



SURVEY PACKAGE

Survey Package ID: C4024 302C1

Survey Area Name: SETF, Building 4024

**Survey Unit Name: Basement Floor and Mezzanine
DM Areas**

Version: Revision 0, April 14, 2007

**Prepared IAW:
SETF Sample and Analysis Plan, Rev. 0, March 2007**

**Prepared For:
The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Rd
Canoga Park, CA 91304**

**Prepared By:
AREVA NP Inc.
Federal D&D Services
7207 IBM Drive
Charlotte, NC 28262**



SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

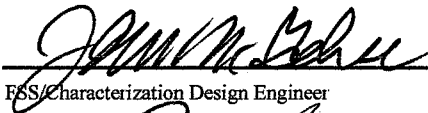
Page 1 of 19

Survey Package Cover Sheet

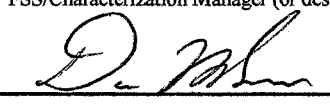
Survey Package Number: C4024 302C1 **Package Type:** Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

Survey Package Preparation:

The survey package instructions are prepared and ready for implementation.

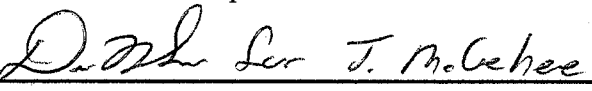
Prepared By:  **Date:** 4/16/07
FSS/Characterization Design Engineer

Reviewed By:  **Date:** 4/17/07
FSS/Characterization Manager (or designee)

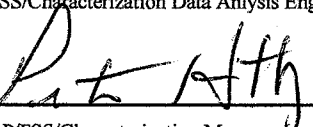
Approved By:  **Date:** 4/17/07
Project Manager

Survey Completion:

The survey package instructions were implemented and the survey measurements have been reviewed for completeness in accordance with the Sample and Analysis Plan. The data collected has been reviewed for completeness in accordance with the survey package instructions.

Reviewed By:  **Date:** 11/30/07
FSS/Characterization Supervisor (or designee)

Reviewed By: N/A **Date:** _____
FSS/Characterization Data Analysis Engineer

Reviewed By:  **Date:** 11/30/07
RP/FSS/Characterization Manager (or designee)

Approved By:  **Date:** 11/30/07
Project Manager

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 2 of 19

Table of Contents

Survey Package Number	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Section	Title	Page
1.0	Survey Area History	3
2.0	Survey Unit Description and History	4
3.0	References	6
4.0	Safety	7
5.0	Support	8
6.0	Procedures	9
7.0	General Survey Package Instruction	10
8.0	Specific Survey Package Instruction	12
9.0	Location Codes	16
10.0	Appendix A, Drawings	
11.0	Appendix B, Photographs	
12.0	Appendix C, Survey Results	

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 3 of 19

Survey Area History

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Survey Area Description:

Erected in 1960 and enlarged in 1962, 4 unshielded SNAP reactors were tested in the SETF. The reactor systems and radioactive test equipment were removed at the end of testing, additional D&D operations were performed in 1978 and again in 2005.

Survey Area History Information:

SETF Facility Description

As constructed, the SETF consisted of three basic areas: the high bay, general support and mechanical/electrical support areas. In addition to the building areas, a paved yard surrounds the main building. All of the building areas except for test cells B-102 and B-104 of the SGTCC have been surveyed and confirmed to be DM by the DHS-RHB.

The test cells contain activated concrete and metal rebar from former reactor testing. In the yard area, other above grade support structures and below grade components such as radioactive solid, liquid, and gas storage tanks were once buried. The tanks were removed, but surveys showing the radiological condition of the remaining vaults are not available.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 4 of 19

Survey Unit Description and History

Survey Package Number: C4024 302C1 Package Type: Structure
LC1: C4024 Survey Area Name: SETF, Building 4024
LC2: 302C1 Survey Unit Name: Basement Floor and Mezzanine DM Areas

LC3 - Surface Category (P1-3) and Associated Area:

LC3_P1_3	Surface Description	Dimensions (Yes or No)	Total Area (m2)
FL1	Floor Surface	No	0
WL1	Lower Wall Surfaces	No	0

Work Breakdown Structure Information:

WBS ID: 10401 Characterization and Confirmatory Survey Activities

Survey Unit Description:

The areas of this survey unit include Mezzanine and Basement floor radiologically clean DM portions of the SETF SGTCC.

Survey Unit Historical Information: Operational History, etc.

This survey is being performed to confirm that residual radioactivity above natural background from former operations at Building 4024 is not present on structural surfaces in areas already confirmed by DHS-RHB as decommissioned materials (DM). Areas include: Mezzanine and Basement floor radiologically clean DM portions of the SETF SGTCC.

Identity of Potential Contaminants

Radioactivity induced by testing SNAP reactors in the sub grade test cell complex was detected as documented in SAP Reference 7.5, Team Product Document No: RS-00025, Building 4024 Concrete Sampling, performed under the Closure of ETEC (R21-RS) Program (RS-00025 report). The RS-00025 report provides the results for concrete sampling in the SETF, Building 4024 conducted in 2003. The activity of 1 inch depth cores ranged from no detectable activity to 105 pCi/g of Europium-152 (Eu-152) and 9.4 pCi/g of Cobalt-60 (Co-60), the primary contaminants of concern (COC). Other potential radionuclide COCs in addition to Co-60 and Eu-152 include: Am-241, Cs-134, Cs-137, Eu-154, Fe-55, Fe-59, H-3, K-40, Mn-54, Na-22, Ni-63, Pu-238, Pu-239, Pu-240, Pu-241, Sr-90, Th-228, Th-230, Th-232, U-234, U-235, and U-238. These additional COCs will also be tested for during the confirmatory survey.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 5 of 19

Survey Unit Description and History

Survey Package Number: C4024 302C1 Package Type: Structure

LC1: C4024 Survey Area Name: SETF, Building 4024

LC2: 302C1 Survey Unit Name: Basement Floor and Mezzanine DM Areas

Additional Information Regarding Survey Unit Classification:

Inside RCA? No

Coolant? No

Spills? No

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 6 of 19

Survey Package References

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

References:

1. Sample and Analysis Plan for the SETF D&D Surveys, Rev 0, March 2007, AREVA
2. Quality Assurance Project Plan for the SETF D&D Surveys, Rev 0, March 2007, AREVA
3. Health and Safety Plan for the SETF D&D Project, March 2007, AREVA
4. MARSSIM, Multi-Agency Radiation Survey and Site Investigation Manual, EPA402-R-97-016 (NUREG-1575), August 2000

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 7 of 19

Survey Safety Requirements

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Safety Requirement and Considerations:

1. This area contains or may contain physical slip, trip and fall hazards, and watch for poisonous snakes and insects.

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page 8 of 19

Survey Support Requirements

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Survey Support Requirements and Considerations:

1. Review Job Hazard Analysis prepared for surveys of radiologically clean areas.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 9 of 19

Survey Package Procedures

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Survey Package Procedures:

1. DD-CS-001 Sample Identification and Chain of Custody
2. DD-CS-011 Operation of Ludlum Model 2350 Data Logger
3. DD-CS-014 Bulk Material and Core Bore Sampling
4. DD-RP-010 Portable Instrument Procedure
5. DD-RP-039 Quality Control of Counting Systems and Portable Counters
6. DD-RP-049 Operation of the Ludlum Model 2929 Dual Channel Scaler

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 10 of 19

General Survey Package Instructions

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

1. The DQOs for Confirmatory Surveys is as follows:

Perform measurements and collect samples of sufficient quantity to confirm that residual radioactivity above natural background from former operations at Building 4024 is not present in areas already confirmed by DHS-RHB as decommissioned materials (DM). Evaluate the measurements and sample results for comparability to previous survey results.

Operate instruments for background study and survey direct measurements and sample analysis such that measurement and/or analysis sensitivities or minimum detectable concentrations (MDCs) are ALARA or, as a minimum less than the derived concentration guideline levels (DCGLs).

2. The survey is to aid in removal activities, waste management activities, and remediation planning.

Upon completion of the initial survey specified in this survey package, the data will be analyzed and a determination will be made as to whether or not the structure has been adequately characterized. If contamination is found, investigation surveys will be conducted to define the extent of the contamination such that the areas of elevated activity can be encapsulated/remediated and the structure can be safely removed and properly segregated during demolition.

3. If materials that are potentially hazardous are encountered during the survey, note this in the item description under "material" and report the location of the material to the FSS/Characterization Manager and EH&S Manager.

4. The number of measurements and/or samples prescribed are minimum number required.

Additional measurements may be required to bound the lateral/vertical extent of radiological contamination in the survey unit. Survey maps for each room contained in this survey unit are located in Appendix A. Note the location and boundaries of any radiological contamination identified during the survey.

5. Use the room number from drawings in the LC5 code of the M2350 to identify measurements by Room number for structural surface surveyed. Mark each measurement location with an appropriate label, including LC5 and LC6 code.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 11 of 19

General Survey Package Instructions

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

6. The M2350 data logger(s) are to be downloaded into the Measure Database at completion of survey or at end of shift at a minimum.
7. All samples are to be logged into the Sample Database at completion of survey or at end of shift at a minimum.
8. Note any problems, comments, or other information pertinent to the data or sample collection under the "FIELD NOTES" section.
9. When all samples or measurements are collected, record the total quantity and initial and date the "Collected By" block on the Survey Package Location Code Sheet to indicate the measurements or samples were collected.
10. Place all data, measurement and sample analysis reports, drawings, etc. in the appropriate section of Appendix C, Survey Results, as they are generated, reviewed and approved for survey package closure.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 12 of 19

Specific Survey Package Instructions

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

1. Beta Scan

Perform a beta scan survey of accessible surfaces of the interior and exterior surfaces of the building as described below. Scans should be biased toward areas of highest activity (e.g. pits, cracks, doorways, etc.).

Use a Model 44-116 or equal detector. The scans shall be performed by moving at a maximum rate of one detector width per second while listening to the audible output of the instrument. For interior surfaces and/or exterior surfaces of the building, perform a scan survey of 9 m2 the accessible floor and lower 2 meters of wall surfaces at each SML. Note any areas of elevated activity on the appropriate survey drawing contained in Appendix A. No scan surveys will be required on the building exterior surfaces above 2 meters if the scan of the lower walls does not identify areas of elevated activity. Do not log scan results.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 13 of 19

Specific Survey Package Instructions

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

2. Direct Beta

Perform direct beta measurements at any locations of elevated activity identified during the scan. If no areas of elevated activity are identified, collect direct beta measurements as directed below.

Use a Model 44-116 or equal detector. A minimum of 18 direct beta measurements will be collected on the surfaces of the building and at locations with the most potential for contamination and where the measurement geometry is most appropriate. If no areas of elevated activity are identified during the scan survey, measurements will be distributed on the building surfaces as follows:

Interior surfaces:

Floor - 10

Walls below 2 meters - 8

Note the location of each measurement on the appropriate survey drawing contained in Appendix A. Mark each measurement location with an appropriate label, including the LC5 and LC6 code.

With the background shield installed, perform a 60 second "C" count to determine the field background. Using the field MDA verification sheet, adjust the count time to ensure that the MDC is less than 900 dpm/100 square centimeters.

Collect three pre-survey and three post survey shielded background counts. If pre-survey background counts in the survey unit are within +/- 20% of mean, use LMI Model 44-116 detector with the M2350 in the scaler mode with a 60 second count time and code the measurement LC4_P4 as "G," for Field Background and LC4_P5 as "A" for Average Background application (per measurement). If otherwise, collect a single shielded background at each of the direct beta measurement locations, code the measurement LC4_P4 as "G," field background and LC4_P5 as "S" for Single Background (per measurement).

For the direct measurement, use LMI Model 44-116 detector with the M2350 in the scaler mode with a 60 second count time and code the measurement LC4_P4 as "F," for Field Count and LC4_P5 as "A" for Average Background application or "S" for Single Background (per measurement) as appropriate.

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 14 of 19

Specific Survey Package Instructions

Survey Package Number: C4024 302C1	Package Type: Structure
Survey Area Name: SETF, Building 4024	
Survey Unit Name: Basement Floor and Mezzanine DM Areas	

3. Direct Alpha

Perform direct alpha measurement at each of the direct beta measurement locations.

Use a Model 43-90 or equal detector. With the background shield installed, perform a 2 minute "C" count to determine the field background. Using the field MDA verification sheet, adjust the count time to ensure that the MDA is less than 75 dpm/100 square centimeters.

Use Model 43-90 detector with the same background protocol and codes as with the direct beta measurements.

4. Contact Gamma

Perform contact gamma measurement at each of the direct beta measurement locations.

Use Model 44-10, the M2350 in the scaler mode with a 12 second count time and code the measurement LC4_P4 as "F," for Field Count.

5. Exposure Rate

Perform gamma exposure rate measurement at one (1) meter distance from each contact gamma measurement location.

Use Model 44-10, the M2350 in the scaler mode with a 12 second count time and code the measurement LC4_P4 as "F," for Field Count.

6. A/B Smear

Collect a smear for removable alpha and beta contamination at each of the direct beta measurement locations.

Collect the smear sample by wiping approximately 100 cm² area for the sample. Combine and analyze by gamma spectroscopy A/B smear samples collected at locations where removable alpha was > 100 dpm/100 cm² or removable beta was >1000 dpm/100 cm².

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 15 of 19

Specific Survey Package Instructions

Survey Package Number:	C4024 302C1	Package Type:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

7. G-Spec Sample

If available, collect a sample from each location composed of loose materials, sediment or sludge to combine for one or two composite samples for gamma spectral analysis.

The samples in order of priority are as follows:

1 to 2 kg Soil/Sediment Samples for Gamma Spectroscopy, if an amount to produce ≥ 125 g of dry sample cannot be obtained, collect materials for a composite sample for the survey unit.

The sample may include a bulk material sample for a petri dish and/or 250 ml marinelli beaker sample.

To achieve the analysis MDC desired, the laboratory requested sample sizes (an amount of soil) that will yield 500 grams of dried soil. The wet soil amount can vary significantly depending on its moisture content. If the desired sample size cannot be obtained, the minimum sample size to achieve an analysis MDC is an amount of wet soil (~1 kg) that will produce 125g of dried soil.

If an amount to produce 125g of dried soil cannot be obtained, combine and analyze by gamma spectroscopy smear sample results showing > 100 alpha or > 1000 beta dpm/100cm².

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 16 of 19

Survey Package Location Codes

Survey Package Number	C4024 302C1	Package Type:	Structure
LC1: C4024	Survey Area Name: SETF, Building 4024		
LC2: 302C1	Survey Unit Name: Basement Floor and Mezzanine DM Areas		
	Class Description: Impacted Class 3 Structure		
	Reason Description: C1 Characterization Survey		
LC3_P1-3 and Surface Category:	FL1 Floor Surface		
LC3_P45	Material Description		
	M1	Metal	
	G1	Miscellaneous Material	
	C2	Concrete (Painted)	
	C1	Concrete (Bare)	

LC4_P13 - Detector Type, Analysis Codes, and Measurement/Samples Quantity

Measurement	LC4 P13 Code	Model	Description	Qty Prescribed	Qty Collected	Collected By (Initials)
A/B Smear	L01	A/B Smear Analysis	Alpha/Beta Counter	10	10	QL
Beta Scan	B14	43-89B	Beta Scintillator	10	10	QL
	B02	44-116	Beta Scintillator			
Contact Gamma	G01	44-10	2"x2" NaI(Tl) Gamma Scintillator	10	10	QL
Direct Alpha	A04	43-89A	Alpha Scintillator	10	10	QL
	A03	43-90	Alpha Scintillator			
Direct Beta	B14	43-89B	Beta Scintillator	10	10	QL
	B02	44-116	Beta Scintillator			
Exposure Rate				10	11	QL

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 17 of 19

Survey Package Location Codes

Survey Package Number C4024 302C1 **Package Type:** Structure

LC1: C4024 **Survey Area Name:** SETF, Building 4024

LC2: 302C1 **Survey Unit Name:** Basement Floor and Mezzanine DM Areas

Class Description: Impacted Class 3 Structure

Reason Description: C1 Characterization Survey

LC4_P13 - Detector Type, Analysis Codes, and Measurement/Samples Quantity

Measurement	LC4 P13 Code	Model	Description	Qty Prescribed	Qty Collected	Collected By (Initials)
	G02	44-10	2"x2" NaI(Tl) Gamma Scintillator			
G-Spec Sample				1	<u>None</u>	<u>W</u>
	L04	GS Material Analysis	Gamma Spectrometry			

LC3_P1-3 and Surface Category: WL1 Lower Wall Surfaces

LC3_P45 Material Description

M1 Metal
G1 Miscellaneous Material
C2 Concrete (Painted)
C1 Concrete (Bare)

LC4_P13 - Detector Type, Analysis Codes, and Measurement/Samples Quantity

Measurement	LC4 P13 Code	Model	Description	Qty Prescribed	Qty Collected	Collected By (Initials)
A/B Smear				8	<u>8</u>	<u>W</u>
	L01	A/B Smear Analysis	Alpha/Beta Counter			
Beta Scan				8	<u>8</u>	<u>W</u>
	B14	43-89B	Beta Scintillator			
	B02	44-116	Beta Scintillator			
Contact Gamma				8	<u>8</u>	<u>W</u>

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 18 of 19

Survey Package Location Codes

Survey Package Number C4024 302C1 **Package Type:** Structure

LC1: C4024 **Survey Area Name:** SETF, Building 4024

LC2: 302C1 **Survey Unit Name:** Basement Floor and Mezzanine DM Areas

Class Description: Impacted Class 3 Structure

Reason Description: C1 Characterization Survey

LC4_P13 - Detector Type, Analysis Codes, and Measurement/Samples Quantity

Measurement	LC4 P13 Code	Model	Description	Qty Prescribed	Qty Collected	Collected By (Initials)
Direct Alpha	G01	44-10	2"x2" NaI(Tl) Gamma Scintillator	8	8	~
	A04	43-89A	Alpha Scintillator			
	A03	43-90	Alpha Scintillator			
Direct Beta	B14	43-89B	Beta Scintillator	8	8	~
	B02	44-116	Beta Scintillator			
Exposure Rate	G02	44-10	2"x2" NaI(Tl) Gamma Scintillator	8	8	~
G-Spec Sample				1	None	~
	L04	GS Material Analysis	Gamma Spectrometry			

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page 19 of 19

Survey Package Location Codes

Survey Package Number C4024 302C1	Package Type:	Structure
--	----------------------	-----------

LC1: C4024	Survey Area Name: SETF, Building 4024
-------------------	--

LC2: 302C1	Survey Unit Name: Basement Floor and Mezzanine DM Areas
-------------------	--

Class Description: Impacted Class 3 Structure

Reason Description: C1 Characterization Survey

LC4_P4 - Count Type

LC4_P5 - Background Mode Codes

A Pre-use Background Check

B Pre-use Source Check

C Post-use Background Check

D Post-use Source Check

F Field Count

G Field Background

S Field Scan

A Average Background

N Background Not Required

S Single Background

Survey Field Notes: Additional information regarding the performance of the survey, measurements, sample collection, etc. Use additional pages as needed for field notes.

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page A-1 of 3

Survey Package Appendix A – Drawings

Survey Package: C4024 302C1 Package: Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

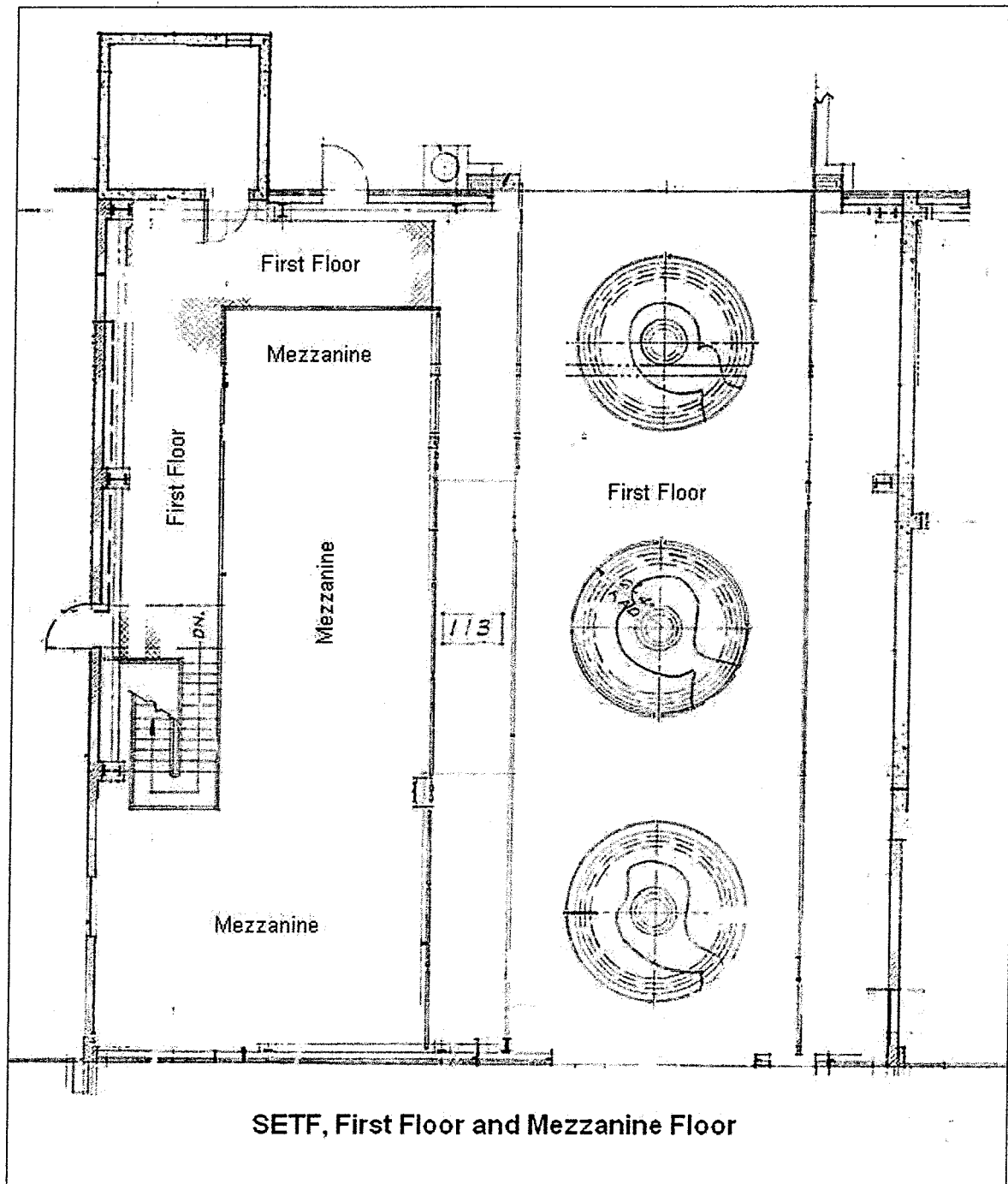
Survey Package Appendix A - Drawings

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page A-2 of 3

Survey Package Appendix A – Drawings

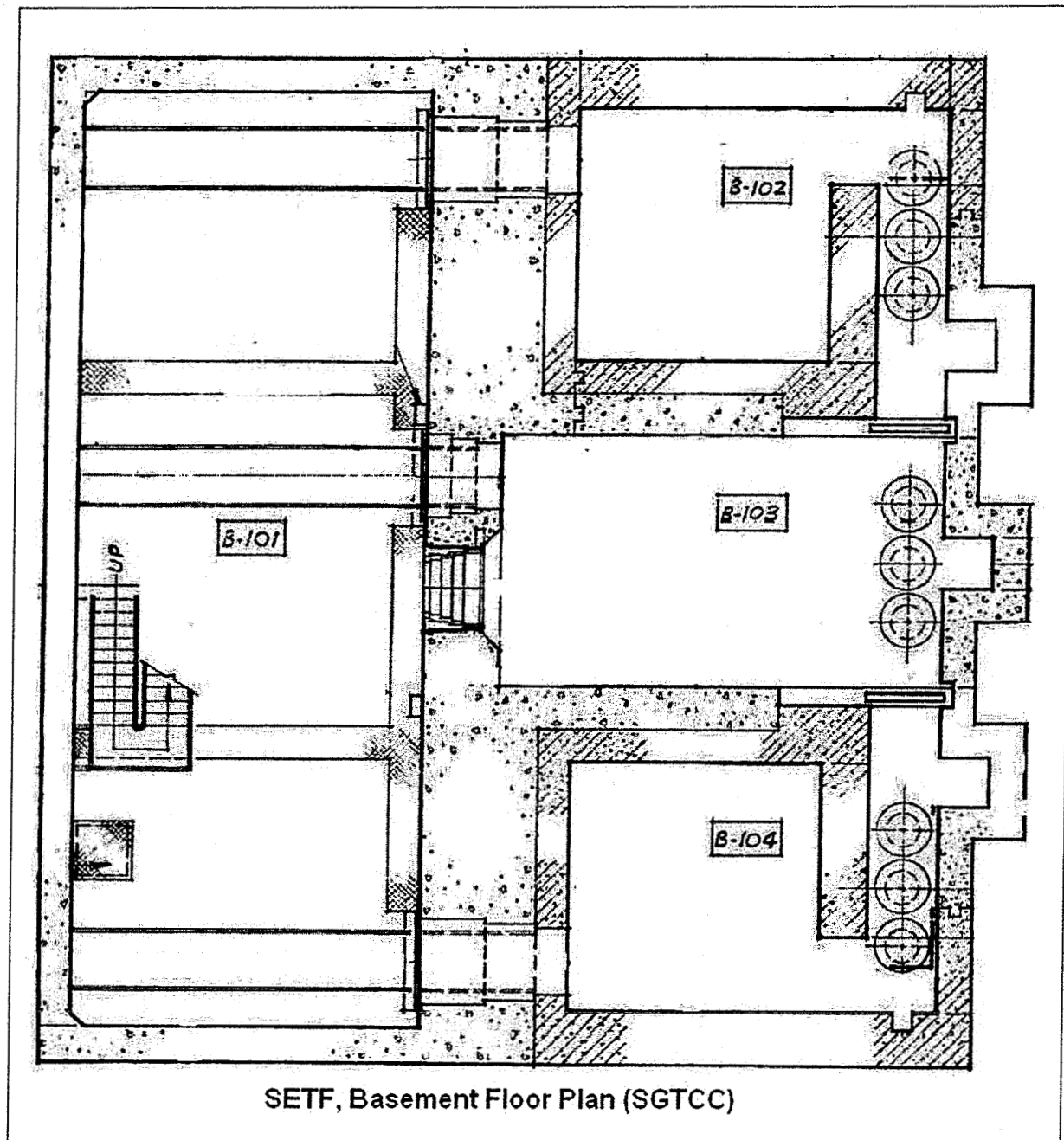


SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page A-3 of 3

Survey Package Appendix A – Drawings



**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page B-1 of 2

Survey Package Appendix B – Photographs

Survey Package: C4024 302C1 **Package:** Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

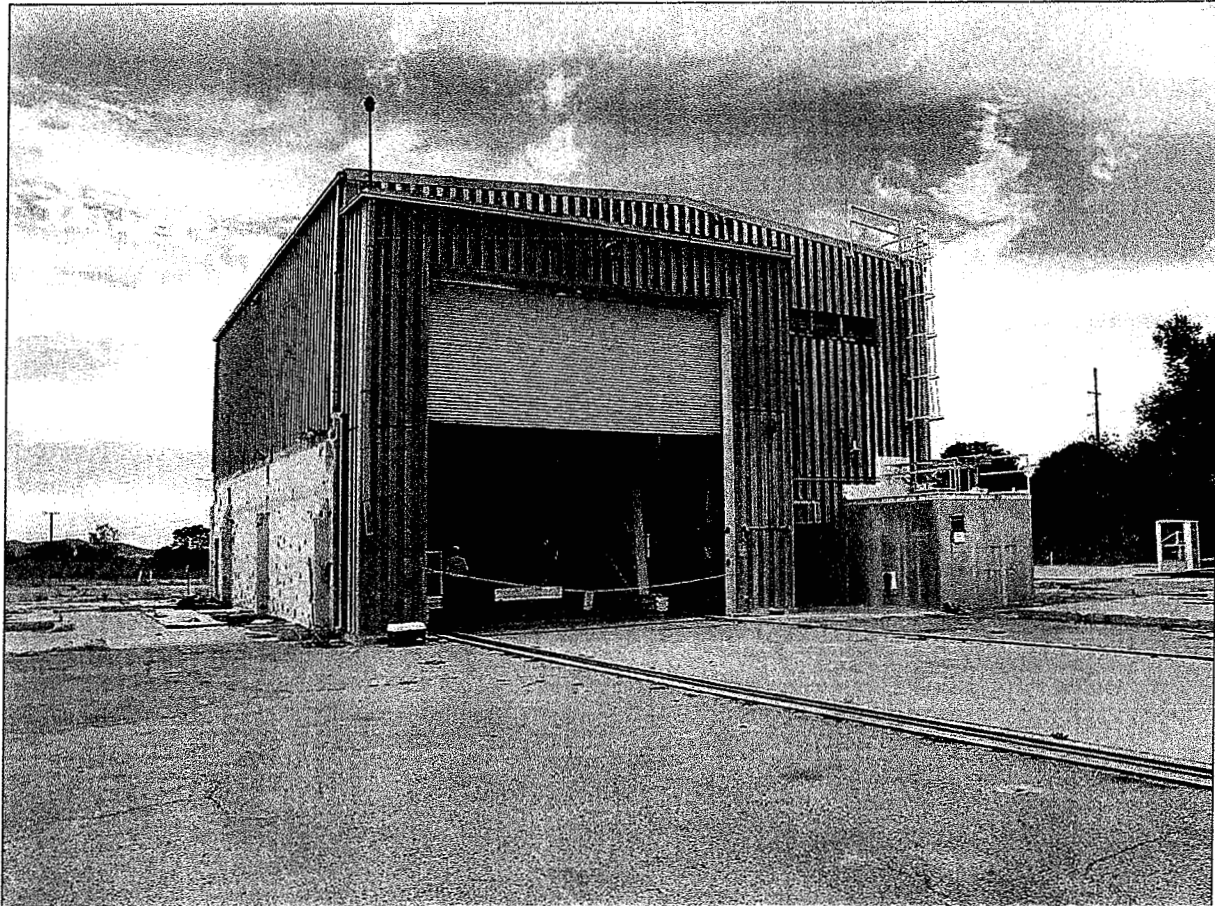
Survey Package Appendix B - Photographs

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page B-2 of 2

Survey Package Appendix B – Photographs



**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-1 of 8

Survey Package Appendix C – Survey Results

Survey Package:	C4024 302C1	Package: Structure
Survey Area Name:	SETF, Building 4024	
Survey Unit Name:	Basement Floor and Mezzanine DM Areas	

Section	Title	Total Pages
1.0	Annotated Drawings	___
2.0	Measurement Results – Direct Beta Measurements	___
3.0	Measurement Results – Direct Alpha Measurements	___
4.0	Measurement Results – Exposure Rate Measurements	___
5.0	Sample Analysis Results – Alpha/Beta Counter	___
6.0	Sample Analysis Results – Gamma Spectroscopy	___
7.0	Sample Analysis Results – Alpha Spectroscopy	___

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-2 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 Package: Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

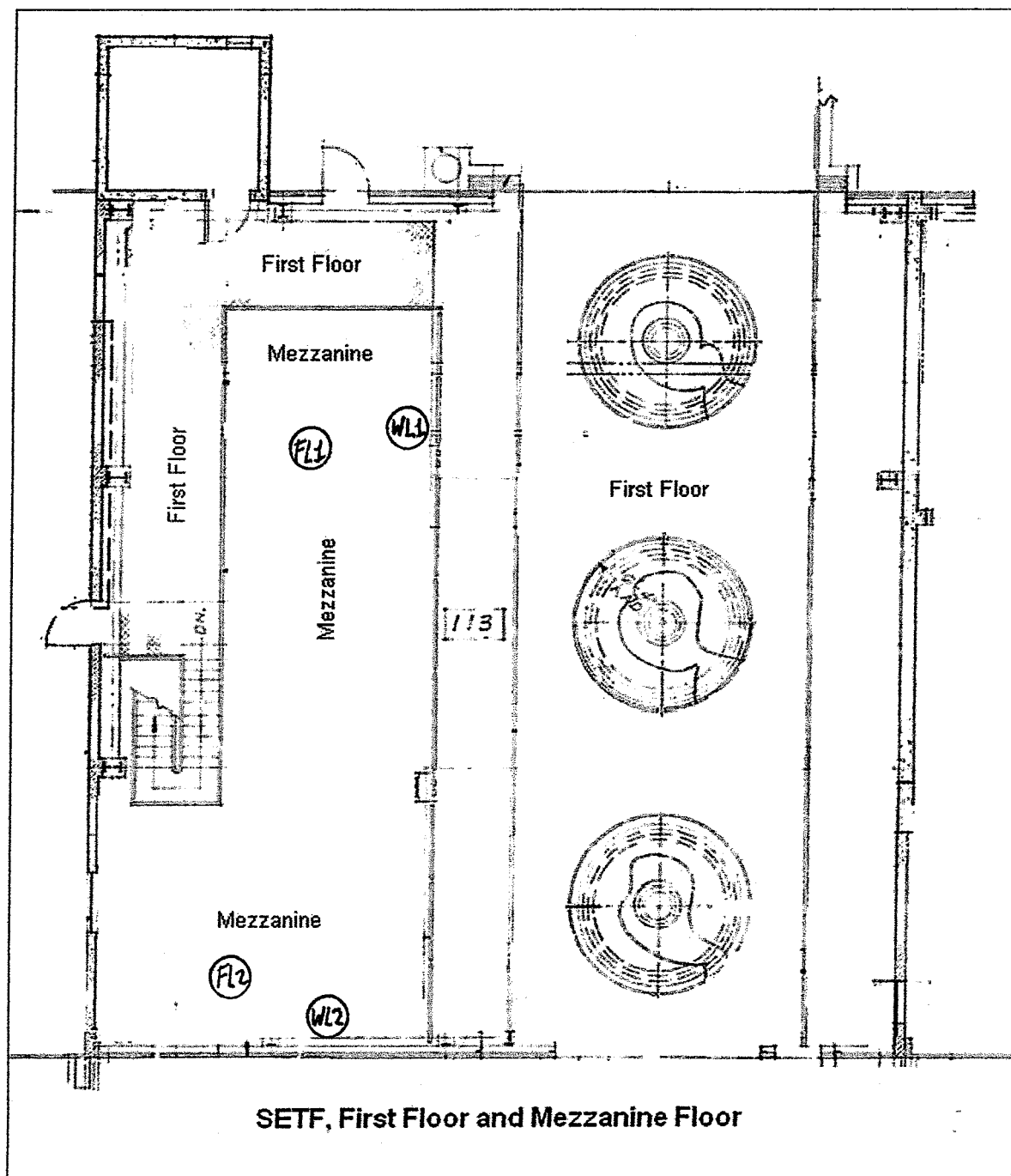
**Section 1.0
Annotated Drawings
__ Pages**

SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page A-2 of 3

Survey Package Appendix A – Drawings

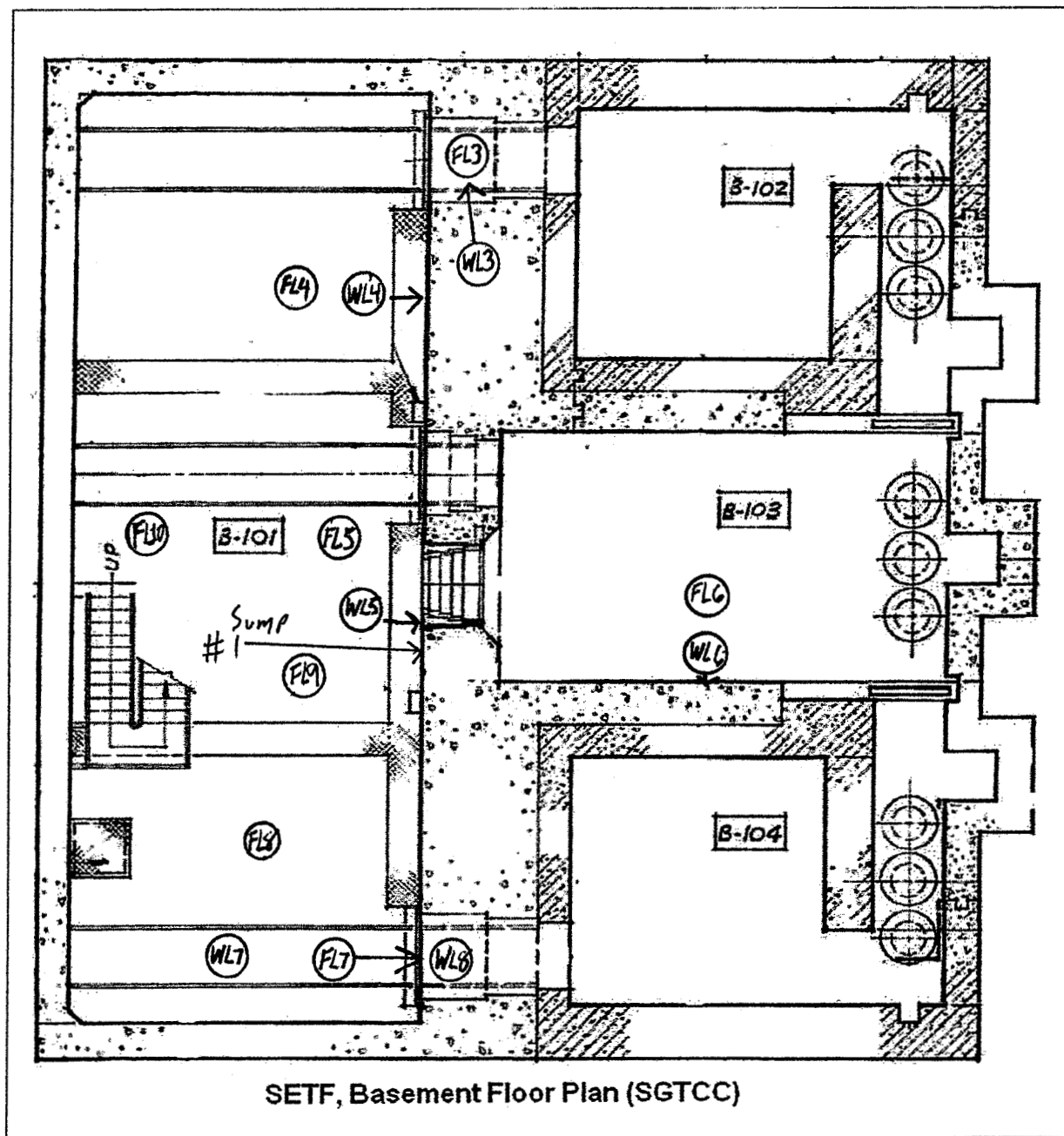


SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA

4/14/2007

Page A-3 of 3

Survey Package Appendix A – Drawings



**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-3 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 **Package:** Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

Section 2.0
Measurement Results – Direct Beta Measurements
__ Pages

Measurement Database Download Report

Direct Beta Measurements

5/1/2007

Page 1 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	Window Solder On/Off	Logging Mode	Count Time (secs)	Logged Count	Time	Sample No	Detector Setup Number	User ID	Package ID	4 pi Beta Efficiency	Active Area (cm ²)	L7	Measurement Location Number	Gross Beta (dpm/100cm ²)
DL041607-001	1	JEL5742	4/16/2007	2:37 PM	C4024 302C1	44-116	222981	0	1	600	2.44E+03	8:08:08 AM	0	0	222981	0.146	125				
EZ259 DRT01	98648	JLW1061	222981	0	0	4/16/2007	8:08:08 AM	2.44E+03	60	1	0	15	EZ259	DRT01	WL1M1	B02AA	LAB01	1	0	1339	
EZ259 DRT01	98648	JLW1061	222981	0	1	4/16/2007	8:20:34 AM	3.46E+03	60	1	0	15	EZ259	DRT01	WL1M1	B02BA	LAB01	1	0	18981	
EZ259 DRT01	98648	JLW1061	222981	0	2	4/16/2007	8:21:54 AM	3.62E+03	60	1	0	15	EZ259	DRT01	WL1M1	B02BA	LAB01	2	0	19852	
EZ259 DRT01	98648	JLW1061	222981	0	3	4/16/2007	8:23:30 AM	3.34E+03	60	1	0	15	EZ259	DRT01	WL1M1	B02BA	LAB01	3	0	18307	
C4024 302C1	98648	JLW1061	222981	3	4	4/16/2007	9:55:10 AM	2.80E+02	60	1	0	15	C4024	302C1	WL1M1	B02GA	WL1	1	0	1534	
C4024 302C1	98648	JLW1061	222981	3	5	4/16/2007	10:00:54 AM	2.88E+02	60	1	0	15	C4024	302C1	WL1M1	B02GA	WL1	2	0	1578	
C4024 302C1	98648	JLW1061	222981	3	6	4/16/2007	10:02:32	3.26E+02	60	1	0	15	C4024	302C1	WL1M1	B02GA	WL1	3	0	1786	
C4024 302C1	98648	JLW1061	222981	3	7	4/16/2007	10:10:34 AM	3.58E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	MZ	1	0	1962	
C4024 302C1	98648	JLW1061	222981	3	8	4/16/2007	10:12:28	3.26E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	MZ	2	0	1786	
C4024 302C1	98648	JLW1061	222981	3	9	4/16/2007	10:22:28	2.62E+02	60	1	0	15	C4024	302C1	FL1M1	B02FA	MZ	1	0	1436	
C4024 302C1	98648	JLW1061	222981	3	10	4/16/2007	10:24:18	2.84E+02	60	1	0	15	C4024	302C1	FL1M1	B02FA	MZ	2	0	1556	
C4024 302C1	98648	JLW1061	222981	3	11	4/16/2007	10:36:46	4.14E+02	60	1	0	15	C4024	302C1	WL1M1	B02FA	WL3	3	0	2268	
C4024 302C1	98648	JLW1061	222981	3	12	4/16/2007	10:39:54	3.46E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	WL4	4	0	1896	
C4024 302C1	98648	JLW1061	222981	3	13	4/16/2007	10:41:32	3.47E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	WL5	5	0	1901	
C4024 302C1	98648	JLW1061	222981	3	14	4/16/2007	10:42:54	2.86E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	WL6	6	0	1567	
C4024 302C1	98648	JLW1061	222981	3	15	4/16/2007	10:45:30	3.63E+02	60	1	0	15	C4024	302C1	WL1C2	B02FA	WL7	7	0	1989	
C4024 302C1	98648	JLW1061	222981	3	16	4/16/2007	10:49:18	3.80E+02	60	1	0	15	C4024	302C1	WL1M1	B02FA	WL8	8	0	2082	
C4024 302C1	98648	JLW1061	222981	3	17	4/16/2007	11:56:56	3.19E+02	60	1	0	15	C4024	302C1	FL1C2	B02FA	FL3	3	0	1748	

Measurement Database Download Report

Direct Beta Measurements

5/1/2007

Page 2 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	4 pi Beta Efficiency	ActiveArea (cm2)												
DL041607-001	1	JEJ5742	4/16/2007	2:37 PM	C4024 302C1	44-116	222981	0.146	125												
Package ID	M2350 Serial Number	User ID	Detector Serial Number	Detector Setup Number	Sample No	Date	Time	Logged Count	Count Time (secs)	Logging Mode	Window On/Off	Scaler Alarm	LC1	LC2	LC3	LC4	LC5	LC6	L7	Measurement Location Number	Gross Beta (dpm/100cm2)
C4024 302C1	98648	JLW1061	222981	3	18	4/16/2007	11:59:46 AM	4.62E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL4	4			0	2532
C4024 302C1	98648	JLW1061	222981	3	19	4/16/2007	12:01:10 PM	2.45E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL5	5			0	1342
C4024 302C1	98648	JLW1061	222981	3	20	4/16/2007	12:02:48 PM	3.48E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL6	6			0	1907
C4024 302C1	98648	JLW1061	222981	3	21	4/16/2007	12:04:56 PM	3.34E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL7	7			0	1830
C4024 302C1	98648	JLW1061	222981	3	22	4/16/2007	12:06:48 PM	4.33E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL8	8			0	2373
C4024 302C1	98648	JLW1061	222981	3	23	4/16/2007	12:08:28 PM	3.92E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL9	9			0	2148
C4024 302C1	98648	JLW1061	222981	3	24	4/16/2007	12:09:54 PM	4.19E+02	60	1	0	15	C4024 302C1	FL1C2	B02FA	FL10	10			0	2296
C4024 302C1	98648	JLW1061	222981	3	25	4/16/2007	12:17:28 PM	3.38E+02	60	1	0	15	C4024 302C1	FL1C1	B02FA	SUMP1	1			0	1852
C4024 302C1	98648	JLW1061	222981	3	26	4/16/2007	12:24:50 PM	3.06E+02	60	1	0	15	C4024 302C1	WL1G1	B02GA	FL1	1			0	1677
C4024 302C1	98648	JLW1061	222981	3	27	4/16/2007	12:26:10 PM	2.81E+02	60	1	0	15	C4024 302C1	WL1G1	B02GA	FL1	2			0	1540
C4024 302C1	98648	JLW1061	222981	3	28	4/16/2007	12:27:26 PM	2.89E+02	60	1	0	15	C4024 302C1	WL1G1	B02GA	FL1	3			0	1584
C4024 DRT02	98648	JLW1061	222981	0	29	4/16/2007	1:09:56 PM	2.62E+03	600	1	0	15	EZ259 DRT02	WL1G1	B02CA	LAB01	1			0	1433
EZ259 DRT02	98648	JLW1061	222981	0	30	4/16/2007	1:20:10 PM	3.34E+03	60	1	0	15	EZ259 DRT02	WL1G1	B02DA	LAB01	1			0	18285
EZ259 DRT02	98648	JLW1061	222981	0	31	4/16/2007	1:21:32 PM	3.67E+03	60	1	0	15	EZ259 DRT02	WL1G1	B02DA	LAB01	2			0	20126
EZ259 DRT02	98648	JLW1061	222981	0	32	4/16/2007	1:22:54 PM	3.27E+03	60	1	0	15	EZ259 DRT02	WL1G1	B02DA	LAB01	3			0	17940

Reviewed By:

Joe King

Date:

5-1-07

Approved By:

John Mc Gahan

Date:

5/1/07

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-4 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 Package: Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

**Section 3.0
Measurement Results – Direct Alpha Measurements
___ Pages**

Measurement Database Download Report

Direct Alpha Measurements

4/16/2007

Page 1 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	4 pi Alpha Efficiency	ActiveArea (cm2)												
DL041607-002	1	JEJ5742	4/16/2007	2:57 PM	C4024 302C1	43-90	249011	0.173	125												
Package ID	M2350 Serial Number	User ID	Detector Serial Number	Detector Setup Number	Sample No	Date	Time	Logged Count	Count Time (secs)	Logging Mode	Window On/Off	Scaler Alarm	LC1	LC2	LC3	LC4	LC5	LC6	L7	Measurement Location Number	Gross Alpha (dpm/ 100cm2)
FS440 DRT01	126195	JEJ5742	249011	3	0	4/16/2007	10:45:50 AM	1.00E+01	600	1	0	16	FS440	DRT01	WL1M1	A03AA	LAB01	1		0	5
FS440 DRT01	126195	JEJ5742	249011	0	1	4/16/2007	10:52:16 AM	3.27E+03	60	1	0	16	FS440	DRT01	WL1M1	A03BA	LAB01	1		0	15135
FS440 DRT01	126195	JEJ5742	249011	0	2	4/16/2007	10:53:44 AM	3.28E+03	60	1	0	16	FS440	DRT01	WL1M1	A03BA	LAB01	2		0	15186
FS440 DRT01	126195	JEJ5742	249011	0	3	4/16/2007	10:55:14 AM	3.04E+03	60	1	0	16	FS440	DRT01	WL1M1	A03BA	LAB01	3		0	14067
C4024 302C1	126195	JEJ5742	249011	3	4	4/16/2007	1:10:28 PM	3.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	WL1	1		0	14
C4024 302C1	126195	JEJ5742	249011	3	5	4/16/2007	1:13:36 PM	0.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	WL1	2		0	0
C4024 302C1	126195	JEJ5742	249011	3	6	4/16/2007	1:15:54 PM	0.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	WL1	3		0	0
C4024 302C1	126195	JEJ5742	249011	3	7	4/16/2007	1:22:24 PM	6.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	MZ	1		0	28
C4024 302C1	126195	JEJ5742	249011	3	8	4/16/2007	1:26:38 PM	0.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	MZ	2		0	0
C4024 302C1	126195	JEJ5742	249011	3	9	4/16/2007	1:36:22 PM	1.00E+00	60	1	0	16	C4024	302C1	FL1M1	A03FA	MZ	1		0	5
C4024 302C1	126195	JEJ5742	249011	3	10	4/16/2007	1:38:26 PM	3.00E+00	60	1	0	16	C4024	302C1	FL1M1	A03FA	MZ	2		0	14
C4024 302C1	126195	JEJ5742	249011	3	11	4/16/2007	2:01:58 PM	0.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03FA	WL3	3		0	0
C4024 302C1	126195	JEJ5742	249011	3	12	4/16/2007	2:03:44 PM	2.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	WL4	4		0	9
C4024 302C1	126195	JEJ5742	249011	3	13	4/16/2007	2:05:32 PM	5.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	WL5	5		0	23
C4024 302C1	126195	JEJ5742	249011	3	14	4/16/2007	2:07:16 PM	4.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	WL6	6		0	18
C4024 302C1	126195	JEJ5742	249011	3	15	4/16/2007	2:09:22 PM	1.00E+00	60	1	0	16	C4024	302C1	WL1C2	A03FA	WL7	7		0	5
C4024 302C1	126195	JEJ5742	249011	3	16	4/16/2007	2:10:48 PM	0.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03FA	WL8	8		0	0
C4024 302C1	126195	JEJ5742	249011	3	17	4/16/2007	3:11:54 PM	2.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL3	3		0	9
C4024 302C1	126195	JEJ5742	249011	3	18	4/16/2007	3:13:22 PM	1.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL4	4		0	5

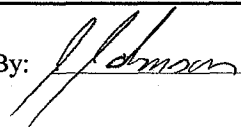
Direct Alpha Measurements

4/16/2007

Page 2 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	4 pi Alpha Efficiency	ActiveArea (cm2)												
DL041607-002	1	JEJ5742	4/16/2007	2:57 PM	C4024 302C1	43-90	249011	0.173	125												
Package ID	M2350 Serial Number	User ID	Detector Serial Number	Detector Setup Number	Sample No	Date	Time	Logged Count	Count Time (secs)	Logging Mode	Window On/Oroff	Scaler Alarm	LC1	LC2	LC3	LC4	LC5	LC6	L7	Measurement Location Number	Gross Alpha (dpm/100cm2)
C4024 302C1	126195	JEJ5742	249011	3	19	4/16/2007	3:15:18 PM	2.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL5	5		0	9
C4024 302C1	126195	JEJ5742	249011	3	20	4/16/2007	3:17:00 PM	2.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL6	6		0	9
C4024 302C1	126195	JEJ5742	249011	3	21	4/16/2007	3:19:08 PM	0.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL7	7		0	0
C4024 302C1	126195	JEJ5742	249011	3	22	4/16/2007	3:20:56 PM	4.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL8	8		0	18
C4024 302C1	126195	JEJ5742	249011	3	23	4/16/2007	3:22:32 PM	4.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL9	9		0	18
C4024 302C1	126195	JEJ5742	249011	3	24	4/16/2007	3:24:22 PM	2.00E+00	60	1	0	16	C4024	302C1	FL1C2	A03FA	FL10	10		0	9
C4024 302C1	126195	JEJ5742	249011	3	25	4/16/2007	3:39:32 PM	2.00E+00	60	1	0	16	C4024	302C1	FL1C1	A03FA	SUMP	1		0	9
C4024 302C1	126195	JEJ5742	249011	3	26	4/16/2007	3:44:04 PM	1.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	FL1	1		0	5
C4024 302C1	126195	JEJ5742	249011	3	27	4/16/2007	3:45:48 PM	1.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	FL1	2		0	5
C4024 302C1	126195	JEJ5742	249011	3	28	4/16/2007	3:47:00 PM	1.00E+00	60	1	0	16	C4024	302C1	WL1M1	A03GA	FL1	3		0	5
C4024 302C1	126195	JEJ5742	249011	3	29	4/16/2007	3:50:14 PM	0.00E+00	120	1	0	16	C4024	302C1	WL1M1	A03GS	WL1	1		0	0
FS440 DRT02	126195	JEJ5742	249011	0	30	4/16/2007	4:28:28 PM	6.00E+00	600	1	0	16	FS440	DRT02	WL1M1	A03CA	LAB01	1		0	3
FS440 DRT02	126195	JEJ5742	249011	0	31	4/16/2007	4:42:18 PM	3.21E+03	60	1	0	16	FS440	DRT02	WL1M1	A03DA	LAB01	1		0	14830
FS440 DRT02	126195	JEJ5742	249011	0	32	4/16/2007	4:43:40 PM	3.37E+03	60	1	0	16	FS440	DRT02	WL1M1	A03DA	LAB01	2		0	15561
FS440 DRT02	126195	JEJ5742	249011	0	33	4/16/2007	4:45:00 PM	3.09E+03	60	1	0	16	FS440	DRT02	WL1M1	A03DA	LAB01	3		0	14289

Reviewed By:



Date:

4/16/07

Approved By:

Date:

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-5 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 Package: Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

**Section 4.0
Measurement Results – Exposure Rate Measurements
___ Pages**

Measurement Database Download Report
Exposure Rate Measurements

4/17/2007

Page 1 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	Gamma Cal Factor													
DL041707-001	1	JLW1061	4/17/2007	10:47 AM	C4024 302C1	44-10	162404	5.36E+10													
Package ID	M2350 Serial Number	User ID	Detector Serial Number	Detector Setup Number	Sample No	Date	Time	Logged Count	Count Time (secs)	Logging Mode	Window On/Off	Scaler Alarm	LC1	LC2	LC3	LC4	LC5	LC6	L7	Measurement Location Number	Exposure Rate uR/hr
CS313 DRT01	98638	JLW1061	162404	0	0	4/17/2007	7:42:58 AM	1.02E+05	600	1	0	17	EZ259	DRT01	BIIM1	G01AA	LAB01	1		0	1.15E+01
CS313 DRT01	98638	JLW1061	162404	0	1	4/17/2007	8:04:44 AM	6.13E+05	30	1	0	17	EZ259	DRT01	BIIM1	G01BA	LAB01	1		0	1.37E+03
CS313 DRT01	98638	JLW1061	162404	0	5	4/17/2007	8:14:24 AM	2.59E+04	30	1	0	17	EZ259	DRT01	BIIM1	G01BA	LAB01	2		0	5.81E+01
CS313 DRT01	98638	JLW1061	162404	0	7	4/17/2007	8:17:30 AM	1.56E+04	30	1	0	17	EZ259	DRT01	BIIM1	G01BA	LAB01	3		0	3.49E+01
C4024 302C1	98638	JLW1061	162404	3	8	4/17/2007	9:09:48 AM	2.16E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	MZ	1		0	1.21E+01
C4024 302C1	98638	JLW1061	162404	3	9	4/17/2007	9:11:16 AM	2.06E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	MZ	1		0	1.15E+01
C4024 302C1	98638	JLW1061	162404	3	10	4/17/2007	9:15:38 AM	1.63E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	MZ	2		0	9.11E+00
C4024 302C1	98638	JLW1061	162404	3	11	4/17/2007	9:17:00 AM	1.73E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	MZ	2		0	9.65E+00
C4024 302C1	98638	JLW1061	162404	3	12	4/17/2007	9:21:58 AM	1.69E+03	12	1	0	17	C4024	302C1	FL1M1	G01FA	MZ	1		0	9.46E+00
C4024 302C1	98638	JLW1061	162404	3	13	4/17/2007	9:22:50 AM	1.76E+03	12	1	0	17	C4024	302C1	FL1M1	G02FA	MZ	1		0	9.86E+00
C4024 302C1	98638	JLW1061	162404	3	14	4/17/2007	9:24:28 AM	1.64E+03	12	1	0	17	C4024	302C1	FL1M1	G01FA	MZ	2		0	9.19E+00
C4024 302C1	98638	JLW1061	162404	3	15	4/17/2007	9:25:16 AM	1.82E+03	12	1	0	17	C4024	302C1	FL1M1	G02FA	MZ	2		0	1.02E+01
C4024 302C1	98638	JLW1061	162404	3	16	4/17/2007	9:30:10 AM	2.34E+03	12	1	0	17	C4024	302C1	WL1M1	G01FA	WL3	3		0	1.31E+01
C4024 302C1	98638	JLW1061	162404	3	17	4/17/2007	9:31:36 AM	2.37E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	WL4	4		0	1.33E+01
C4024 302C1	98638	JLW1061	162404	3	18	4/17/2007	9:33:20 AM	2.52E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	WL5	5		0	1.41E+01
C4024 302C1	98638	JLW1061	162404	3	19	4/17/2007	9:34:30 AM	1.86E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	WL6	6		0	1.04E+01
C4024 302C1	98638	JLW1061	162404	3	20	4/17/2007	9:35:42 AM	1.82E+03	12	1	0	17	C4024	302C1	WL1C2	G01FA	WL7	7		0	1.02E+01
C4024 302C1	98638	JLW1061	162404	3	21	4/17/2007	9:36:44 AM	1.92E+03	12	1	0	17	C4024	302C1	WL1M1	G01FA	WL8	8		0	1.08E+01
C4024 302C1	98638	JLW1061	162404	3	22	4/17/2007	9:41:42 AM	2.28E+03	12	1	0	17	C4024	302C1	WL1M1	G02FA	WL3	3		0	1.27E+01
C4024 302C1	98638	JLW1061	162404	3	23	4/17/2007	9:43:14 AM	2.45E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	WL4	4		0	1.37E+01
C4024 302C1	98638	JLW1061	162404	3	24	4/17/2007	9:44:14 AM	2.41E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	WL5	5		0	1.35E+01
C4024 302C1	98638	JLW1061	162404	3	25	4/17/2007	9:45:40 AM	2.64E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	WL6	6		0	1.48E+01
C4024 302C1	98638	JLW1061	162404	3	26	4/17/2007	9:46:56 AM	2.66E+03	12	1	0	17	C4024	302C1	WL1C2	G02FA	WL7	7		0	1.49E+01
C4024 302C1	98638	JLW1061	162404	3	27	4/17/2007	9:48:22 AM	2.66E+03	12	1	0	17	C4024	302C1	WL1M1	G02FA	WL8	8		0	1.49E+01
C4024 302C1	98638	JLW1061	162404	3	28	4/17/2007	9:50:14 AM	4.13E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL3	3		0	2.31E+01
C4024 302C1	98638	JLW1061	162404	3	29	4/17/2007	9:51:22 AM	4.23E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL4	4		0	2.37E+01

Measurement Database Download Report

Exposure Rate Measurements

4/17/2007

Page 2 of 2

Download ID	Station Number	User ID	Download Date	Download Time	Survey Package ID	Detector Model Number	Detector Serial Number	Gamma Cal Factor
DL041707-001	I	JLW1061	4/17/2007	10:47 AM	C4024 302C1	44-10	162404	5.36E+10

Package ID	M/2350 Serial Number	User ID	Detector Serial Number	Detector Setup Number	Sample No	Date	Time	Logged Count	Count Time (secs)	Logging Mode	Window On/Off	Scaler	IC1	IC2	IC3	IC4	IC5	IC6	L7	Measurement Location Number	Exposure Rate uR/hr
C4024 302C1	98638	JLW1061	162404	3	30	4/17/2007	9:52:28 AM	2.73E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL3	5	0	0	1.53E+01
C4024 302C1	98638	JLW1061	162404	3	31	4/17/2007	9:53:48 AM	3.11E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL6	6	0	0	1.74E+01
C4024 302C1	98638	JLW1061	162404	3	32	4/17/2007	9:55:50 AM	4.28E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL7	7	0	0	2.40E+01
C4024 302C1	98638	JLW1061	162404	3	33	4/17/2007	9:57:28 AM	2.94E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL8	8	0	0	1.64E+01
C4024 302C1	98638	JLW1061	162404	3	34	4/17/2007	9:58:34 AM	2.73E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL9	9	0	0	1.52E+01
C4024 302C1	98638	JLW1061	162404	3	35	4/17/2007	9:59:34 AM	2.65E+03	12	1	0	17	C4024	302C1	FL1C2	G01FA	FL10	10	0	0	1.48E+01
C4024 302C1	98638	JLW1061	162404	3	36	4/17/2007	10:01:12 AM	4.27E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL3	3	0	0	2.39E+01
C4024 302C1	98638	JLW1061	162404	3	37	4/17/2007	10:02:12 AM	4.28E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL4	4	0	0	2.39E+01
C4024 302C1	98638	JLW1061	162404	3	38	4/17/2007	10:03:28 AM	2.81E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL5	5	0	0	1.57E+01
C4024 302C1	98638	JLW1061	162404	3	39	4/17/2007	10:04:24 AM	3.18E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL6	6	0	0	1.78E+01
C4024 302C1	98638	JLW1061	162404	3	40	4/17/2007	10:05:32 AM	4.67E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL7	7	0	0	2.61E+01
C4024 302C1	98638	JLW1061	162404	3	41	4/17/2007	10:06:18 AM	2.94E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL8	8	0	0	1.64E+01
C4024 302C1	98638	JLW1061	162404	3	42	4/17/2007	10:07:00 AM	2.71E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL9	9	0	0	1.52E+01
C4024 302C1	98638	JLW1061	162404	3	43	4/17/2007	10:07:40 AM	2.66E+03	12	1	0	17	C4024	302C1	FL1C2	G02FA	FL10	10	0	0	1.49E+01
C4024 302C1	98638	JLW1061	162404	3	44	4/17/2007	10:11:34 AM	2.95E+03	12	1	0	17	C4024	302C1	FL1C1	G01FA	SUMP	1	0	0	1.65E+01
C4024 302C1	98638	JLW1061	162404	3	45	4/17/2007	10:12:40 AM	2.50E+03	12	1	0	17	C4024	302C1	FL1C1	G02FA	SUMP	1	0	0	1.40E+01
EZ259 DRT02	98638	JLW1061	162404	0	46	4/17/2007	10:34:26 AM	1.14E+05	600	1	0	17	EZ259	DRT02	WL1	G01CA	LAB01	1	0	0	1.27E+01
EZ259 DRT02	98638	JLW1061	162404	0	47	4/17/2007	10:38:28 AM	6.21E+05	30	1	0	17	EZ259	DRT02	WL1	G01DA	LAB01	1	0	0	1.39E+03
EZ259 DRT02	98638	JLW1061	162404	0	48	4/17/2007	10:40:02 AM	2.82E+04	30	1	0	17	EZ259	DRT02	WL1	G01DA	LAB01	2	0	0	6.30E+01
EZ259 DRT02	98638	JLW1061	162404	0	50	4/17/2007	10:43:08 AM	1.69E+04	30	1	0	17	EZ259	DRT02	WL1	G01DA	LAB01	3	0	0	3.79E+01

Reviewed By: J. Lee Date: 4-17-07
Approved By: John McHale Date: 4/17/07

4/14/2007

Page C-6 of 8

Survey Package:	C4024 302C1	Package:	Structure
Survey Area Name:	SETF, Building 4024		
Survey Unit Name:	Basement Floor and Mezzanine DM Areas		

Section 5.0
Sample Analysis Results – Alpha/Beta Counter
41 Pages

DATA M2929 SN 118419

SN	PROGRAM_NAME	SAMPLE_ID	DATE	TIME	BG Count Time (min)	Sample (min) Count Time	Alpha gross cts	Alpha BKG CPM	Alpha Alpha EFF DPM	Alpha MDC	Beta gross cts	Beta BKG CPM	Beta EFF	Beta DPM	Beta MDC	
1	ALPHA/BETA SMEARS	MZ-1	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	56	35	0.24	9.68	75.87
2	ALPHA/BETA SMEARS	MZ-2	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	44	35	0.24	-23.51	75.87
3	ALPHA/BETA SMEARS	WL3-3	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	42	35	0.24	-29.06	75.87
4	ALPHA/BETA SMEARS	WL4-4	4/16/2007	1:30:00 PM	20	1.5	1	0.4	0.29	0.91	12.14	43	35	0.24	-26.28	75.87
5	ALPHA/BETA SMEARS	WL5-5	4/16/2007	1:30:00 PM	20	1.5	1	0.4	0.29	0.91	12.14	49	35	0.24	-9.68	75.87
6	ALPHA/BETA SMEARS	WL6-6	4/16/2007	1:30:00 PM	20	1.5	1	0.4	0.29	0.91	12.14	47	35	0.24	-15.21	75.87
7	ALPHA/BETA SMEARS	WL7-7	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	49	35	0.24	-9.68	75.87
8	ALPHA/BETA SMEARS	WL8-8	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	40	35	0.24	-34.58	75.87

2
P1 out 9L

Removable Contamination Results

Survey Package ID: C4024302C1 Collection Date: 4/16/07 Time: 1330

L3 Code: WLI Technician: J. Johnson

Instrument Model No: Ludlum Model 2929 **Serial No:** 118419

beta

alpha

bkg count time (min) = 20 bkg cpm = 35 bkg count time (min) = 20 bkg cpm = 0.4

sample count time (min) = 1.5 eff. beta= 0.241 sample count time (min) = 1.5 eff. alpha= 0.294

SAMPLE ID (L5 - L6 Code)	B (counts)	BDPM (calculated)	BMDC (calculated)	A (counts)	ADPM (calculated)	AMDC (calculated)
MZ-1	56			0		
MZ-2	44			0		
WL3-3	42			0		
WL4-4	43			1		
WL5-5	49			1		
WL6-6	47			1		
WL7-7	49			0		
WL8-8	40			0		
<i>See Excel</i> <i>See Excel</i> <i>See Excel</i> <i>4/12/07</i>						

Upload Filename: C4024302C1-WL1 Upload Date: 4/16/07 Time: 1615

Sample Database ID: _____ Technician: J. McKeown

DATA M2929 SN 118419

SN	PROGRAM_NAME	SAMPLE_ID	DATE	TIME	BG Count Time (min)	Sample (min) Count Time	Alpha gross cts	Alpha BKG CPM	Alpha EFF	Alpha DPM	Alpha MDC	Beta gross cts	Beta BKG CPM	Beta EFF	Beta DPM	Beta MDC
1	ALPHA/BETA SMEARS	MZ1-1	4/16/2007	1:30:00 PM	20	1.5	1	0.4	0.29	0.91	12.14	34	35	0.24	-51.18	75.87
2	ALPHA/BETA SMEARS	MZ2-2	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	54	35	0.24	4.15	75.87
3	ALPHA/BETA SMEARS	FL3-3	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	53	35	0.24	1.38	75.87
4	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	47	35	0.24	-15.21	75.87
5	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	41	35	0.24	-31.81	75.87
6	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	2	0.4	0.29	3.17	12.14	47	35	0.24	-15.21	75.87
7	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	46	35	0.24	-17.98	75.87
8	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	1	0.4	0.29	0.91	12.14	52	35	0.24	-1.38	75.87
9	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	59	35	0.24	17.98	75.87
10	ALPHA/BETA SMEARS	FL4-4	4/16/2007	1:30:00 PM	20	1.5	0	0.4	0.29	-1.36	12.14	41	35	0.24	-31.81	75.87

Removable Contamination Results

Survey Package ID:

C4024302C/ Collection Date: 4/16/07 Time: 1330

L3 Code:

FLI

Technician: J. Johnson

Instrument Model No:**Ludlum Model 2929**

Serial No:

118419

beta

alpha

bkg count time (min) =

20

bkg cpm=

35

bkg count time (min) =

20

bkg cpm = 0.4

sample count time (min) =

1.5

eff. beta=

0.241

sample count time (min) = 1.5

1.5

eff. alpha= 0.294

SAMPLE_ID (L5 - L6 Code)	B (counts)	BDPM (calculated)	BMDC (calculated)	A (counts)	ADPM (calculated)	AMDC (calculated)
MZ-1	34			1		
MZ-2	54			0		
FL3-3	53			0		
FL4-4	47			0		
FL5-5	41			0		
FL6-6	47			2		
FL7-7	46			0		
FL8-8	52			1		
FL9-9	59			0		
FL10-10	41			0		

See Excel sheet

See Excel sheet

Jim Allen 4/12/07

Upload Filename

C4024 302C1-FL1

Upload Date:

4/16/07

Time:

1630

Sample Database ID:

Technician:Page 1 of 2

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-7 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 **Package:** Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

Section 6.0
Sample Analysis Results – Gamma Spectroscopy
 0 Pages

**SNAP ENVIRONMENTAL TEST FACILITY D&D PROJECT
CANOGA PARK, CALIFORNIA**

4/14/2007

Page C-8 of 8

Survey Package Appendix C – Survey Results

Survey Package: C4024 302C1 Package: Structure
Survey Area Name: SETF, Building 4024
Survey Unit Name: Basement Floor and Mezzanine DM Areas

**Section 7.0
Sample Analysis Results – Alpha Spectroscopy
0 Pages**