH-232.
 - 2.) ACTIVITY IN THE 17 KEV WINDOW CALIBRATED FOR PU-238.
 - 3.) INDICATION OF OTHER ISOTOPES (Y) MEANS THAT ISOTOPES OTHER THAN TH-232 AND PU-238 MAY BE PRESENT.
- SEE GAMMA SPECTROSCOPY REPORT.

- METHOD STATISTICS -

WELL	PU - 238		TH - 232	
	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)	MDA (pCi/g)	UNCERTAINTY (+/-) (95 % CONFIDENCE) (pCi/g)
A	31	13	2.1	0.9
B	31	13	2.1	0.9
C	25	11	2.6	1.1

HEALTH PHYSICS DATA SHEET

AT. MARTIN HENSLEY

PG: 1 OF 1

P NO. [REDACTED]

VERHOFF	INST./PROBE ID #	NEXT CAL.DUE DATE	INST. OPERATOR NAME AND HP NO.
PAC	5010/ 2783	11-18-94	HENSLEY [REDACTED]
IRM-200			
PC-5			
BETA/GAMMA	3643/ 5069	11-12-94	HENSLEY
FIDLER	3645/ 3660	10-13-94	HENSLEY

DATE	DESCRIPTION	AREA	COUNT RESULTS						
			PAC	SRM 200	PC-5	BETA GAMMA	FIDLER		
			DPM	DPM	CPM	MR	CPM		
			100 cm ²	100 cm ²	100 cm ²	HR	CH-1	OUT	CH-2
'0-6-94	BLD: 21 SURROUNDING SOILS (SPOILS AREA) WESTON								
'0-6-94	INSTRUMENT CHECK	BLD: 88	17K			44	130	4K	3K
	SOIL SAMPLE CC 0/1 (001)	SPOILS AREA				N/D	24K	33K	5K
	SS# CC 0/2 (001)						4K	47K	35K
	SS# CC 0/1 (003)								
	SS# CC 0/2 (003)								
	SS# CC 0/1 (004)								
	SS# CC 0/2 (004)								
	SS# CC 0/1 (007)								
	SS# CC 0/2 (007)								
	SS# CC 0/1 (009)								
	SS# CC 0/2 (009)								
	SS# CC 0/1 (011)								
	SS# CC 0/2 (011)								
	SS# CC 0/1 (017)								
	SS# CC 0/2 (017)								
	SS# CC 0/1 (026)								
	SS# CC 0/2 (026)								
	* PERSONNEL CHECK ANDY SPERRY TANYA PEAKE SCOTT RETNER RONALD SCHULZ		N/D	N/D					
			N/D	N/D					
			N/D	N/D					
			N/D	N/D					

Reviewed by: _____ HP# _____ DATE _____

COMMENTS:

DPM CPM - 0 < K CPM

< = SOIL SAMPLE

ge No. 1
/06/94

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
XD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4402

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9409439	10/06/94	10/06/94	H. HENSLEY	CONF	1.1	5	N	WESTON BLDG-21 SOILS CC-0/1 (001)	C
9409440	10/06/94	10/06/94	H. HENSLEY	CONF	1.2	14	N	WESTON BLDG-21 SOILS CC-0/1 (003)	C
9409436	10/06/94	10/06/94	H. HENSLEY	CONF	0.6	0	N	WESTON BLDG-21 SOILS CC-0/1 (004)	A
9409442	10/06/94	10/06/94	H. HENSLEY	CONF	0.4	3	N	WESTON BLDG-21 SOILS CC-0/1 (007)	A
9409438	10/06/94	10/06/94	H. HENSLEY	CONF	1.1	20	N	WESTON BLDG-21 SOILS CC-0/1 (009)	A
9409431	10/06/94	10/06/94	H. HENSLEY	CONF	1.2	23	N	WESTON BLDG-21 SOILS CC-0/1 (011)	A
9409432	10/06/94	10/06/94	H. HENSLEY	CONF	0.9	10	N	WESTON BLDG-21 SOILS CC-0/1 (017)	C
9409433	10/06/94	10/06/94	H. HENSLEY	CONF	0.9	10	N	WESTON BLDG-21 SOILS CC-0/1 (026)	B
9409446	10/06/94	10/06/94	H. HENSLEY	CONF	1.2	10	N	WESTON BLDG-21 SOILS CC-0/2 (001)	B
9409441	10/06/94	10/06/94	H. HENSLEY	CONF	1.2	7	N	WESTON BLDG-21 SOILS CC-0/2 (003)	B
9409445	10/06/94	10/06/94	H. HENSLEY	CONF	0.7	0	N	WESTON BLDG-21 SOILS CC-0/2 (004)	C
9409444	10/06/94	10/06/94	H. HENSLEY	CONF	0.8	2	N	WESTON BLDG-21 SOILS CC-0/2 (007)	B
9409443	10/06/94	10/06/94	H. HENSLEY	CONF	1.3	18	N	WESTON BLDG-21 SOILS CC-0/2 (009)	A
9409437	10/06/94	10/06/94	H. HENSLEY	CONF	1.1	3	N	WESTON BLDG-21 SOILS CC-0/2 (011)	B
9409434	10/06/94	10/06/94	H. HENSLEY	CONF	1.4	3	N	WESTON BLDG-21 SOILS CC-0/2 (017)	B

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
 (MD-80030, OP. 1355)
 400 SECOND COUNT
 PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW	17 KEV WINDOW	MORE ISO-TOPIES	GRID LOCATION	WELL
9409435	10/06/94	10/06/94	M. HENSLEY	CONT	1.5	8	N	WESTON BLDG-21 SOILS CC-0/2 (025)	C
				Ave =	1.04	9.07			
				Max =	1.5	23.			

SAMPLE TAKEN 12/8/94

SAMPO 90, 1993 PA,MN,JR. Version 3.20h 1994-Dec-12 13:24:01

* G A M M A S P E C T R U M A N A L Y S I S R E P O R T *

E.G.&G. Mound Applied Technologies, Inc.

Sample description: ~~WESTON SW-0/1 (124) BD-21~~
Spectrum file name: SW01
Sample identifier : SW01
Sample geometry : EPA Dish
Sample type : Soil
Sample size : 4.750E+02 g
Measured by : EFN

Collect started on :1994-Dec-08 at 14:39:12
Collect ended on :1994-Dec-08 at 16:52:33
Live time: 8.00E+003 s Real time: 8.00E+003 s Dead time: 1.25E-002 %

Shape calibration requested : SOIL3
Shape calibration used : SOIL3
Created : 1994-Aug-02 14:00:08
Modified : 1994-Aug-02 14:00:08

Energy calibration requested : SOIL3
Energy calibration used : SOIL3
Created : 1994-Aug-01 09:13:53
Modified : 1994-Aug-01 09:13:53

Efficiency calibration requested : SOIL5
Efficiency calibration used : SOIL5
Created : 1994-Aug-25 17:18:06
Modified : 1994-Aug-25 17:18:06

Last search discrimination level: 3.00
Last search FROM channel 14 TO channel 8178
Last fitting discrimination level: 3.00
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : 0.55
Minimum acceptable confidence : 0.10
Gamma reference library : C:\SAMPO\LIBRARY\SOILLIB.ILF
with 46 isotopes and 160 gamma lines.

Peaked background file: C:\SAMPO\SPECTRA\CHMBRBK3.PTF
Energy tolerance for peaked background subtraction: 0.55 keV
Threshold factor for peak areas: 1.00

Sample description: WESTON SW-0/1 (124) BD-21

***** R A D I O N U C L I D E A N A L Y S I S R E P O R T *****

Nuclide #	Nuclide Name	Confid.	Concen. (pCi/g)	Error (%)
-----	-----	-----	-----	-----
1	K-40	0.924	4.36	7.87
2	Pb-210U	0.999	0.58	25.08
3	Ac-228Th	0.572	0.53	6.53
4	Th-234U	0.998	0.31	28.84
5	Ra-226U	0.994	1.02	21.61
6	Pb-214U	0.998	0.41	6.08
7	Bi-214U	0.544	0.44	7.21
8	Ra-224Th	0.999	0.84	14.44
9	Pb-212Th	0.995	0.66	3.43
10	Bi-212Th	0.353	0.73	18.95
11	Pu-238	0.996	455.38	5.68
12	Am-241Pu	0.884	1.81	3.98
13	Tl-208Th	0.703	0.63	6.86
14	Po xrays	0.320	11.87	4.59

NOTE: X-rays are listed for qualitative identification only. Concentration values associated with these identifications should be disregarded.

Sample description: WESTON SW-0/1 (124) BD-21

***** P E A K A S S O C I A T I O N R E P O R T *****

Nuclide #	Nuclide Name	Peak #	Peak Channel	Peak Energy (keV)	Peak Usage (%)
-----	-----	-----	-----	-----	-----
1	K-40	34	6491.34	1460.33	100.00
2	Pb-210U	8	205.41	46.44	100.00
3	Ac-228Th	18	929.12	209.38	77.91
		24	1502.39	338.31	86.56
		31	4048.42	911.04	111.50
		32	4304.22	968.64	106.22
4	Th-234U	10	280.07	63.21	56.23
		15	410.40	92.51	65.22
5	Ra-226U	17	824.75	185.86	100.00
6	Pb-214U	21	1075.54	242.12	129.66
		22	1311.04	295.19	79.07
		25	1562.66	351.87	105.53
7	Bi-214U	28	2706.54	609.10	100.23
		33	4977.86	1120.08	87.45
		35	7841.57	1764.76	118.58
8	Ra-224Th	20	1070.81	241.06	100.00
9	Pb-212Th	19	1059.43	238.49	100.70
		23	1332.28	299.98	67.65
10	Bi-212Th	29	3230.56	727.01	100.00
11	Pu-238	7	191.78	43.38	100.00
12	Am-241Pu	9	263.26	59.44	100.00
13	Tl-208Th	26	2268.05	510.59	40.17
		27	2590.10	582.90	117.39
14	Po xrays	12	341.21	76.95	92.12
		14	397.72	89.66	151.30
		15	410.40	92.51	45.56

3. Chain of Custody Forms

K.3. CHAIN OF CUSTODY FORMS

K.3.1. Chemical Analysis

K.3.2. Radiological Analysis

K.3.1. CHEMICAL ANALYSIS

RFW 21-21-001/A-7/91

[illegible][illegible][illegible]

381-596a

Custody Transfer Record/Lab Work Request

Client <u>EG&G Mound</u>		Refrigerator #												
Est. Final Proj. Sampling Date <u>Nov 94</u>		#/Type Container	Liquid											
Work Order # <u>05376-046-002</u>			Solid	A				G	G	G				
Project Contact/Phone # <u>A. Sperry 513 275 3440</u>		Volume (ML)	Liquid											
AD Project Manager <u>Gerald Beis</u>			Solid	60				500	250	500				
QC _____ Del _____ TAT _____		Preservatives												
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →	ORGANIC							INORG				
Account # _____			VOA	BNA	Pes/PCB	Herb	1	2	3	Metal	NC			

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only									
			MS	MSD													
	TMA	CC 0/1 (070)			SOIL	10-12-94	1030										
		CC 0/2 (070)					1035	1									
		CC 1/1 (070)					1030										
		CC 0/1 (052)					1440										
		CC 1/1 (052)					1440										
		CC 0/2 (052)					1445	1									
		CC 0/1 (071)					1050										
		CC 0/2 (071)					1055	1									
		CC 1/2 (071)					1055	1									
		CC 0/1 (070)					0900										

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. pH, CYANIDE, SULFIDE, TOC, TOX
2. METALS, PHENOLS
3. SEMI-VOA, PCB

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:

- 1) Shipped _____ or Hand Delivered _____
Airbill # _____
- 2) Ambient or Chilled
- 3) Received in Good Condition Y or N
- 4) Labels Indicate Properly Preserved Y or N
- 5) Received Within Holding Times Y or N

COC Tape was:

- 1) Present on Outer Package Y or N
- 2) Unbroken on Outer Package Y or N
- 3) Present on Sample Y or N
- 4) Unbroken on Sample Y or N
- COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
T. Pluff	FEDEX	10-13-94	1700				

 Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES:

Custody Transfer Record/Lab Work Request

Client <u>EG&G Hound</u>	Refrigerator #										
Est. Final Proj. Sampling Date <u>Nov 94</u>	#/Type Container	Liquid									
Work Order # <u>05376-046-002</u>	Solid	A				G	G	G			
Project Contact/Phone # <u>A. Sperry 573 825 3440</u>	Liquid										
AD Project Manager <u>Gerald Greis</u>	Solid	LD				500	250	500			
QC _____ Del _____ TAT _____	Preservatives										
Date Rec'd _____ Date Due _____	ANALYSES REQUESTED →	ORGANIC						INORG			
Account # _____		VOA	BNA	Pest	PCB	Herb	1	2	3	Metal	Z

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only									
			MS	MSD													
	TNA	CC 0/2 (0716)			SOIL	10-24-94	0905	1				1	1	1			
	✓	CC 0/3 (0716)			✓	✓	0915					1					

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. pH, Cyanide, Sulfide, Toc, Tox
2. Metals, Phenols
3. Semi-VOA, PCB

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:

- 1) Shipped ☐ or Hand Delivered ☐ Airbill # _____
- 2) Ambient or Chilled
- 3) Received in Good Condition Y or N
- 4) Labels Indicate Properly Preserved Y or N
- 5) Received Within Holding Times Y or N

COC Tape was:

- 1) Present on Outer Package Y or N
- 2) Unbroken on Outer Package Y or N
- 3) Present on Sample Y or N
- 4) Unbroken on Sample Y or N
- COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
T. P. Hoff	FEDEX	10-17-94	1700				

 Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES:

RFW 21-21-001/A-7/91

Client <u>H.G. Mound</u>		Refrigerator # _____														
Est. Final Proj. Sampling Date <u>Dec 94</u>		#/Type Container	Liquid <u>C</u>								P	P	P	P	G	
Work Order # <u>D5376-046-882</u>			Solid <u>I</u>													
Project Contact/Phone # <u>A. Sperry (513) 825-3440</u>		Volume (ml)	Liquid <u>40</u>								500	250	250	250	40	
AD Project Manager <u>A. Sperry</u>			Solid <u>I</u>													
QC _____ Del _____ TAT _____		Preservatives	<u>HCl</u>								<u>NH₄</u>	<u>NH₄</u>	<u>BGA</u>		<u>H₂O₂</u>	
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →	ORGANIC								INORG					
Account # _____			VOA	BNA	Pes/ PCB	Herb					Metal	CN	<u>Sulfide</u>	<u>Tox</u>	<u>PAH</u>	<u>TOC</u>

[illegible][illegible]

WESTON
MANAGEMENT CONSULTANTS

[illegible]

FIELD PERSONNEL TO COMPLETE ONLY SHADED AREAS								DATE/REVISIONS:				WESTON Analytics Use Only							
Special Instructions: 1. PHEN, FCC, TOK 2. Phthalate, Phenols 3. Methyl-Vinyl, PCB								_____ 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____				Samples were: 1) Shipped ____ or Hand Delivered ____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N				COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N			
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:											

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON
SOLUTIONS

Page 2 of 2

Client <u>EC & G PAULND</u>						Refrigerator # _____																
Est. Final Proj. Sampling Date <u>Dec 97</u>						#/Type Container	Liquid _____ Solid <u>G</u>									<u>G</u>	<u>G</u>	<u>G</u>	<u>G</u>			
Work Order # <u>05-76 - 076 - 002</u>						Volume	Liquid _____ Solid <u>(G)</u>									<u>250</u>	<u>500</u>	<u>250</u>	<u>250</u>			
Project Contact/Phone # <u>A. Spencer / STB 205-37710</u>							Preservatives									<u>250</u>	<u>500</u>	<u>250</u>	<u>250</u>			
AD Project Manager <u>A. Spencer</u>						ANALYSES REQUESTED →		ORGANIC				INORG										
QC _____ Del _____ TAT _____								VOA	BNA	Pest/ PCB	Herb	Metal	CN	<u>3.11.01</u>	<u>1</u>	<u>2</u>	<u>3</u>					
Date Rec'd _____ Date Due _____								WESTON Analytics Use Only														
Account # _____																						
MATRIX CODES:						Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected										
S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish		MS	MSD																			
TMP	CCS 0/2 (124)			Soil	12-8-97	0840	1															
↓	CCS 0/1 (125)			↓	↓	0800																
↓	CCS 0/2 (125)			↓	↓	0810	1															
12-8-97																						

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. pH, CN, TOC, TOX
2. Monomers, Polymers
3. Solids - Vol% PCB

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:	COC Tape was:
1) Shipped ____ or Hand Delivered ____ Airbill # _____	1) Present on Outer - Package Y or N
2) Ambient or Chilled	2) Unbroken on Outer Package Y or N
3) Received in Good Condition Y or N	3) Present on Sample Y or N
4) Labels Indicate Properly Preserved Y or N	4) Unbroken on Sample Y or N
5) Received Within Holding Times Y or N	COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
A. Sorenson	Smith	12-8-97	1720				

Discrepancies Between
Samples Labels and
COC Record? Y or N
NOTES:

381-596a

Custody Transfer Record/Lab Work Request

Client: <u>F.G.E. MORA</u>		Refrigerator #																		
Est. Final Proj. Sampling Date: <u>Dec 94</u>		#/Type Container		Liquid																
Work Order # <u>0537-046-002</u>		Volume		Solid																
Project Contact/Phone: <u>A Sperry 1513-8253440</u>		Preservatives		Liquid																
AD Project Manager: <u>A Sperry</u>				Solid																
QC Del TAT		ANALYSES REQUESTED																		
Date Rec'd		Date Due																		
Account #																				

MATRIX CODES:
 S - Soil
 SE - Sediment
 SO - Solid
 SL - Sludge
 W - Water
 O - Oil
 A - Air
 DS - Drum
 Solids
 DL - Drum
 Liquids
 L - EP/CLP
 Leachate
 WI - Wipe
 X - Other
 F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
		MS	MSD				VOA	BNA	Pos/PCB	Herb												
TMA	CC 0/1 (221)			SOIL	12/6/94	1000																
	CC 0/2 (221)					1005																
	CC 0/1 (222)					1030																
	CC 0/2 (222)					1040																
	CC 1/1 (222)					1000																
	CC 0/1 (196)					0900																
	CC 0/1 (709)					0910																
	CC 0/2 (709)					0915																
	CC 0/1 (185)					0905																
	CC 0/1 (231)					1100																

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. pH, CN, TOC, TOX
2. Metals, Phenol
3. Sem.-Vol, PCB

DATE/REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

WESTON Analytics Use Only

Samples were:
 1) Shipped ☐ or Hand Delivered ☐
 Airbill # _____
 2) Ambient or Chilled
 3) Received in Good Condition Y or N
 4) Labels Indicate Property Preserved Y or N
 5) Received Within Holding Times Y or N

COC Tape was:
 1) Present on Outer Package Y or N
 2) Unbroken on Outer Package Y or N
 3) Present on Sample Y or N
 4) Unbroken on Sample Y or N
 COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
J. Waller	Feeder	12/6/94	1700				

Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES:

Custody Transfer Record/Lab Work Request

Client: <u>EG-16 MOUND</u>			Refrigerator #																																																					
Est. Final Proj. Sampling Date: <u>Dec 94</u>			#/Type Container			Liquid: <u>6</u> Solid: <u>6</u>																																																		
Work Order # <u>0537-046-017</u>			Volume			Liquid: <u>40</u> Solid: <u>60</u>																																																		
Project Contact/Phone: <u>A Sperry 1513-825-3440</u>			Preservatives			<u>HCL</u>																																																		
AD Project Manager: <u>A Sperry</u>			ANALYSES REQUESTED			<table border="1"> <tr> <td colspan="5">ORGANIC</td> <td colspan="7">INORG</td> </tr> <tr> <td>VOA</td> <td>BNA</td> <td>Pes/PCB</td> <td>Herb</td> <td></td> <td>Metal</td> <td>CN</td> <td colspan="6"></td> </tr> <tr> <td><u>1</u></td> <td></td> <td></td> <td></td> <td></td> <td><u>1</u></td> <td><u>2</u></td> <td><u>3</u></td> <td colspan="6"></td> </tr> </table>												ORGANIC					INORG							VOA	BNA	Pes/PCB	Herb		Metal	CN							<u>1</u>					<u>1</u>	<u>2</u>	<u>3</u>						
ORGANIC					INORG																																																			
VOA	BNA	Pes/PCB	Herb		Metal	CN																																																		
<u>1</u>					<u>1</u>	<u>2</u>	<u>3</u>																																																	
QC: <u>Del</u> <u>TAT</u>			Date Rec'd			Date Due			Account #																																															
MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drums DL - Drums L - EP/CLP WI - Wipe X - Other F - Fish			Lab ID	Client ID/Description	Matrix QC Chosen (✓)	Matrix	Date Collected	Time Collected	WESTON Analytics Use Only																																															
			MS	MSD																																																				
	TMA	CC-011 (187)			SOIL	12/16/94	1130																																																	
		CC-012 (187)					1140																																																	
		CC-017 (231)					1110																																																	
		Trip Blank			Water		1115																																																	

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

- 1 pH, CN, TOC, TOX
2. Metals, phenols
3. Semi-Voa, PCB

DATE/REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

WESTON Analytics Use Only

- | | |
|---------------------------|----------------------|
| Samples were: | COC Tape was: |
| 1) Shipped <u>or</u> | 1) Present on Outer |
| Hand Delivered <u>or</u> | Package Y or N |
| Airbill # <u> </u> | 2) Unbroken on Outer |
| 2) Ambient or Chilled | Package Y or N |
| 3) Received in Good | 3) Present on Sample |
| Condition Y or N | Y or N |
| 4) Labels Indicate | 4) Unbroken on |
| Property Preserved | Sample Y or N |
| Y or N | COC Record Present |
| 5) Received Within | Upon Sample Rec't |
| Holding Times | Y or N |
| Y or N | |

 Discrepancies Between
 Samples Labels and
 COC Record? Y or N

NOTES:

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>Walt</u>	<u>Felix</u>	<u>12/16/94</u>	<u>1700</u>				

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Custody Transfer Record/Lab Work Request

WESTON

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FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions:				1. _____				Samples were: 1) Shipped ___ or Hand Delivered ___ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N			
				2. _____							
				3. _____							
				4. _____							
				5. _____							
				6. _____							
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES: _____			
J. Walker	Fedex	12/7/94	1700								

Custody Transfer Record/Lab Work Request

Client <u>FG & R Mond</u>		Refrigerator #													
Est. Final Proj. Sampling Date <u>Dec 99</u>		#/Type Container	Liquid												
Work Order # <u>OS37-046-002</u>			Solid												
Project Contact/Phone # <u>A Sperry/538253440</u>		Volume	Liquid												
AD Project Manager <u>A Sperry</u>			Solid												
QC <u>TC</u> Del <u>TAT</u>		Preservatives													
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →		ORGANIC						INORG					
Account # _____				VOA	BNA	Pes/PCB	Herb	6A				Metal	CN	Sulfide	1

[illegible]

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS								DATE/REVISIONS:						WESTON Analytics Use Only						
Special Instructions:																				
1. pH, CN, TOC, TOX 2. Metals, Phenols 3. Semi-Voc, PCB								_____ 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____						Samples were: 1) Shipped ____ or Hand Delivered ____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Property Preserved Y or N 5) Received Within Holding Times _____ Y or N						
														COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N						
Relinquished by		Received by		Date	Time	Relinquished by		Received by		Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:								
J. Walz		Fedex		12/7/04	1700															

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

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Custody Transfer Record/Lab Work Request

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FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVIEWS:				WESTON Analytics Use Only	
Special Instructions:				1. _____				Samples were: 1) Shipped ____ or Hand Delivered ____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec'd Y or N	
				2. _____					
				3. _____					
				4. _____					
				5. _____					
				6. _____					
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:	
<i>J. W. L.</i>	<i>[Signature]</i> <i>Freelex</i>	<i>12/13/94</i>	<i>1700</i>						

RFW 21-21-001/A-7/91	L372	L373	L375	L377	L378	Ref#	Cooler#	381-596a
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FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: 1 pH, C.N., TOC, TOX 2 Metals, phenols 3 Sam.-Voa, PCB				_____ 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____				Samples were: 1) Shipped ____ or Hand Delivered ____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N		COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N	
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:			
J. White	F. Lee	12/13/94	1700								

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Samples were:	COC Tape was:
1) Shipped ____ or Hand Delivered ____	1) Present on Outer Package Y or N
Airbill # _____	2) Unbroken on Outer Package Y or N
2) Ambient or Chilled	3) Present on Sample Y or N
3) Received in Good Condition Y or N	4) Unbroken on Sample Y or N
4) Labels Indicate Properly Preserved Y or N	COC Record Present Upon Sample Rec't Y or N
5) Received Within Holding Times Y or N	

Discrepancies Between
Samples Labels and
COC Record? Y or N
NOTES:

K.3.2. RADIOLOGICAL ANALYSIS

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RFW 21-21-001/A-7/91

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381-596a

381-596a

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RFW 21-21-001/A-7/91

RFW 21-21-001/A-7/91

Custody Transfer Record/Lab Work Request

Client <u>REG Mound</u>				Refrigerator # _____													
Est. Final Proj. Sampling Date <u>Nov 94</u>				#/Type Container		Liquid											
Work Order # <u>05376-046-002</u>						Solid											
Project Contact/Phone # <u>A. SPERRY / 513-825-3340</u>				Volume (ml)		Liquid											
AD Project Manager <u>GERALD GELS</u>						Solid											
QC _____ Del _____ TAT _____				Preservatives													
Date Rec'd _____ Date Due _____				ANALYSES REQUESTED →		ORGANIC					INORG						
Account # _____						VOA BNA Pest PCB Herb					Metal CN						
											1 Gamma Th Ur Pu						

WESTON Analytics Use Only										
MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)	Matrix	Date Collected	Time Collected				
			MS MSD							
S- Soil	A154N	NW 9/1 (052)		Soil	10-10-94	1540				
SE- Sediment		NW 9/2 (052)				1545				
SO- Solid		NE 9/1 (052)				1510				
SL- Sludge		NE 9/2 (052)				1515				
W- Water		NW 1/1 (052)				1540				
O- Oil										
A- Air										
DS- Drum Solids										
DL- Drum Liquids										
L- EP/TCLP Leachate										
WT- Wipe										
X- Other										
F- Fish										

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: <u>1. Gamma, Th, Ur, Pu</u>				1 _____				Samples were: 1) Shipped _____ or Hand Delivered _____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N			
				2 _____							
				3 _____							
				4 _____							
				5 _____							
				6 _____							

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:
<u>T.P. Felt</u>	<u>FED EX</u>	<u>10-13-94</u>	<u>1700</u>					

RFW 21-21-001/A-7/91

381-596a

RFW 21-21-001/A-7/91

RFW 21-21-001/A-7/91

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Custody Transfer Record/Lab Work Request

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Page 1 of 2

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Client <u>E.G. & G Mound</u>		Refrigerator # _____														
Est. Final Proj. Sampling Date <u>Nov. 94</u>		#/Type Container	Liquid								P	P	P	P	P	
Work Order # <u>05376-046-002</u>			Solid													
Project Contact/Phone # <u>A. Sperry 813-825-3448</u>		Volume (ml.)	Liquid								1000	1000	1000	1000	1000	
AD Project Manager <u>Gerald Gels</u>			Solid								1000					
QC _____ Del _____ TAT _____		Preservatives														
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →		ORGANIC						INORG						
Account # _____		VOA	BNA	Pest/PCB	Herb					Metal	CN	1	(Sediment)	PW	TR	Vr

[illegible][illegible]

381-596a

Client <u>EAG Mound</u>		Refrigerator #																		
Est. Final Proj. Sampling Date <u>Nov-94</u>		#/Type Container	Liquid																	
Work Order # <u>05376-046-002</u>			Solid											P P P P P						
Project Contact/Phone # <u>A. Sperry 513 825 3440</u>		Volume (ml)	Liquid																	
AD Project Manager <u>Gerald Gels</u>			Solid											1000 1000 1000 1000 1000						
QC _____ Del _____ TAT _____		Preservatives												HNO ₃ HNO ₃ HNO ₃ HNO ₃						
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →		ORGANIC						INORG										
Account # _____				VOA	BNA	Pest/PCB	Herb							Metal	CN	1	Seawater	Pa	Th	Ur

[illegible]

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only																							
Special Instructions: 1. Gamma, Pu, Th, U				_____ 1. _____ _____ 2. _____ _____ 3. _____ _____ 4. _____ _____ 5. _____ _____ 6. _____				Samples were: 1) Shipped ____ or Hand Delivered ____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Property Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec'd Y or N																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Relinquished by</th> <th style="width: 15%;">Received by</th> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> </tr> </thead> <tbody> <tr> <td>T. Platt</td> <td>FEDEX</td> <td>10-13-91</td> <td>1700</td> </tr> </tbody> </table>				Relinquished by	Received by	Date	Time	T. Platt	FEDEX	10-13-91	1700	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Relinquished by</th> <th style="width: 15%;">Received by</th> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				Relinquished by	Received by	Date	Time									Discrepancies Between Samples Labels and COC Record? Y or N NOTES: _____			
Relinquished by	Received by	Date	Time																												
T. Platt	FEDEX	10-13-91	1700																												
Relinquished by	Received by	Date	Time																												

381-596a

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RFW 21-21-001/A-7/91

L372

L373

L375

L377

L378

Ref#

Cooler#

381-596a

RFW 21-21-001/A-7/91

Custody Transfer Record/Lab Work Request

Client: <u>EGE Ground</u>		Refrigerator #																	
Est. Final Proj. Sampling Date: <u>Dec 94</u>		#/Type Container		Liquid															
Work Order # <u>05376-046-002</u>		Volume (mL)		Solid															
Project Contact/Phone: <u>A. Sperry 513 8253440</u>		Preservatives		Liquid															
AD Project Manager: <u>A. Sperry</u>		ANALYSES REQUESTED		Solid															
QC	Det	TAT			ORGANIC						INORG								
Date Rec'd			Date Due			VOA	BNA	Pes/PCB	Herb	Metal						N			
Account #																			

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - Liquids L - CEP/ICLP Leachate WT - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only													
			MS	MSD																	
		<u>Qwan 01 (028)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1020</u>														
		<u>CC 02 (028)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1030</u>														
		<u>CC 01 (031)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1115</u>														
		<u>CC 02 (031)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1130</u>														
		<u>CC 01 (032)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1145</u>														
		<u>CC 02 (032)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1155</u>														
		<u>NE 01 (107)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1440</u>														
		<u>SE 02 (107)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1515</u>														
		<u>NE 02 (107)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1545</u>														
		<u>SE 01 (107)</u>			<u>Soil</u>	<u>12/1/94</u>	<u>1510</u>														

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. Gamma; Pu, Th, Ue

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:	COC Tape was:
1) Shipped _____ or	1) Present on Outer
Hand Delivered _____	Package Y or N
Airbill # _____	2) Unbroken on Outer
2) Ambient or Chilled	Package Y or N
3) Received in Good	3) Present on Sample
Condition Y or N	Y or N
4) Labels Indicate	4) Unbroken on
Properly Preserved	Sample Y or N
Y or N	COC Record Present
5) Received Within	Upon Sample Rec't
Holding Times	Y or N
Y or N	

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>A. Walt</u>	<u>FedX</u>	<u>10/5/94</u>	<u>1700</u>				

Discrepancies Between
Samples Labels and
COC Record? Y or N

NOTES:

Custody Transfer Record/Lab Work Request

Client <u>EG&G Mound</u>				Refrigerator # _____																	
Est. Final Proj. Sampling Date <u>Dec 94</u>				#/Type Container		Liquid _____															
Work Order # <u>D5376-046-002</u>						Solid _____															
Project Contact/Phone # <u>A. Sperry / 513 825 3440</u>				Volume		Liquid _____															
AD Project Manager <u>A. Sperry</u>						Solid _____															
QC _____ Del _____ TAT _____				Preservatives																	
Date Rec'd _____ Date Due _____				ANALYSES REQUESTED →				ORGANIC				INORG									
Account # _____								VOA		BNA		Pes/PCB		Herb		Metal		CN		1	
WESTON Analytics Use Only																					
MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - EP/CLP Leachate WI - Wipe X - Other F - Fish		Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected													
				MS	MSD																
			QUAN NW 0/1 (107)			SOIL	12/1/94	1435													
			NW 0/1 (107)			SOIL	12/1/94	1430													
			SE 0/1 (083)			SOIL	12/1/94	1330													
			SE 1/1 (083)			SOIL	12/1/94	1330													
			NE 0/1 (141)			SOIL	12/1/94	1520													
			SW 0/1 (141)			SOIL	12/1/94	1530													
			SE 0/2 (141)			SOIL	12/1/94	1540													
			NE 0/2 (090)			SOIL	12/1/94	1405													
			SE 0/1 (090)			SOIL	12/1/94	1410													
			NE 0/2 (141)			SOIL	12/1/94	1525													
FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS						DATE/REVISIONS:						WESTON Analytics Use Only									
Special Instructions: 1. Gamma, Pu, Th, U _R						1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____															
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:													
J. Walter	Fedex	12/5/94	1700																		

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

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Page 3 of 3

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS	DATE/REVISIONS:	WESTON Analytics Use Only	
Special Instructions:	_____ 1. _____	Samples were:	COC Tape was:
1. Gamma, Pu, Th, U _R	_____ 2. _____	1) Shipped _____ or Hand Delivered _____	1) Present on Outer Package Y or N
	_____ 3. _____	Airbill # _____	2) Unbroken on Outer Package Y or N
	_____ 4. _____	2) Ambient or Chilled	3) Present on Sample Y or N
	_____ 5. _____	3) Received in Good Condition Y or N	4) Unbroken on
	_____ 6. _____	4) Labels Indicate Present / Absent	

[illegible]

Custody Transfer Record/Lab Work Request

Client: <u>EG-E Mound</u>		Refrigerator #																		
Est. Final Proj. Sampling Date: <u>Dec 94</u>		#/Type Container		Liquid																
Work Order # <u>0537-046-002</u>		Volume <u>ml</u>		Solid																
Project Contact/Phone # <u>A Sperry / 53-8253440</u>		Preservatives		Liquid																
AD Project Manager <u>A Sperry</u>				Solid																
QC Del TAT		ANALYSES REQUESTED		ORGANIC				INORG												
Date Rec'd		Date Due		VOA	BNA	Pes/PCB	Herb	Metal	CN											
Account #				WESTON Analytics Use Only																

MATRIX CODES: S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum Solids DL- Drum Liquids L- EP/CLP Leachate WI- Wipe X- Other F- Fish	Lab ID	Client ID/Description	Matrix OC Chosen (✓) MS MSD	Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
		NW 2/1 (138)		Water	12/5/94	0825																
		NW 2/1 (138)		Water	12/5/94	0825																
		NW 2/1 (138)		Water	12/5/94	0825																
		NW 2/1 (138)		Water	14/5/94	0825																
		NW 2/1 (222)		Water	12/5/94	1345																
		SW 0/1 (223)		Soil	12/5/94	1510																
		NE 0/1 (223)				1520																
		SE 0/1 (223)				1440																
		NW 0/1 (230)				1505																
		NW 0/1 (222)				1450																

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

DATE/REVISIONS:

Special Instructions:

1. Gamma, Pu, Th, Ue

1.	
2.	
3.	
4.	
5.	
6.	

WESTON Analytics Use Only

Samples were:	COC Tape was:
1) Shipped ☐ or	1) Present on Outer
Hand Delivered ☐	Package Y or N
Airbill #	2) Unbroken on Outer
	Package Y or N
2) Ambient or Chilled	3) Present on Sample
	Y or N
3) Received in Good Condition Y or N	4) Unbroken on Sample Y or N
4) Labels Indicate Properly Preserved Y or N	COC Record Present Upon Sample Rec't Y or N
5) Received Within Holding Times Y or N	

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
J. Walt	Fed Ex	12/6/94	1700				

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

RFW 21-21	A-7/91	L372	L373	L375	L377	L378	Ref#	Cooler#	381-596a
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Custody Transfer Record/Lab Work Request

Client <u>EGG Mound</u>		Refrigerator #																																																																	
Est. Final Proj. Sampling Date <u>Dec 94</u>		#/Type Container		Liquid																																																															
Work Order # <u>0537-646-857</u>		Volume <u>ML</u>		Solid																																																															
Project Contact/Phone # <u>A. Sperry (513-8253440)</u>		Preservatives		Liquid																																																															
AD Project Manager <u>A. Sperry</u>				Solid																																																															
QC <u>Del</u> TAT		ANALYSES REQUESTED		<table border="1"> <tr> <td colspan="5">ORGANIC</td> <td colspan="2">INORG</td> <td colspan="9"></td> </tr> <tr> <td>VOA</td> <td>BNA</td> <td>Pes/PCB</td> <td>Herb</td> <td></td> <td>Metal</td> <td>CN</td> <td colspan="9"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td colspan="9"></td> </tr> </table>																ORGANIC					INORG											VOA	BNA	Pes/PCB	Herb		Metal	CN																1									
ORGANIC					INORG																																																														
VOA	BNA	Pes/PCB	Herb		Metal	CN																																																													
						1																																																													
Date Rec'd _____ Date Due _____																																																																			
Account # _____																																																																			

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
			MS	MSD																			
	QUAN	NW 0/1 (196)			SOIL	12/6/94	0810																
		SW 0/2 (196)					0840																
		CC 0/1 (196)					0900																
		CC 0/1 (185)					0905																
		SW 0/1 (196)					0835																
		NF 0/1 (196)					0815																
		CC 0/1 (231)					1100																
		CC 1/1 (221)					1000																
		CC 0/1 (221)					1000																
		CC 0/1 (222)					1030																

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. Gamma, Pu, Th, Ue

DATE/REVISIONS:

- _____
- _____
- _____
- _____
- _____
- _____

WESTON Analytics Use Only

Samples were:

 1) Shipped _____ or
 Hand Delivered _____
 Airbill # _____

2) Ambient or Chilled

3) Received in Good Condition Y or N

4) Labels Indicate Properly Preserved Y or N

5) Received Within Holding Times Y or N

COC Tape was:

1) Present on Outer Package Y or N

2) Unbroken on Outer Package Y or N

3) Present on Sample Y or N

4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>F. Wall</u>	<u>Fedex</u>	<u>12/6/94</u>	<u>1700</u>				

 Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES:

Custody Transfer Record/Lab Work Request

Client: <u>EC-10 Mount</u>		Refrigerator #											
Est. Final Proj. Sampling Date: <u>Dec 94</u>		#/Type Container	Liquid										
Work Order # <u>8537-046-002</u>		Solid											
Project Contact/Phone # <u>A Sperry 513-825-3440</u>		Volume <u>ML</u>	Liquid										
AD Project Manager <u>A Sperry</u>		Solid											
QC Del <u>TAT</u>		Preservatives											
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →	ORGANIC					INORG					
Account # _____			VOA	BNA	Pes/PCB	Herb	Metal	CN					

MATRIX CODES: S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum Solids DL- Drum Liquids L- EP/TCLP Leachate WI- Wipe X- Other F- Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
			MS	MSD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. GAMMA, Pu, Th, Ue

DATE/REVISIONS:

- _____
- _____
- _____
- _____
- _____
- _____

WESTON Analytics Use Only

Samples were:

- 1) Shipped _____ or Hand Delivered _____
Airbill # _____
- 2) Ambient or Chilled
- 3) Received in Good Condition Y or N
- 4) Labels Indicate Property Preserved Y or N
- 5) Received Within Holding Times Y or N

COC Tape was:

- 1) Present on Outer Package Y or N
- 2) Unbroken on Outer Package Y or N
- 3) Present on Sample Y or N
- 4) Unbroken on Sample Y or N
- COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>Walt</u>	<u>Fedex</u>	<u>12/7/94</u>	<u>1700</u>				

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions:				1. _____				Samples were: 1) Shipped _____ or _____ Hand Delivered _____ Airbill # _____ 2) Ambient or Chilled _____ 3) Received in Good Condition Y or N _____ 4) Labels Indicate Properly Preserved Y or N _____ 5) Received Within Holding Times _____ Y or N _____ COC Tape was: 1) Present on Outer Package Y or N _____ 2) Unbroken on Outer Package Y or N _____ 3) Present on Sample Y or N _____ 4) Unbroken on Sample Y or N _____ COC Record Present Upon Sample Rec't Y or N _____			
1. Gamma, Pa, Th, U _K				2. _____							
				3. _____							
				4. _____							
				5. _____							
				6. _____							
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N _____ NOTES: _____			
Waltz	FedEx	12/3/94	1300								

1. Drawing, 12. 14. 42

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Samples were:	COC Tape was:
1) Shipped ____ or Hand Delivered ____ Airbill # _____	1) Present on Outer Package Y or N
2) Ambient or Chilled	2) Unbroken on Outer Package Y or N
3) Received in Good Condition Y or N	3) Present on Sample Y or N
4) Labels Indicate Property Preserved Y or N	4) Unbroken on Sample Y or N
5) Received Within Holding Times Y or N	COC Record Present Upon Sample Rec'd Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
→	200	200	200				

Discrepancies Between
Samples Labels and
COC Record? Y or N
NOTES:

Custody Transfer Record/Lab Work Request

[illegible]

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
2-1-81	2-1-81	2-1-81	12:00				

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

Properly Preserved Sample Y or N

5) Received Within COC Record Present Holding Times Upon Sample Rec'd Y or N

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

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Page 2 of 2

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. Order Tr. U. S.

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:

1) Shipped ☐ or
Hand Delivered ☐
Airbill #

2) Ambient or Chilled

3) Received in Good Condition Y or N

4) Labels Indicate Properly Preserved
Y or N

5) Received Within Holding Times

COC Tape was:

1) Present on Outer
Package Y or N

2) Unbroken on Outer
Package Y or N

3) Present on Sample
Y or N

4) Unbroken on
Sample Y or N

COC Record Present
Upon Sample Rec't
Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	12-2-77	1:00				

Discrepancies Between
Samples Labels and
COC Record? Y or N
NOTES:

Custody Transfer Record/Lab Work Request

Client <u>E.G. Moun</u>				Refrigerator #													
Est. Final Proj. Sampling Date <u>Dec 91</u>				#/Type Container		Liquid											
Work Order # <u>05-76-016-003</u>						Solid											
Project Contact/Phone # <u>A. Sperry / 503-850-3140</u>				Volume		Liquid											
AD Project Manager <u>A. Sperry</u>						Solid											
QC <u>Del</u> TAT <u></u>				Preservatives													
Date Rec'd <u></u> Date Due <u></u>				ANALYSES REQUESTED <u>→</u>		ORGANIC					INORG						
Account # <u></u>						VOA		BNA		Pest/PCB		Herb		Metal		CN	
						WESTON Analytics Use Only											
MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)	Matrix	Date Collected	Time Collected											
			MS MSD														
	<u>022</u>	<u>0/1 (121)</u>		<u>Sec</u>	<u>12-8-91</u>	<u>1155</u>											
		<u>0/2 (121)</u>				<u>1155</u>											
		<u>0/1 (121)</u>				<u>1200</u>											
		<u>0/2 (121)</u>				<u>1205</u>											
		<u>0/1 (121)</u>				<u>1210</u>											
		<u>0/2 (121)</u>				<u>1215</u>											
		<u>0/1 (121)</u>				<u>1210</u>											
		<u>0/2 (121)</u>				<u>1215</u>											
FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only									
Special Instructions: <u>1. Sample for T, Pb, Cu</u>				1. _____				Samples were: 1) Shipped <u>or</u> Hand Delivered <u>or</u> Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N									
				2. _____													
				3. _____													
				4. _____													
				5. _____													
				6. _____													
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:									
<u>1-1-91</u>	<u>1-1-91</u>	<u>12:00</u>															

Custody Transfer Record/Lab Work Request

Client <u>EGTG Mand</u>		Refrigerator #													
Est. Final Proj. Sampling Date <u>Dec 94</u>		#/Type Container	Liquid												
Work Order # <u>0537-046-002</u>			Solid												
Project Contact/Phone # <u>A. Sperry-5038353440</u>		Volume <u>ml</u>	Liquid												
AD Project Manager <u>A. Sperry</u>			Solid												
QC _____ Del _____ TAT _____		Preservatives													
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →		ORGANIC				INORG							
Account # _____				VOA	BNA	Pest/PCB	Herb	Metal	CN						

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only	
Special Instructions:				1. _____				Samples were:	
1. Gamma, Pu, Th, Ua				2. _____				1) Shipped _____ or	
				3. _____				Hand Delivered _____	
				4. _____				Airbill # _____	
				5. _____				2) Ambient or Chilled	
				6. _____				3) Received in Good Condition Y or N	
								4) Labels Indicate Property Preserved Y or N	
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N	
2/1/80	1/1/80	2/1/80	1400					NOTES:	
								5) Received Within Holding Times Y or N	

Custody Transfer Record/Lab Work Request

Client: <u>EGG Mgmt</u>				Refrigerator # _____			
Est. Final Proj. Sampling Date: <u>12-9-97</u>				#/Type Container: <u>Liquid</u>			
Work Order #: <u>05236-010-002</u>				Volume: <u>Liquid</u>			
Project Contact/Phone #: <u>Aspery 713-825-1110</u>				Preservatives: _____			
AD Project Manager: <u>Aspery</u>				ANALYSES REQUESTED →			
QC: _____ Del: _____ TAT: _____				ORGANIC INORG			
Date Rec'd: _____ Date Due: _____				VOA BNA Pest/PCB Herb Metal CN			
Account #: _____				WESTON Analytics Use Only			

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
			MS	MSD																			
S - Soil																							
SE - Sediment																							
SO - Solid																							
SL - Sludge																							
W - Water																							
O - Oil																							
A - Air																							
DS - Drum Solids																							
DL - Drum Liquids																							
L - EP/CLP Leachate																							
WI - Wipe																							
X - Other																							
F - Fish																							

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: <u>1. See line 6, 7, 8, 9</u>				1. _____				Samples were: 1) Shipped _____ or Hand Delivered _____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N			
				2. _____							
				3. _____							
				4. _____							
				5. _____							
				6. _____							

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N
<u>Aspery</u>	<u>Aspery</u>	<u>12-8-97</u>	<u>14:00</u>					

NOTES: _____

RFW 21-21-001/A-7/91	L372	L373	L375	L377	L378	Ref#	Cooler#	381-596a
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RFW 21-21-001/A-7/91	L372	L373	L375	L377	L378	Ref#	Cooler#	381-596
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RFW 21-21-001	91	L372	L373	L375	L377	L378	Ref#	Cooler#	381-596a
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Custody Transfer Record/Lab Work Request

WESTON

Page 3 of 3

Client <u>EGG Mound</u>		Refrigerator #																		
Est. Final Proj. Sampling Date <u>Dec 94</u>		#/Type Container	Liquid																	
Work Order # <u>05376-046-002</u>		Solid																		
Project Contact/Phone # <u>A Sperry 513 825 3440</u>		Volume <u>ml</u>	Liquid																	
AD Project Manager <u>A Sperry</u>		Solid																		
QC <u>Del</u> STAT		Preservatives																		
Date Rec'd _____ Date Due _____		ANALYSES REQUESTED →																		
Account # _____		ORGANIC																		
		VOA	BNA	Pes/PCB	Herb												INORG			
																	Metal	N	C	1

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids L - EP/CLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only															
			MS	MSD																			
	SW	0/1 (118)			SOIL	12/13/94	1010																
	SW	0/1 (118)					1000																
	SW	0/1 (111)					0905																
																							

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

1. Gamma, Pu, Th, Ue

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WESTON Analytics Use Only

Samples were:

 1) Shipped _____ or
 Hand Delivered _____
 Airbill # _____

2) Ambient or Chilled

 3) Received in Good
 Condition Y or N

 4) Labels Indicate
 Properly Preserved
 Y or N

 5) Received Within
 Holding Times

Y or N

COC Tape was:

 1) Present on Outer
 Package Y or N

 2) Unbroken on Outer
 Package Y or N

 3) Present on Sample
 Y or N

 4) Unbroken on
 Sample Y or N

 COC Record Present
 Upon Sample Rec't

Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>qualk</u>	<u>Fedex</u>	<u>12/13/94</u>	<u>1000</u>				

 Discrepancies Between
 Samples Labels and
 COC Record? Y or N

NOTES:

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON.
Page of

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only	
Special Instructions:				_____ 1.				Samples were:	COC Tape was:
				_____ 2.				1) Shipped _____ or Hand Delivered _____	1) Present on Outer Package Y or N
				_____ 3.				Airbill # _____	2) Unbroken on Outer Package Y or N
				_____ 4.				2) Ambient or Chilled	3) Present on Sample Y or N
				_____ 5.				3) Received in Good Condition Y or N	4) Unbroken on Sample Y or N
				_____ 6.				4) Labels Indicate Property Preserved Y or N	COC Record Present Upon Sample Rec't Y or N
Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Discrepancies Between Samples Labels and COC Record? Y or N NOTES:	
<i>[Signature]</i>	Fedex	12/13/94	1700						

[illegible]

381-596a

100

Custody Transfer Record/Lab Work Request

Client <u>EG&G Mound</u>				Refrigerator #																
Est. Final Proj. Sampling Date <u>Dec 94</u>				#/Type Container		Liquid														
Work Order # <u>05376-040-002</u>				Volume		Solid														
Project Contact/Phone # <u>A. Sperry / 513-265-3437</u>				Preservatives		Liquid														
AD Project Manager <u>G. Gels</u>						Solid														
QC _____ Del _____ TAT _____				ANALYSES REQUESTED →		ORGANIC					INORG									
Date Rec'd _____ Date Due _____						VOA	BNA	Pes/PCB	Herb						Metal	CN	*			
Account # _____						WESTON Analytics Use Only														

MATRIX CODES: S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum Solids DL- Drum Liquids L- EP/TCLP Leachate WI- Wipe X- Other F- Fish	Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected	WESTON Analytics Use Only														
			MS	MSD																		
	QUAN	1/F (257)			Concrete	9-13-94	1552															
		1/F (050)				9-8-94	1413															
		1/F (099)				9-12-94	1048															
		1/F (121)				9-12-94	1324															
		1/F (122)				9-12-94	1328															
		1/F (191)				9-13-94	1010															
		1/F (204)			↓	9-13-94	1056															
		1/N (004)			PAINT	9-13-94	1512															
		1/N (026)				9-5-94	0840															
		1/N (041)			↓	9-5-94	0940															

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: <u>Full</u> <u>* Field Spectrum Gamma</u>				1. _____				Samples were: 1) Shipped _____ or Hand Delivered _____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Property Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec't Y or N			
				2. _____							
				3. _____							
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				5. _____							
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<u>A. Sperry</u>	<u>FedEx</u>	<u>11-29-94</u>	<u>1700</u>					

Custody Transfer Record/Lab Work Request

Client <u>EGIS Moving</u>				Refrigerator #																																																																																																																																																																																																																																																																																																																																																	
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		1/S (074)				9-20-94	1436																		
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A. Spry	FedEx	11-29-94	1700					

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			<u>1/S (062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100)</u>				<u>11-29-94</u>	<u>1350</u>															
			<u>1/S (062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100)</u>				<u>11-29-94</u>	<u>1400</u>															
			<u>1/S (076, 077, 078)</u>				<u>11-29-94</u>	<u>1405</u>															
			<u>1/W (001)</u>				<u>9-21-94</u>	<u>1120</u>															
			<u>1/W (003)</u>				<u>9-21-94</u>	<u>1124</u>															
			<u>1/W (004)</u>				<u>9-21-94</u>	<u>1126</u>															
			<u>1/W (005)</u>				<u>9-21-94</u>	<u>1128</u>															
			<u>1/W (010)</u>				<u>9-21-94</u>	<u>1148</u>															
			<u>1/W (021, 022, 023, 024, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049, 050, 051, 052, 053, 054, 055, 056, 057, 058, 059, 060, 061, 062, 063, 064, 065, 066, 067, 068, 069, 070, 071, 072, 073, 074, 075, 076, 077, 078, 079, 080, 081, 082, 083, 084, 085, 086, 087, 088, 089, 090, 091, 092, 093, 094, 095, 096, 097, 098, 099, 100)</u>				<u>11-29-94</u>	<u>1050</u>															

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: * Full Spectrum Gamma				1. _____				Samples were 1) Shipped ___ or Hand Delivered ___ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec. 1 Y or N			
				2. _____							
				3. _____							
				4. _____							
				5. _____							
				6. _____							

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>A. Spry</u>	<u>Feleix</u>	<u>11-29-94</u>	<u>1700</u>				

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

2000

Custody Transfer Record/Lab Work Request

Client <u>ES&S Mound</u>				Refrigerator # _____																			
Est. Final Proj. Sampling Date <u>Dec 94</u>				#/Type Container		Liquid																	
Work Order # <u>05376-046-002</u>						Solid																	
Project Contact/Phone # <u>A. Spry / 513-885-3437</u>				Volume		Liquid																	
AD Project Manager <u>G. Gels</u>						Solid																	
QC _____ Del _____ TAT _____				Preservatives																			
Date Rec'd _____ Date Due _____				ANALYSES REQUESTED →		ORGANIC					INORG												
Account # _____								VOA		BNA		Pest/PCB		Herb		Metal		CN		*			
↓ WESTON Analytics Use Only ↓																							
MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - EP/TCLP Leachate WI - Wipe X - Other F - Fish		Lab ID	Client ID/Description	Matrix OC Chosen (✓)		Matrix	Date Collected	Time Collected															
				MS	MSD																		
			6VAN	1/E (08,09,010,018,019,028)			PAINT	11-29-94	1105														
				2/E (028,036,044,052,053,062)			Leachate	11-29-94	1425														
				2/E (021)				9-14-94	0930														
				2/E (060)				9-14-94	1328														
				2/E (054)				9-14-94	1136														
				2/E (061)				9-14-94	1340														
				2/E (067)				9-14-94	1352														
				2/N (001)			PAINT	9-22-94	1500														
				2/N (004)				9-22-94	1506														
				2/N (006)				9-22-94	1450														

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS				DATE/REVISIONS:				WESTON Analytics Use Only			
Special Instructions: * Full Spectrum Gamma				1 _____				Samples were: 1) Shipped _____ or Hand Delivered _____ Airbill # _____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N COC Tape was 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N COC Record Present Upon Sample Rec'd Y or N			
				2 _____							
				3 _____							
				4 _____							
				5 _____							
				6 _____							

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
A. Spry	FedEx	11-29-94	1700				

Discrepancies Between Samples Labels and COC Record? Y or N
 NOTES:

48: 56.

**L. CORRECTIVE ACTION REPORTS AND PLAN CHANGE
NOTIFICATIONS**

APPENDIX L

Corrective Action Report 001

On 12 October 1994, the laboratory reported that soil samples submitted for sulfide analysis were not preserved properly. According to the referenced method for sulfide analysis, the surface of the soil samples should have been moistened with a zinc acetate solution. Three corrective actions were taken as a result of this deficiency: the laboratory preserved all samples which were received unpreserved, a zinc acetate solution was provided to the field sampling team and the field team began preserving the samples, and an investigation-specific plan change notice was issued amending the sampling plan with the revised preservation requirement. The effect of the initial lack of preservation cannot be quantitatively assessed, but since the data are being used for screening purposes, the impact should be minimal.

Corrective Action Report 002

A trip blank was not submitted with volatile samples collected prior to 1 December 1994. Trip blanks were submitted with volatile samples as soon as the deficiency was noted. Trip blanks are used to determine whether target analytes detected in samples are attributable to sample handling. Because significant levels of volatile contaminants were not present in the affected samples, there was essentially no impact from the deficiency.

Corrective Action Report 003

Sample SW0/2 (185), corresponding to Quanterra-Richland sample number 41214003, was mislabeled by the field team as SW 0/1 (185). The laboratory reports included the correction. The error did not affect data usability.

Corrective Action Report 004

An equipment blank, CC2/2 (221), was labeled incorrectly by the field team as CC0/2 (221). The laboratory reports were corrected, and the associated sample data were changed to reflect the correct sample identification. The error did not affect data usability.

Corrective Action Report 005

All soil samples collected for gamma spectrometry at Quanterra-Richland were also submitted for alpha spectrometry, and the laboratory analyzed all samples for alpha spectrometry. The SAP specifies that approximately five percent of the gamma spectrometry samples should be analyzed by alpha spectrometry. The error does not affect data usability.

Investigation-Specific Plan Change 001

The plan change was issued as part of Corrective Action Report 001 and amends the SAP to include the proper sample preservation and holding time specifications.

WESTON Plan Change Notification 001

The plan change was issued in order to adjust the soil sampling grid layout from EG&G Mound north to true north for gridding and sampling purposes.

WESTON Plan Change Notification 002

The plan change was issued in order to eliminate from the Micro-R field screen several soil sampling squares which fell directly beneath Building 21.

WESTON Plan Change Notification 003

The plan change was issued in order to eliminate several Building 21 sampling squares from the Micro-R field scan when grids fell below ground surface or coincided with building doorways.

WESTON Plan Change Notification 004

The plan change was issued in order to modify the procedure for the exterior Building 21 wall sampling as determined in a meeting with WESTON and BWS&C on 25 August 1994. The plan change states that no smear pad wipes will be taken from the exterior of Building 21. The procedure to be followed for exterior walls field screening will be to obtain one-minute direct readings from the center of each sample grid using Alpha Scintillometer and GM-Pancake probes.

WESTON Plan Change Notification 005

The plan change was issued in order to move sample grids of the Building 21 exterior walls which fall below ground surface or coincide with building doorway as determined during a meeting with BWS&C on 25 August 1994.

WESTON Plan Change Notification 006

The plan change was issued to allow for Alpha Scintillometer and GM-Pancake field screening of exterior Building 21 sample grids which could not be screened in their geometric centers due to the truncation of these grids by either the ground surface, the doorway, or the roof overhang.

WESTON Plan Change Notification 007

The plan change was issued to relocate all Building 21 roof samples which fell within one meter of the roof's edge, to comply with EG&G Mound and WESTON safety concerns.

WESTON Plan Change Notification 008

The plan change was issued in order to eliminate Interval III soil samples from sampling points where bedrock was shallower than 24 inches bgs.

WESTON Plan Change Notification 009

The plan change was issued in order to eliminate Interval II soil samples from those sampling points where bedrock was shallower than 12 inches bgs.

WESTON Plan Change Notification 010

The plan change was issued in order to eliminate soil sampling locations which fell outside the EG&G Mound fenceline or under the Building 21 foundation.

WESTON Plan Change Notifications 011 through 040

The plan changes were issued in order to note soil sample locations which were moved because of the presence of obstructions including asphalt roadways, concrete drainage channels, and buildings.

WESTON Plan Change Notification 041

The plan change was written in order to eliminate samples to be collected from locations inside Building 21 which coincide with building doorways.

WESTON Plan Change Notification 042

The plan change was written in order to move several soil sampling grids at the request of EG&G Mound Project Engineer Eric Horstman.

WESTON Plan Change Notification 043

The plan change was written in order to eliminate the use of a GeoProbe drill rig for soil sampling purposes after determining that its use would be inefficient and ineffective.

WESTON Plan Change Notification 044

The plan change was written in order to eliminate the requirement for marking sampling grids on the Building 21 ceiling. It was decided that ceiling grids would correspond to the floor grids directly beneath them.

WESTON Plan Change Notification 045

The plan change was written in order to eliminate the requirement for an asbestos survey to be performed on the roof material of Building 21. Before beginning work on the roof surface, field team members determined that it was not made of an asbestos material, as expected, but was constructed of corrugated sheet metal.

WESTON Plan Change Notification 046

The plan change was written in order to eliminate the requirement for collecting paint chip samples from Building 21 ceiling grids. The field team determined that the ceiling had not been painted but was covered with a fixed plastic/rubber coating that does not present a possibility for subsurface contamination.

EG&G Mound Plan Change 001

Soil samples collected from the area surrounding Building 21 were submitted to Quanterra-Richland for gamma spectroscopy analysis instead of to the EG&G Mound soil screening laboratory.

EG&G Mound Plan Change 002

Five percent of the samples submitted for radiological analysis were to be analyzed by a second independent laboratory. EG&G Mound did not subcontract the second laboratory and elected to eliminate the split sample analyses.

EG&G Mound Plan Change 003

The holding time for phenol was changed from 7 days to 28 days.

EG&G Mound Plan Change 004

The alpha spectrometry analysis in the SAP did not include uranium isotopes. EG&G Mound modified the SAP to include uranium isotopes.

EG&G Mound Plan Change 005

EG&G Mound deleted plutonium-238 and thorium-230 from the gamma spectrometry analysis.

EG&G Mound Plan Change 006

EG&G Mound deleted the requirement for plutonium-241 from the alpha spectrometry analysis.

EG&G Mound Plan Change 007

EG&G Mound added thorium-230 to the isotope list for alpha spectrometry.