BOEING

Supporting Document

GO NO.	S/A NO.	PAGE 1 OF	TOTAL PAGES	REV. LTR/CHG. NO.	NUMBER
90127		107	107	new	N001SRR140130

PROGRAM TITLE
Radiation Safety

DOCUMENT TITLE
De Soto 104 Mass Spectroscopy Laboratory Final Status Survey Report

DOCUMENT TYPE
Final Report

RELATED DOCUMENTS
N001SRR140129, Final Survey Plan

ORIGINAL ISSUE DATE
11/13/98

RELEASE DATE
12-16-98 E.M.

PREPARED BY/DATE

	DEPT.	MAIL ADDR
P. Liddy	641	T487

P. Liddy 11/30/98

APPROVALS

	DATE
P.D. Rutherford	12/4/98
J.D. Willenberg	12/14/98

IR&D PROGRAM? YES NO X
IF YES, ENTER AUTHORIZATION NO.

DISTRIBUTION

*	NAME	MAIL ADDR
	J. Barnes	T487
	P. Horton	T038
	P. Rutherford	T487
	F. Dahl	T100
	R. McGinnis	T487
	D. Trippeda	T038
	Radiation Safety Files	T487

ABSTRACT

This document describes the results of the Final Status Survey for the release of the Mass Spectroscopy Laboratory at the De Soto Building 104.

RELEASED DOCUMENT

* COMPLETE DOCUMENT
NO ASTERISK, TITLE OF CHANGE PAGE ONLY.

RESERVED FOR PROPRIETARY/LEGAL NOTICES

TABLE OF CONTENTS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

On August 1998, a Final Status Survey was completed in the Mass Spectroscopy Laboratory of the De Soto Building 104 confirming that the facility meets release limits approved by the Department of Energy, and the Department of Health Services. Accordingly, the facility is suitable for unrestricted use.

During 1998, a comprehensive decontamination and decommissioning effort were conducted in the Mass Spectroscopy Lab. After D&D efforts, a comprehensive Final Status Survey of the facility concluded in September 1998. In the course of the Final Status Survey, measurements were obtained for alpha and beta surface contamination on the interior walls, floors, and ceilings; and ambient gamma exposure rates at 1 meter above the interior floors. Measurements were taken for the concrete slab surrounding the Mass Spectroscopy Laboratory, outside roof area, ventilation ducting, and the pipe trench excavation areas. Contamination measurements were subdivided into two lots: Sample Lot 1 for the Mass Spectroscopy Laboratory of known and suspected contamination or "affected areas", which previously required decontamination, and Sample Lot 2 or outside "unaffected areas", where no decontamination effort was required. All measurements were tested statistically for compliance within the regulatory acceptable derived concentration guideline limits (DCGLs), and ambient exposure rates.

As a result of the Final Status Survey, all areas, affected and unaffected, the highest total alpha measurement found was 31 dpm/100cm^2. The highest removable alpha measurement found was 5 dpm/100cm^2. In all areas, the highest total beta measurement found was 1185 dpm/100cm^2. The highest removable beta found was 27 dpm/100cm^2.

In 21 soil samples removed from the pipe trench, all highest values detected were less than the regulatory limits. The highest level for Cs-137 was 0.13 pCi/gm, and Co-60 was 0.04 pCi/gm. Graphs of the surface contamination results were evenly distributed, and the results were less than the release limits. All tests for surface contamination and soil concentrations confirmed the De Soto building 104 Mass Spectroscopy laboratory is suitable for release without radiological restrictions.

1.0 INTRODUCTION

Rocketdyne Propulsion and Power conducts decontamination and decommissioning (D&D) operations at its former nuclear facilities and sites to demonstrate compliance with dose and risk based regulations. During D&D of these facilities, continuous efforts are made to eliminate or reduce residual radioactive contamination to levels that are as low as reasonably achievable (ALARA). Upon completion of D&D, radiological surveys are performed under established protocols to demonstrate that remaining radioactivity does not exceed the Department of Energy (DOE), Environmental Protection Agency (EPA), Nuclear Regulatory Commission (NRC), or the State of California regulatory limits.

The regulatory agency responsible for the site confirms whether the building is acceptable for release for "unrestricted use". The Final Status Survey is designed to demonstrate compliance with the regulatory release criterion. The scope of the Final Status Survey includes known and suspected areas of radioactivity. The Final Status Survey is discussed as a single stage of the investigation process using data from other surveys in the planning process. A systematic sampling approach was used based on rules that achieve representative sampling consistency with the application of statistical tests.

The Final Status Survey of the De Soto, building 104 Mass Spectroscopy Laboratory, will demonstrate that all parameters of the established regulatory guidelines and values are satisfied. In this report, the De Soto building 104 confirmation and verification activities include data quality objectives, analytical data, and statistical test results.

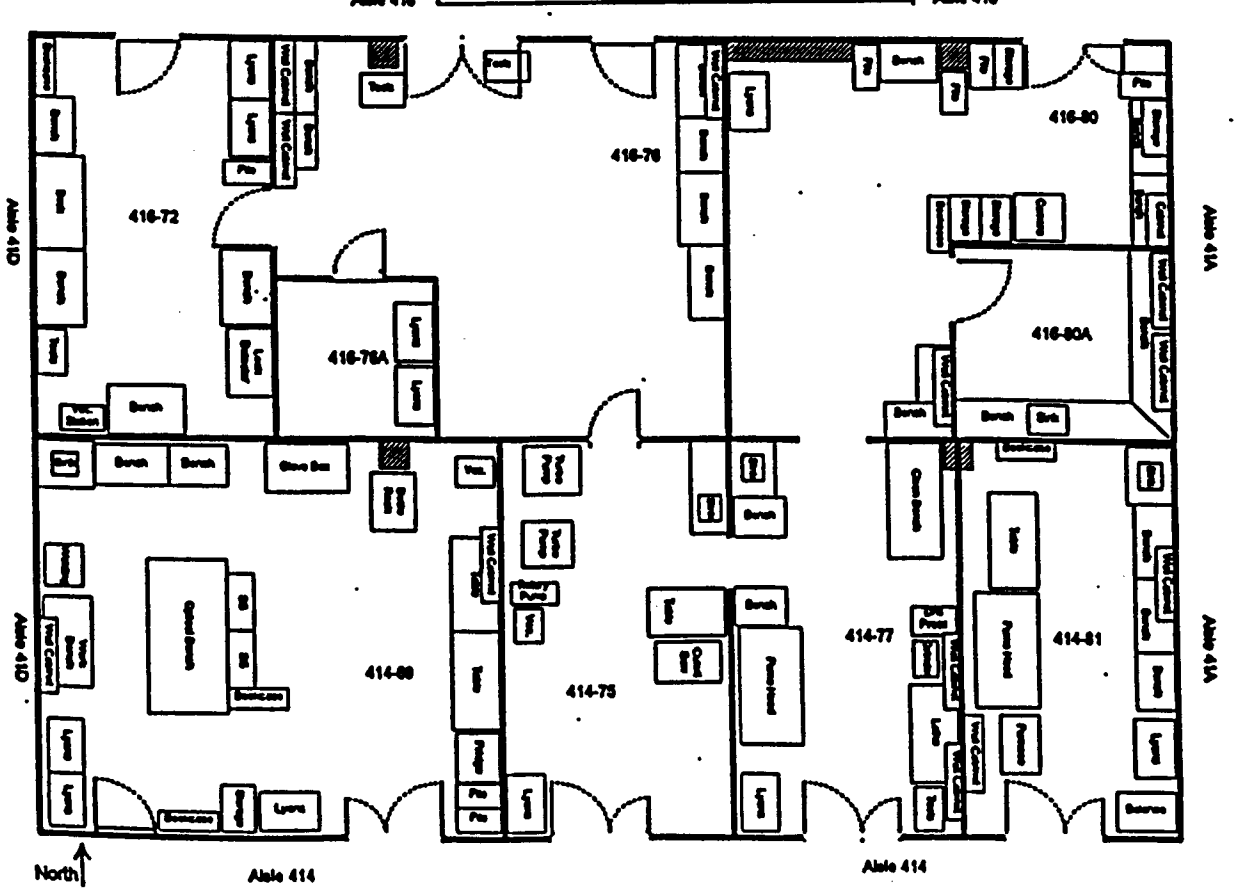
2.0 BACKGROUND

2.1 Location and Structure

The Mass Spectroscopy Laboratory was located in the northeast quadrant of the first floor of the De Soto Building 104, in Canoga Park, California. The Building 104 remediation area included the dimensions of the laboratory itself, and offices along the northeast quadrant of the Mass Spectroscopy Laboratory that were part of the work area.

A plan view of the Mass Spectroscopy Laboratory is shown in Figure 1 below. Originally there existed one double and one single door accesses into the laboratory (416-76), and a double door access to the spectrometer at the north wall (416-80). Concrete walls separated the offices from the laboratory. The spectrometer and dark room had an access from the lab (416-76A).

Room number until 1989	Room number after 1989
411A	416-80A
411B	416-80
411-76	416-76
411-76A	416-76A
411-72	416-72
413-69	414-69
413-75	414-75
413-72	414-77
413-81	414-81



The roof of the building was made up of composition panels with asphalt base topping. The building still exists on a concrete foundation, which extends around the building to form a perimeter walkway and loading dock. The ceiling height of the laboratory was approximately 12 feet. The laboratory itself occupied approximately 4900 sq. feet.

2.2 Operating History

The De Soto Building 104 was one of several buildings comprising the headquarters of the former Atomics International from 1960 to 1984. In 1984, Atomics International merged with Rocketdyne. The Mass Spectroscopy Laboratory analyzed low-level, activated test samples for universities and national laboratories until May 1995, when operations terminated. The laboratory was relocated to Battelle-Pacific Northwest Laboratories (PNL) in early 1996. Low level radioactive materials were stored in the Mass spectroscopy Laboratory until operations ceased.

2.3 Radiological Assessment

The laboratory housed a Helium Mass Spectroscopic Analyzer capable of measuring irradiated metal samples for He-3 / He-4 ratios useful in the evaluation of steels for use in reactor cores. Typical isotopes controlled by the laboratory were mainly activation products, such as Mn-54, Mn-56, Co-58, Co-60, Fe-59, and Nb-95. Quantities of encapsulated radionuclides included Pm-147. Uranium isotopes were also utilized in support of ATR work.

In 1984, surveys which included room 416-72 indicated 344 dpm/100cm^2 average alpha, and 2274 dpm/100cm^2 average beta; under the 5,000 dpm/100cm^2 average limit. The removable alpha was 12 dpm/100cm^2; and removable beta was 84 dpm/100cm^2 under the 1000dpm/100cm^2 limit.

Some contamination was found during the removal of sources, radioactive drums, and debris from the Mass Spectroscopy Laboratory at the end of 1991, and beginning of 1992. In early 1992, a sink under a lab ventilation hood in the same area revealed 4000 dpm/100cm^2 gross contamination. This was decontaminated, and the hood and sink were removed from the area.

In 1995 the offices adjacent to the Mass Spectroscopy Laboratory were surveyed for radiological contamination and found clean, confirming process knowledge that indicated contaminated materials were not worked on or transported outside of the laboratory. All cabinets and furniture were removed. In 1997, a floor survey in room 416-80 showed contamination above releasable limits. Isotopic analysis of the floor smear showed 51 pCi of Co-60, and 100 pCi of Cs-137

In June 1997, the final decommissioning of the Mass Spectroscopy Laboratory began, and all ventilation ducting, piping, conduit, floor tile, dry wall, and ceiling panels were removed. In June 1998, the Final Status Survey began, and was completed in September 1998. The Final Status Survey of the Mass Spectroscopy Laboratory confirmed that that there was no contamination found exceeding any radiological limits.

3.0 SURVEY PREPARATION

3.1 Identifying Survey Units

The De Soto building 104 offices and Mass Spectroscopy Laboratory were divided into two survey units: "affected" and "unaffected" areas. The survey units were then evaluated to determine if surface contamination was below the derived concentration guidelines (DCGLs). A reference coordinate system was established and marked in the laboratory and office areas. Random sampling points were identified in the survey pattern. (Refer to Figure 2, Grid Map Areas). Coordinates that did not fall within the survey unit area or could not be surveyed because of site conditions were replaced with other sample locations.

Scanning was performed to locate small areas of elevated concentrations of residual radioactivity to determine if they met the release criteria. Direct, qualitative scans were conducted for alpha and beta-gamma contamination followed by a cumulative counts and smear surveys of interior surfaces. The percentage of survey conducted for each area is shown in Table 1.

Table 1. Surveys Determined for the Mass Spec Lab.

	Qualitative (Scan Total)		Quantitative[b] (Total)*		Removable[b]		Ambient[b]
Measurements[1]	**Alpha**	**Beta**	**Alpha**	**Beta**	**Alpha**	**Beta**	**Gamma**
Mass Spec Lab (affected areas)	100%	100%	11%	11%	11%	11%	11%
Office Areas (unaffected areas)	100%	100%	11%	11%	11%	11%	11%

[b] 11% indicates measurements taken in each 1 square meter within each 9 square meter grid
*5 minute cumulative counts.

[1]From References 7.0, Item 5: Rocketdyne System of Procedures

3.2 Sampling Locations

For affected areas, such as the laboratory, a direct, qualitative alpha and beta-gamma scan of the floors, walls, and ceilings (100% surface area) was conducted. Following the scans, the entire area was divided into 9 square meter grids portrayed on a scaled survey map (see Figure 2). Within each grid, a one square meter area (1m x 1m) was selected for a cumulative count survey. For surfaces having less than a square meter area (remnant areas), a minimum area of one square meter was surveyed by combining other adjacent remnant areas.

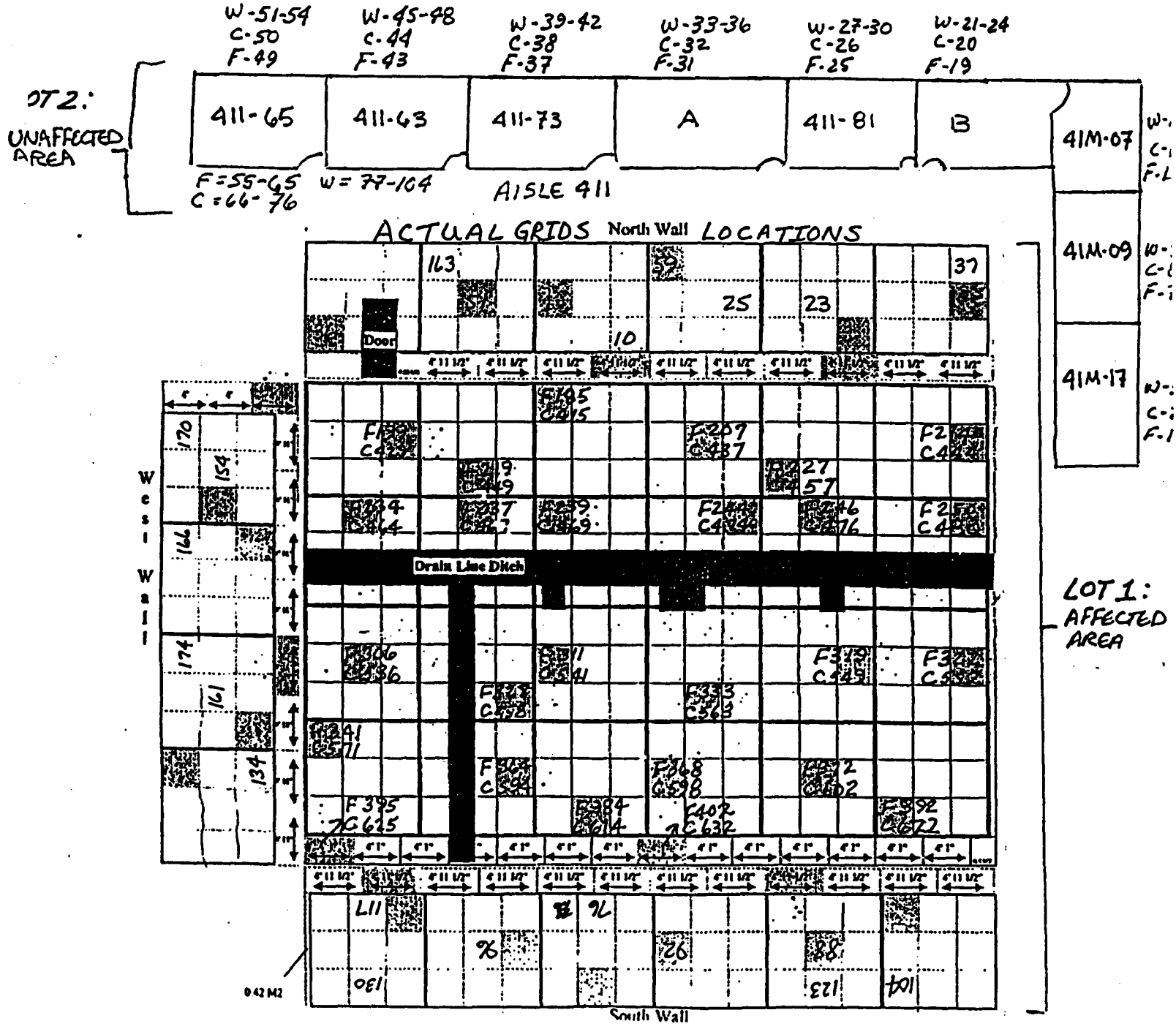


Figure 2: Grid Map Areas

For unaffected areas, such as the office areas, hallways, etc., a direct, qualitative scan (100 % of all surface area) on the floors, walls, and ceilings was conducted. Areas of concern included floor baseboards, windowsills, areas behind file cabinets or furniture, door thresholds, and any other areas where contamination potentially accumulated over time.

Following the surface scan, survey points were selected of the area for the floor, walls, and ceiling for a cumulative count (quantitative) survey. The survey points were calculated based on a surface area of 2000 square feet, and only 45 sample points would have been required as specified in Table 2 below. For conservative purposes, the sample points were increased to104 for the unaffected area.

Table 2: Statistical Sampling Point Population for 95% Reliability

Surface Area (ft^2)	Sample Points[1]
1 to 30	100% scan
31 to 50	30
51 to 100	37
101 to 200	40
201 to 300	43
301 to 400	44
401 to 2000	45
2000 to 100,000	75

Measurements of the average and maximum alpha surface activities were made with alpha scintillation detectors, sensitive only to alpha particles with energies exceeding about 1.5 MeV. Scintillation detectors were calibrated with a Th-230 standard alpha source. Measurements of the average and maximum beta surface activities were made with a thin-window pancake Geiger-Mueller tube calibrated with a Tc-99 standard beta source.

Daily checks and calibrations were performed on all instrumentation to determine acceptable performance. Daily checks and calibration data were entered on the appropriate Instrument Qualification Sheet (IQS).

[1] From Reference 7.0, Item 8: 10CFR32.110, "Acceptance Sampling Procedures under Specific Licenses"

The older 9in.x 9in.floor tiles, which demonstrated sufficient levels of asbestos, were classified as Asbestos Containing Material (ACM), and removed using proper asbestos abatement procedures. The floor mastic used to attach the tile was also considered ACM . In order to facilitate the removal process and determine if a mixed hazardous waste issue existed, a number of floor tiles were randomly selected and removed by trained asbestos abatement personnel. Removed tile and associated sub-floor areas were surveyed for radioactive contamination. If random surveys indicated the flooring material was free of contamination, then the expanse of the floor was considered non-contaminated, and asbestos abatement proceeded without additional radiological controls. No floor tiles, or areas underneath the tiles were contaminated. Surveys on concrete pads were conducted in the same method as floor areas. All sink traps were removed during the D&D project.

Structural surfaces consisting of beams, pipes, conduits, and other surfaces that were not easily assessable were surveyed over twenty percent (20%) of the surface area, and *unaffected areas* over ten percent (10%) of the surface area for contamination. Select surfaces to survey were based on those expected to have the highest contamination levels (e.g. ledges, tops of conduit, etc.). Ventilation systems for the laboratory that were located on the roof of Building 104 were removed as part of the D&D project. Access into any remaining air ducts in both affected and unaffected areas of the D&D project were surveyed for possible contamination. Air conditioning supply ducting was reinstalled following the removal of the HEPA filtration/ ventilation ducting. The work was conducted after a survey of the accessible areas of the supply ducting, and subsequently no contamination was detected.

3.3 Sample Collection

Sample Lot 1 (affected areas)

Sample Lot 1 was composed of measurements taken exclusively from the Mass Spectrometer Laboratory. Measurements were taken for total alpha and beta, removable alpha and beta, and ambient gamma levels. Qualitative measurements were taken for all (100%) of the survey grids, and qualitative measurements for 11% of all the survey grids. This method satisfies the State of California guidelines in DECON-1[1] that a minimum of 10% of an area shall be surveyed. Structural surfaces (pipes, conduit, light fixtures, etc.) were previously removed during the D&D of this area.

[1]References 7.0, item 6: DECON-1, "State of California for Decontaminating Facilities and Equipment Prior to Release for Unrestricted Use", June 1977

Sample Lot 2 (unaffected areas)

Sample Lot 2 was composed of measurements taken in office areas (outside of the laboratory) and hallways. A 100% direct qualitative frisk of each 1 square meter grid was performed using an alpha scintillation probe and a G-M pancake probe. The number of square feet in the unaffected area was calculated to determine the amount of sample points needed for a quantitative survey from the guidelines in Table 2. Subsequently, a quantitative survey for removable alpha and beta activity was conducted within each of the selected grids. Twenty percent of all structural surfaces (pipes, conduit, light fixtures, etc.) were surveyed for total and removable alpha and beta activity.

3.4 Survey Instrumentation and Techniques

A count rate meter with an audible indication was used for both qualitative and quantitative scans. Audible indication during the scan required a detector to be more sensitive than the scalar read-out. For scanning, the detector was moved slowly, at a scan rate of less than 5 cm/sec, over the surface being surveyed. The face of the detector was located near the surface and not more than ½-inch distance away.

Standard 1.75 inch disk smears (1 3/4 NPO, cloth) were used to obtain measurements of removable surface alpha and beta activity by wiping approximately 100 cm^2 of the surface area. The activity was measured on the disks using a low background, gas-flow, Tennelec proportional counter calibrated using Th-230 and Tc-99 standard sources.

The ambient exposure rates were measured at 1-meter from all surfaces using a 1-inch probe, NaI scintillation detector calibrated quarterly, and daily checks made using a Cs-137 source. A standard conversion factor of 215 cpm per μR/hr, based on comparisons with a Reuter-Stokes High Pressure Ion Chamber (HPIC), was used for conversion of counts per minute to μR/hr measurements. All survey data was recorded on Final Status Survey Data Sheets (FSDS).

3.5 Calibrations and Checks

Measurements of total and maximum alpha surface activity were made using an alpha scintillation detector, sensitive only to alpha particles with energies exceeding about 1.5 MeV. The detector was calibrated with a Th-230 alpha source standard traceable to the National Institute of Standards and Technology (NIST). Measurements of the average and maximum beta surface activities were made with a thin-window pancake Geiger-Mueller (G-M) tube. The G-M detector was calibrated with a Tc-99 beta source standard, traceable to NIST.

All portable survey instruments were serviced and calibrated with NIST traceable standards on a quarterly basis. In addition, daily source, background, and performance checks were done on all instrumentation, when in use, to determine acceptable performance and establish a background value for the instrument on that day. Calibration records for the survey instruments used are maintained in the Radiation Safety Department files.

The gas-flow proportional counters, used to measure removable contamination, were calibrated using Th-230 and Tc-99 standard sources, traceable to NIST.

The ambient exposure rates at 1m from surfaces were measured using a one-inch by one-inch (1-in x 1-in) probe NaI scintillation detector. These instruments were calibrated against a Reuter-Stokes high-pressure ionization chamber, and daily checks were made using a Cs-137 source.

3.6 Survey Evaluations

Acceptable contamination limits and gamma exposure rates for releasing a facility for unrestricted use are described in Table 3. The lowest (most conservative) applicable limits were chosen from these guidelines and incorporated into the Final Status Survey criteria for the Mass Spectroscopy Laboratory.

Table 3: Allowable Residual Surface Contamination (dpm/100cm^2)

Radionuclides[1]	Average	Maximum	Removable
Separated or enriched Sr-90, Th-natural, Th-232	<1,000	<3,000	<200
U-natural, U-235, U-238, and associated decay products	<5,000α	<15,000α	<1,000α
Beta-gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission), including Sr-90 intrinsic to the mixture. [This category of radionuclides includes mixed fission products, including Cs-137 and Sr-90. It does not apply to Sr-90, which has been separated from the other fission products or mixtures where the Sr-90 has been enriched.]	<5,000β-γ	<15,000β-γ	<1,000β-γ
Gamma Exposure Rate	≤ 5 μR/hr above background at one meter		

Note: Where surface contamination by both alpha- and beta-gamma-emitting radionuclides exists, the limits established for alpha- and beta-gamma-emitting radionuclides apply independently. Measurements of average contamination should not be averaged over an area of more than one square meter. For objects of less surface area, dose rate averages should be derived for each such object. The maximum and removable contamination level applies to an area of not more than 100 cm^2.

[1]From References 7.0, Item 2: DOE Order 5400.5, Figure IV-1.

Table 4 provides guidelines for alpha and beta-gamma emitters whose specific isotopic content had not been determined.

Table 4: Contamination Limits for Unidentified Isotopes

Radionuclides[1]	Average (dpm/100 cm2)	Removable (dpm/100 cm2)	Maximum (dpm/100 cm2)	Max Count Rate Meter Response
Unidentified Alpha emitters	< 100	< 20	< 300	No detectable activity when measured on a ZnS portable survey meter. (< 2 cpm on "slow" response)
Unidentified Beta-Gamma emitters	< 5,000	< 100	< 15,000	< 100 net counts per minute above ambient background on a pancake frisker

The average surface levels of contamination were taken over an area of one square meter. For objects of less surface area, the average was derived for each surface. The maximum contamination level applied to an area of not more than 100 cm^2. The amount of removable material per 100 cm^2 of surface area was determined by wiping an area with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wiping with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 cm^2 was determined, the activity per unit area was based on the actual area and the entire surface was wiped.

[1]From References 7.0, Item 2: DOE Order 5400.5, Figure IV-1.

4.0 DATA ANALYSES

The Final Status Survey had to confirm that the De Soto building 104 Mass Spectroscopy Laboratory and adjoining offices were acceptable for unrestricted use. Therefore, the results of the survey must be validated using statistical analysis. A distribution analysis was performed in which the activity was plotted against the cumulative probability using CUM-Plot 2.20[1].

A statistical procedure was used to validate the applicability of the raw survey data for selected sample lot areas. The statistical method known as "sampling inspection by variables" was used. This method is widely applied in the industry and military[2].

In sampling inspection by variables, the data is assumed to be *normally* (i.e., Gaussian)[3] distributed. The mean of the distribution $\bar{x}$, and its standard deviation s, are then related to a "test statistic," TS, as follows:

$$TS = \bar{x} + k \cdot s$$

where $\bar{x}$ = average (arithmetic mean of measured values)

s = observed sample standard deviation

k = tolerance factor calculated from the number of samples to achieve the desired sensitivity for the test

TS and $\bar{x}$ are then compared with an acceptance limit, U, to determine acceptance or other plans of action, including rejection of the area as contaminated and requiring further remediation.

The sample mean and standard deviation are easily calculable quantities; the value of **k**, the tolerance factor, is examined. Of the various criteria for selecting plans for acceptance sampling by variables[4], the most appropriate is the method of *Lot Tolerance Percent Defective* (LTPD, also referred to as the *Reject-able Quality Level* (RQL). The LTPD is defined as the poorest quality that should be accepted in an individual lot. Associated with the LTPD is a parameter referred to as "consumer's risk" (β), the risk of accepting a lot of quality equal to or poorer than the LTPD.

[1]References 7.0, Item 7: CUM-Plot 2.20, Proprietary Statistical Program .

[2]From References 7.0, Item 4: MIL-STD-414, "Sampling Procedures and Tables for Inspection by Variables for Percent Defective", June 11, 1957.

[3]Ref. 7.0, Item 4.

[4]Ref. 7.0, Item 4.

Assigning values for LTPD and β, and given the sample size n, a value for k can be calculated as follows:

$$k = \frac{K_2 + \sqrt{K_2^2 - ab}}{a};\quad a = 1 - \frac{K_\beta}{2(n-1)};\quad b = K_2^2 - \frac{K_\beta^2}{n}$$

where k = tolerance factor,

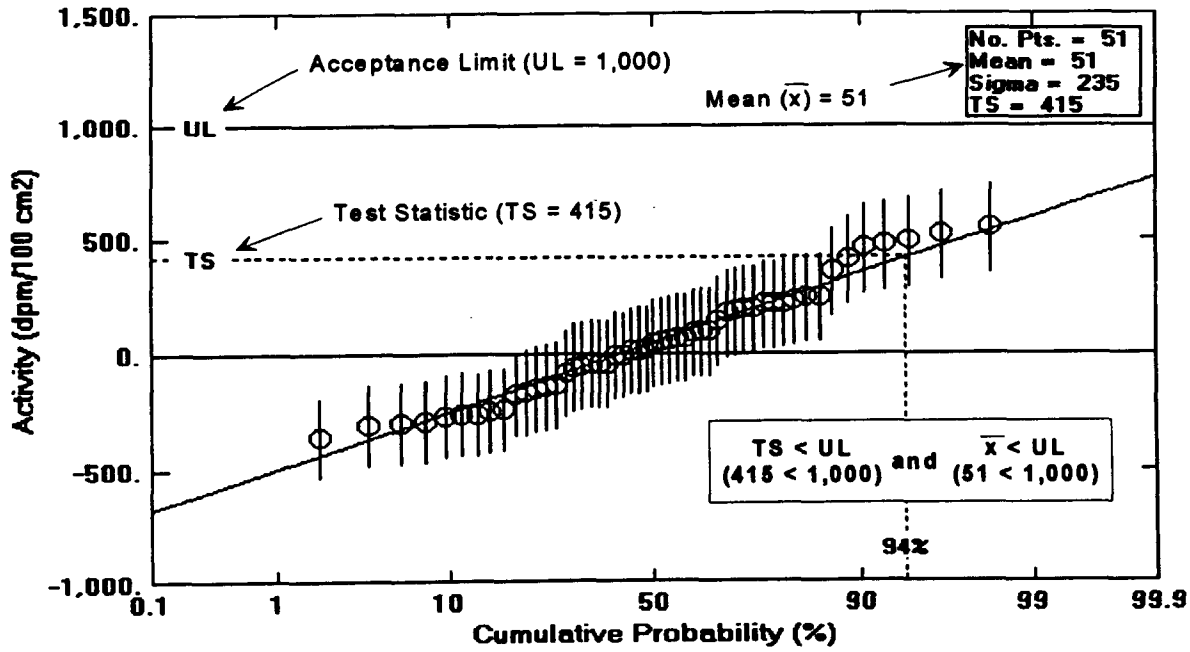
K_2 = the normal deviate exceeded with probability equal to the LTPD,

K_β = the normal deviate exceeded with probability of β,

n = number of samples.

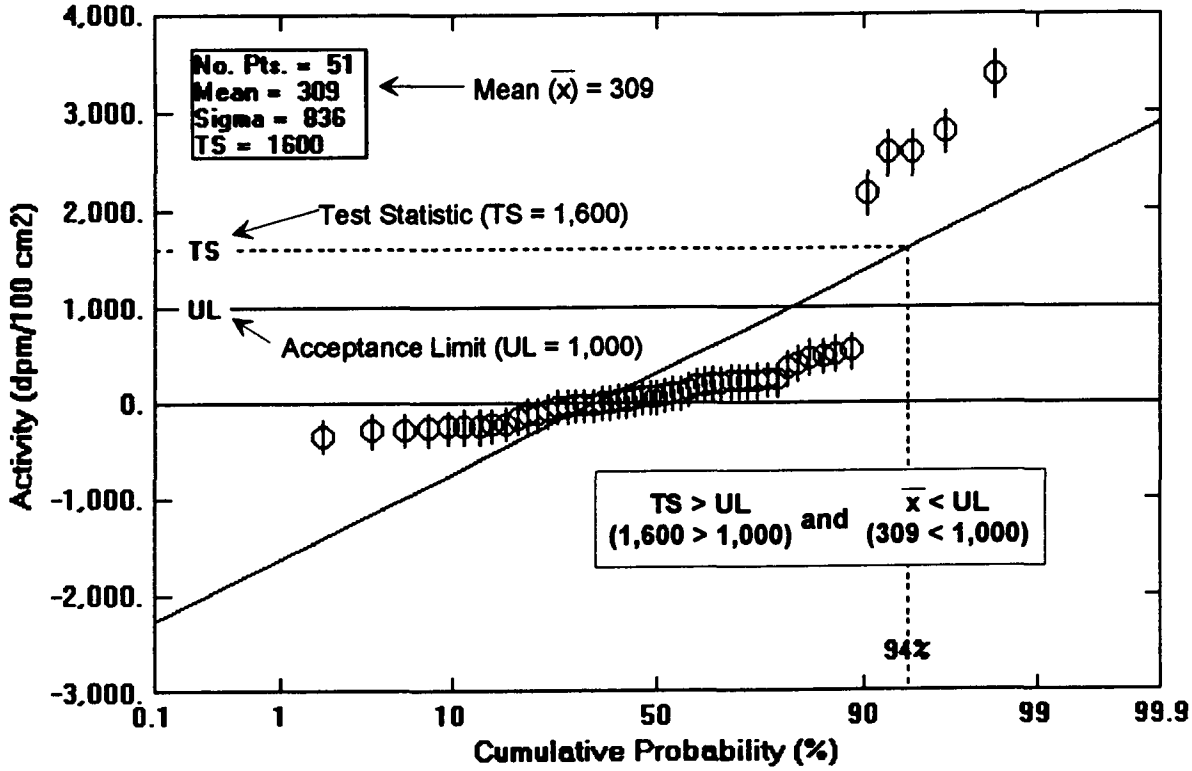
Depending on the data collected, the statistical test may result in one of three conclusions illustrated below:

1. **Acceptance**: If the test statistic ($\bar{x} + k \cdot s$) is less than or equal to the limit (U); accept the region as clean. If any single measured value exceeds 80% of the limit; decontaminate that location to as near background as is possible, but do not change the value in the analysis. Graph A is an example of the sample lot acceptance by the test.



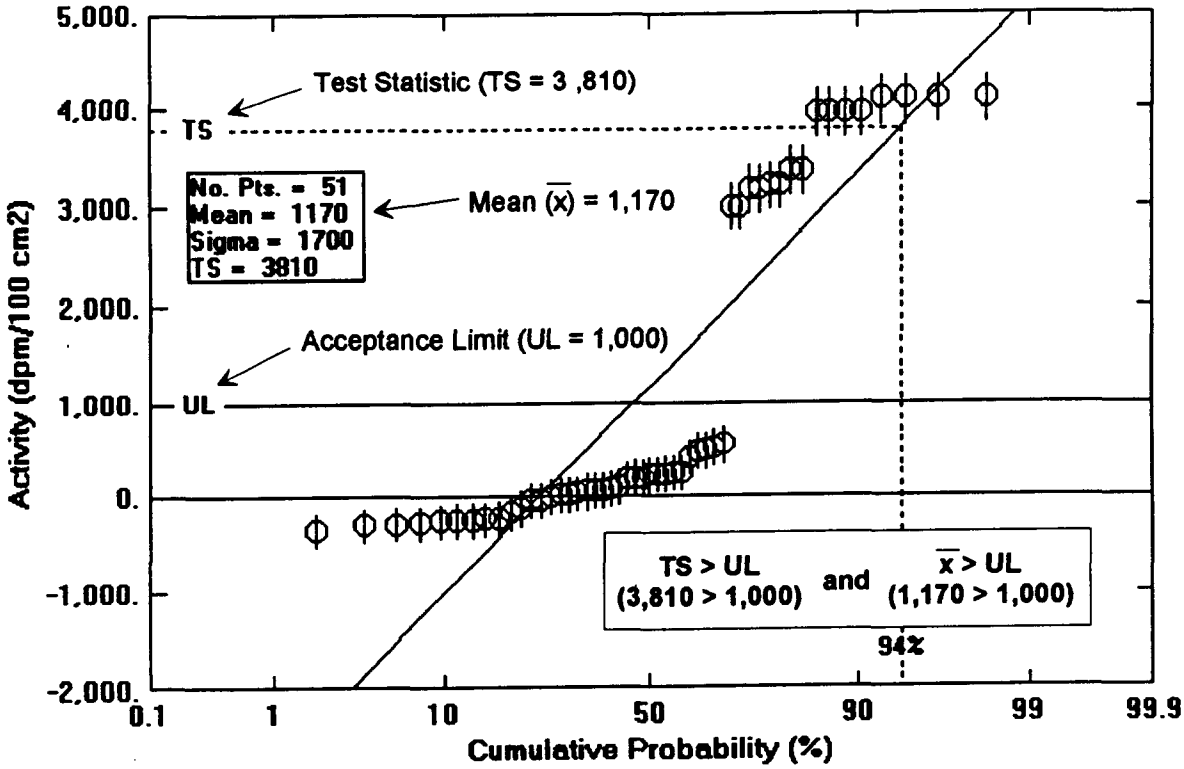
Graph A. Example of Sample Lot Acceptance, where TS ($=\bar{x} + k \cdot s$) ≤ UL and $\bar{x}$ ≤ UL

2. **Collect additional measurements**: If the test statistic ($\bar{x} + k \cdot s$) is greater that the limit (U), but $\bar{x}$ itself is less than U, and if independently re-sampling and combining all measured values to determine if $\bar{x} + k \cdot s \leq U$ for the combined set occurs; then accept the region as clean. If not, the region is contaminated and must be remediated. Graph B gives an example of additional measurements that must be taken in the sample lot to accept or reject it.



Graph B. Example of Sample Lot Requiring Additional Measurements, where TS ($= \bar{x} + k \cdot s$) > UL and $\bar{x}$ < UL

3. **Rejection:** If the test statistic ($\bar{x} + k \cdot s$) is greater than the limit (U) and $\bar{x} \geq$ U; the region is contaminated and must be remediated. **Graph** C gives an example of sample lot rejection by the test.



Graph C. Example of Sample Lot Rejection, where TS (= $\bar{x} + k \cdot s$) > UL and $\bar{x}$ > UL

The Mass Spectroscopy Laboratory survey was analyzed using a Lot Tolerance Percent Defect of β = LTPD = 5%, for the choices $K_\beta = K_2 = 1.645$ for a region of rejection, one-tailed test. The 5% value used was more conservative than the 10% LTPD Consumer Risk Value[1] used by the USNRC [Regulatory Guide 6.6], and State of California.[2] If the statistical tests meet the acceptance criteria above, we are willing to accept the hypothesis that the probability of accepting a Sample Lot as not being contaminated, which is in fact 5% or more contaminated is 5%. In other words, if the test statistic is less than the release criteria, we are 95% confident that over 95% of the Sample Lot has residual contamination below 100% of the release criteria of Section 3.6. This is referred to as the (95/95/100) test.[3]

[1]From References 7.0, item 3: USNRC Regulatory Guide 6.6,"Acceptance Sampling Procedures for Exempted and Generally Licensed Containing By-Product Material"

[2]From References 7.0, item 6: DECON-1, "State of California for Decontaminating Facilities and Equipment Prior to Release for Unrestricted Use", June 1977.

[3]From References 7.0, item 4: MIL-STD-414, "Sampling Procedures and Tables for Inspection by Variables for Percent Defective", June 11, 1957.

5.0 SAMPLE LOT ANALYSES AND RESULTS

Survey measurements were tested against the acceptance criteria for each particular type of radiation. Sample lots 1 and 2 were tested for the total and removable contamination and ambient gamma.

Measurements for the survey were taken over the period from 6/6/98 through 9/15/98, based on entries from the D&D logbook from the De Soto Building 104. Raw data measurements were adjusted for daily instrument background and statistically tested using the CUM Plot[1] method. Data was plotted on cumulative probability graphs to demonstrate a visual characterization. The more linear the data, the closer it approached normal distribution. When applicable, plots are shown in two scales; a condensed scale to show all the data relative to the acceptance limit, and when there is a wide separation between the data and the acceptance limit.

The test statistic ($TS = \bar{x} + k \cdot s$) for both sample lots combined was calculated and applicable contamination acceptance limits were compared. Individual calculated sample results data, used to generate the graphs, are provided in the following attachments.

5.1 Sample Lot Results (Mass Spec Lab)

The survey data results, Table 5 below, demonstrates for each applicable acceptance limit (U), the corresponding test statistic (TS) value is less than U, ($TS < U$). Therefore, the combined Sample Lots pass the "sampling inspection by variables" test and are "Accepted" as radiologically clean. The De Soto Building 104 Mass Spectroscopy Laboratory surveys correspond to assuring with a 95% confidence that 95% of the Sample Lots have residual contamination below 100% (a 95/95/100 test) of the applicable NRC, DOE, EPA, and State of California limits[2].

Table 5: Survey Results Comparison

	Total (dpm/100 cm²)		Removable (dpm/100 cm²)		Ambient Gamma
Criteria	**Alpha**	**Beta**	**Alpha**	**Beta**	**Exposure Rate (μR/h)**
Acceptance Limit (UL)	5,000	5,000	1,000	1,000	5
Actual Results (TS)	16.7	951	2.81	12.8	2.6

[1] References 7.0, item 7: CUM-Plot 22.0, Proprietary Statistical Program

[2] References 7.0, item 6: DECON-1, "State of California for Decontaminating Facilities and Equipment Prior to Release for Unrestricted Use", June 1977.

5.2 Trench Sampling

This section summarizes the results from a radiation survey performed on soil samples from the Mass Spectroscopy Laboratory piping trench area and western extension into the graphics room following excavation. In order to ascertain the levels of radioactivity in soil, a series of soil samples were taken and counted on a GeLi gamma spectrometer detector. Soil samples were obtained from the trench area after the piping was sampled and removed. Each soil sample was placed in a plastic bag, uniquely numbered, and subsequently placed in a "B"-box in numerical order. Each sample was transferred to a marinelli beaker, weighed, and analyzed in the counting lab using a Ge(Li) gamma spectrometer.

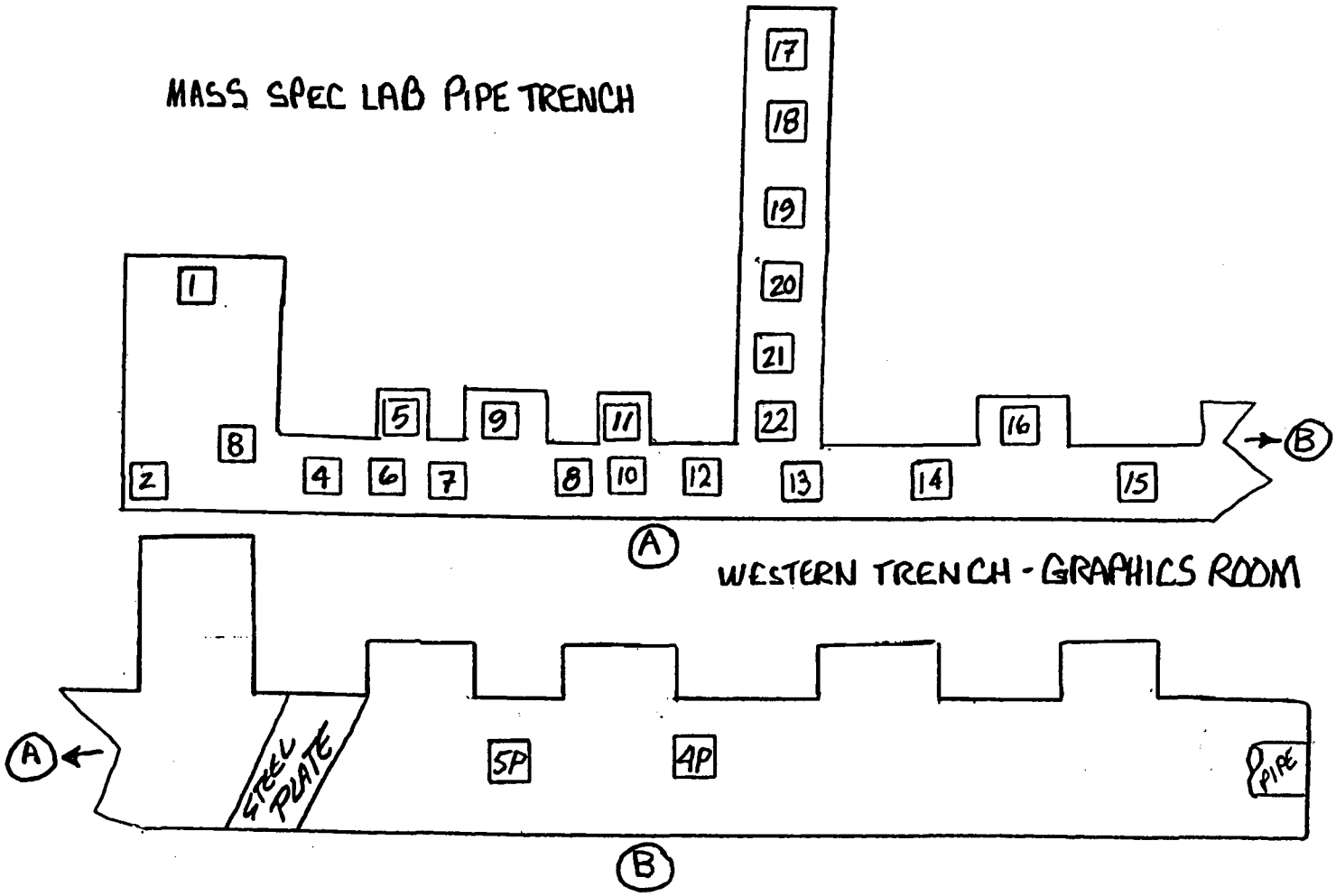


Figure 3: Mass Spec Lab and Western Pipe Trench

Table 6a and 6b summarizes the radionuclide concentrations after excavation and piping removal from the trench. The results were found to contain a maximum of 0.13 pCi/g of Cs-137 within normal background and approximately 1% of the clean-up standard of 9.2 pCi/gm (the location of the highest counts/minute).

Table 6a: Gamma Spectrometer Analysis of Soil Samples from Mass Spec Lab Pipe Trench

SAMPLE NUMBER*	DATE	LOCATION	NUCLIDE	DETECTED pCi/gm	MDA pCi/gm	LIMIT pCi/gm
ENV98176	7/6/98	TL-10	Cs-137	0.13	0.022	9.2
ENV98177	7/6/98	TL-11	Co-60	0.04	0.025	1.94

NOTE: MDA means minimum detectable activity * taken from 1998 Environmental Sample Logbook, SSFL, Bldg T100 Laboratory

In the west end of the pipe trench (that ran under the graphics room), remediated debris such as sludge, water, and piping sections were disposed of as radwaste. The debris contained trace levels of activation products below the limits described in Table 7. Soil samples were taken from the west trench after the soil was excavated and placed into shipping boxes. Soil samples from the boxes were analyzed and found to be below the guideline limits.

Samples ENV98155 and 156, taken directly from the west trench, were removed simultaneously with the soil samples removed by the Department of Health Services for the State of California. The results of those soil samples are shown in Table 6b.

Table 6b: Gamma Spectrometer Analysis of Soil Samples from Graphics Area Pipe Trench

Sample Number*	Date	Location	Isotopes Detected	C-137	Co-60
ENV98155	6/3/98	4P	No Unnatural Activity	NDA	NDA
ENV98156	6/3/98	5P	No Unnatural Activity	NDA	NDA

NOTE: NDA means no detectable activity. * taken from 1998 Environmental Sample Logbook, SSFL, Bldg T100 Laboratory

Table 7 below, lists the soil release limits to compare the radionuclides in Tables 6a and 6b, verifying the pipe trench radionuclides well below the release limits.

Table 7. Soil Guideline Release Limits

Radionuclide	Soil Guidelines[1] (pCi/g)
Am-241	5.44
Co-60	1.94
Cs-134	3.33
Cs-137	9.20
Eu-152	4.51
Eu-154	4.11
Fe-55	629,000
H-3	31,900
K-40	27.6
Mn-54	6.11
Na-22	2.31
Ni-59	151,000
Ni-63	55,300
Pu-238	37.2
Pu-239	33.9
Pu-240	33.9
Pu-241	230
Pu-242	35.5
Ra-226	5 and 15[a]
Sr-90	36.0
Th-228	5 and 15[a]
Th-232	5 and 15[a]
U-234	30[b]
U-235	30[b]
U-238	35[b]

NOTES: (a) DOE Order 5400.5 limits are 5 pCi/g averaged over first 15 cm of soil depth and 15 pCi/g averaged over 15-cm layers below the top 15 cm. (b) Generally, more conservative NRC limits for Uranium isotopes are proposed.

[1]From References 7.0, item 1, N001SRR140127, Proposed Sitewide Release Criteria for Remediation of Facilities at the Santa Susana Field Lab", revision A, 8/22/96.

6.0 SUMMARY

In all areas, affected and unaffected, the highest total alpha measurement found was 31.3 dpm/100cm^2. The highest removable alpha measurement found was 5.4 dpm/100cm^2. In all areas, the highest total beta measurement found was 1185 dpm/100cm^2. The highest removable beta found was 27.2 dpm/100cm^2. The highest level for Cs-137 was 0.13 pCi/gm, and Co-60 was 0.04 pCi/gm in the piping trench area.

All tests for surface contamination and soil concentration confirmed the De Soto building 104 Mass Spectroscopy laboratory is suitable for release for "unrestricted use".

7.0 REFERENCES

1. N001SRR140127, Proposed Sitewide Release Criteria for Remediation of Facilities at the Santa Susana Field Lab", revision A, 8/22/96.

2. DOE Order 5400.5 "Radiation Protection of the Public and Environment", Department of Energy, 1/7/92, (Figure IV-1).

3. USNRC Regulatory Guide 6.6,"Acceptance Sampling Procedures for Exempted and Generally Licensed Items Containing By-Product Material"

4. MIL-STD-414, "Sampling Procedures and Tables for Inspection by Variables for Percent Defective", June 11, 1957.

5. Rocketdyne System of Procedures, N001SRR140129, De Soto Mass Spectroscopy Laboratory Final Survey Plan, 1998.

6. DECON-1, "State of California for Decontaminating Facilities and Equipment Prior to Release for Unrestricted Use", June 1977.

7. CUM-Plot, Proprietary Statistical Program.

8. 10CFR32.110, "Acceptance Sampling Procedures under Specific Licenses".

9. 1998 Environmental Sample Logbook, SSFL, Bldg T100 Laboratory.

Appendix A

Direct Alpha Frisk

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
AFFECTED AREA					
GIF FOYER					
CEILING GRID C039	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C040	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C041	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C042	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C043	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C044	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C045	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C046	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C047	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C048	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C049	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C059	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C060	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C061	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C062	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C063	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C064	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C065	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C066	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C067	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C068	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C069	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C070	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C071	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C072	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C073	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C074	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C075	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C076	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C077	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C078	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C079	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C080	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID C081	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F028	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F029	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F030	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F031	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F032	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F033	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F034	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F035	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F036	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F037	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F038	06/23/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ASS SPECTROSCOPY LAB					
FLOOR GRID F120	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F122	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F123	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F124	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F125	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F126	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F127	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F128	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F129	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F130	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F131	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F144	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F157	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F170	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F171	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F172	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F173	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F174	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F175	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F176	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F177	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F178	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F179	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F180	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F181	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F182	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F183	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F184	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F185	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F186	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F187	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F188	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F189	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F190	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F191	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F192	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F193	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F194	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F195	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F196	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F197	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F198	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F199	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F200	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F201	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F202	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F203	06/08/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
FLOOR GRID F204	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F205	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F206	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F207	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F208	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F209	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F210	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F211	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F212	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F213	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F214	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F215	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F216	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F217	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F218	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F219	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F220	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F221	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F222	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F223	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F224	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F225	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F226	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F227	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F228	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F229	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F230	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F231	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F232	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F233	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F234	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F235	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F236	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F237	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F238	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F239	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F240	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F241	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F242	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F243	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F244	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F245	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F246	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F247	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F248	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F249	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F250	06/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F251	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F252	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F253	06/05/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
LOOR GRID F254	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F255	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F256	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F257	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F258	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F259	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F260	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F261	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F262	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F263	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F264	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F265	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F266	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F267	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F268	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F269	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F270	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F271	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F272	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F273	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F274	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F275	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F276	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F277	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F278	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F279	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F280	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F281	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F282	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F283	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F284	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F285	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F286	06/05/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F287	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F288	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F289	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F290	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F291	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F292	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F293	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F294	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F295	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F296	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F297	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F298	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F299	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F300	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F301	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F302	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F303	07/09/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
AFFECTED AREA					
CIF FOYER					
CEILING GRID C039	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C040	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C041	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C042	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C043	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C044	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C045	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C046	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C047	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C048	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C049	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C059	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C060	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C061	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C062	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C063	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C064	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C065	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C066	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C067	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C068	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C069	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C070	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C071	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C072	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C073	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C074	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C075	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C076	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C077	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C078	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
CEILING GRID C079	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C080	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
EILING GRID C081	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F028	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F029	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F030	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F031	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F032	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F033	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F034	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F035	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F036	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F037	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F038	06/23/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
LOOR GRID F304	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F305	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F306	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F307	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F308	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F309	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F310	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F311	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F312	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F313	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F314	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F315	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F316	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F317	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F318	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F319	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F321	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F322	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F323	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F326	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F327	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F328	07/07/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F329	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F330	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F331	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F332	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F333	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F334	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F335	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F336	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F337	07/08/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F338	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F339	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID F340	07/09/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F372	07/11/1998	< MDA	35.7	5000	dpm/100 cm2
LOOR GRID F393	07/11/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W001	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W002	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W003	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W004	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W005	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W006	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W007	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W008	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W009	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W010	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W011	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W012	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W013	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W014	06/16/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ALL GRID W015	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W016	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W017	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W018	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W019	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W020	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W021	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W022	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W023	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W023N	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W024	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W025	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W026	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W027	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W028	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W029	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W030	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W031	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W032	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W033	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W034	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W035	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W036	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W037	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W038	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W039	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W040	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W041	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W042	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W043	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W044	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W045	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W046	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W047	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W048	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W049	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W050	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W051	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W052	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W053	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W054	06/16/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W066	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W067	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W068	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W069	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W070	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W071	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W072	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W073	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W074	06/28/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
WALL GRID W075	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W076	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W077	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W078	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W079	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W080	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W081	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W082	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W083	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W084	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W085	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W086	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W087	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W088	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W089	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W090	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W091	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W092	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W093	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W094	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W095	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W096	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W097	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W098	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W099	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W100	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W101	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W102	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W103	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W104	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W105	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W106	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W107	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W108	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W109	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W110	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W111	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W112	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W113	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W114	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W115	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W116	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W117	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W118	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W119	06/28/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W132	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W133	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W134	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W135	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W136	06/19/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ALL GRID W137	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W138	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W139	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W140	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W141	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W142	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W143	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W145	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W146	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W147	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W148	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W149	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W150	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W151	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W152	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W153	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W154	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W155	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W156	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W158	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W159	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W160	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W161	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W162	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W163	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W164	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W165	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W166	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID W167	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W168	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID W169	06/19/1998	< MDA	35.7	5000	dpm/100 cm2
SOUTH HALLWAY					
CEILING GRID S019	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID S020	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID S021	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID S022	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID S023	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
CEILING GRID S024	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S013	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S014	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S015	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S016	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S017	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
FLOOR GRID S018	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S001	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S002	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S003	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S004	07/18/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
WALL GRID S005	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID S006	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S007	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S008	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID S009	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID S010	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
WALL GRID S011	07/18/1998	< MDA	35.7	5000	dpm/100 cm2
ALL GRID S012	07/18/1998	< MDA	35.7	5000	dpm/100 cm2

DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
NAFFECTED AREA					
HALLWAY AREAS					
ALLWAY AREAS (UNSPE	06/23/1998	< MDA	35.7	5000	dpm/100 cm2
FFICE AREAS					
ROOM 104-1-AB-35	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
OOM 104-1-AB-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
OOM 104-1-AC-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
ROOM 104-1-BB-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
ROOM 104-1-BC-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
OOM 104-1-BD-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
OOM 104-1-CB-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
ROOM 104-1-CC-39	06/24/1998	< MDA	35.7	5000	dpm/100 cm2
OOF AREA					
ROOF LOCATION 01	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 02	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 03	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 04	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 05	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 06	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 07	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 08	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 09	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 10	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 11	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 12	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 13	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 14	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 15	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 16	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 17	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 18	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 19	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 20	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 21	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 22	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 23	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 24	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 25	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 26	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 27	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 28	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
OOF LOCATION 29	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 30	08/20/1998	< MDA	35.7	5000	dpm/100 cm2

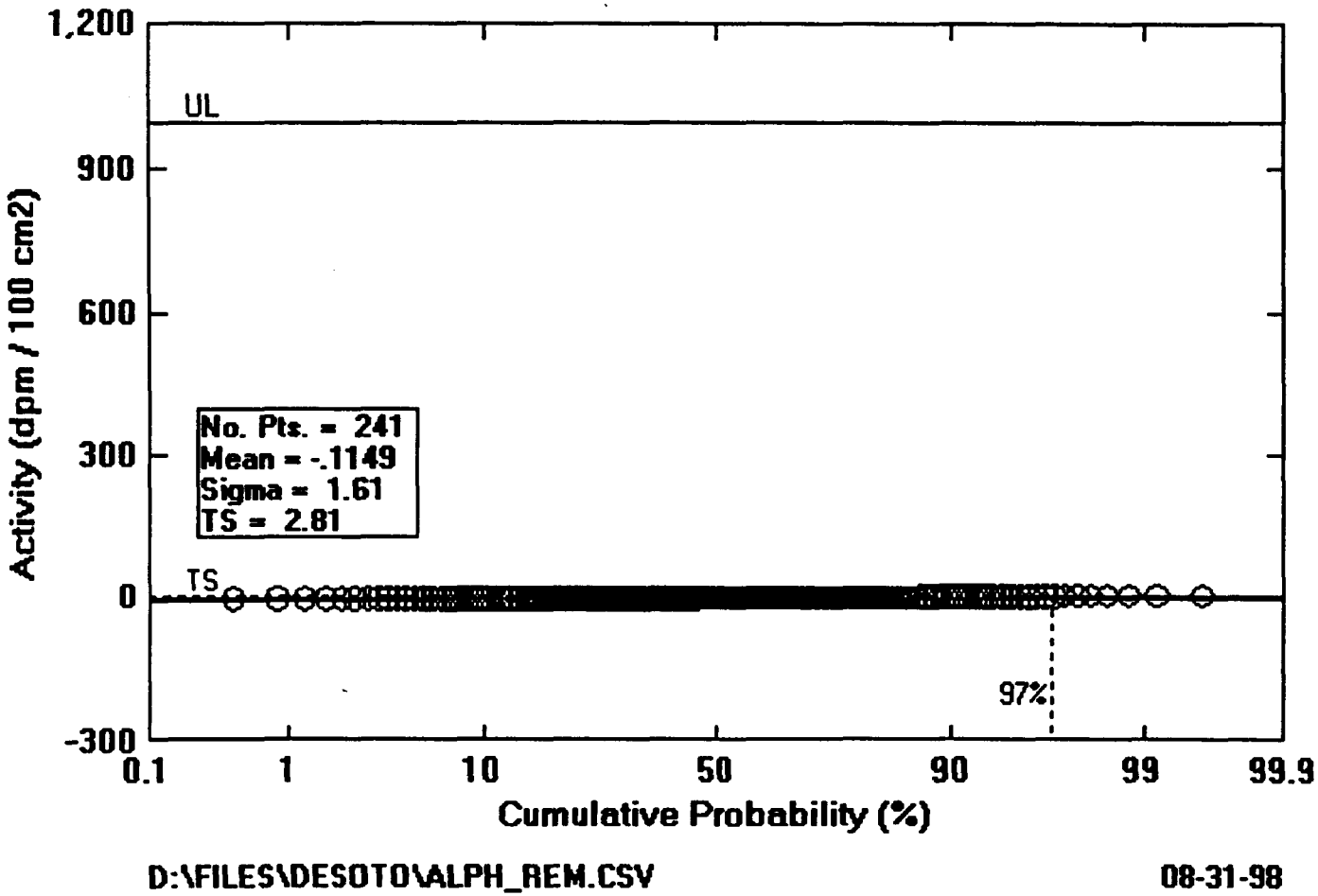
DIRECT ALPHA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ROOF LOCATION 31	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 32	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 33	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 34	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 35	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 36	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 37	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 38	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 39	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 40	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 41	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 42	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 43	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 44	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 45	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 46	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 47	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 48	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 49	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 50	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 51	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 52	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 53	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 54	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 55	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 56	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 57	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 58	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 59	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 60	08/20/1998	< MDA	35.7	5000	dpm/100 cm2
ROOF LOCATION 61	08/20/1998	< MDA	35.7	5000	dpm/100 cm2

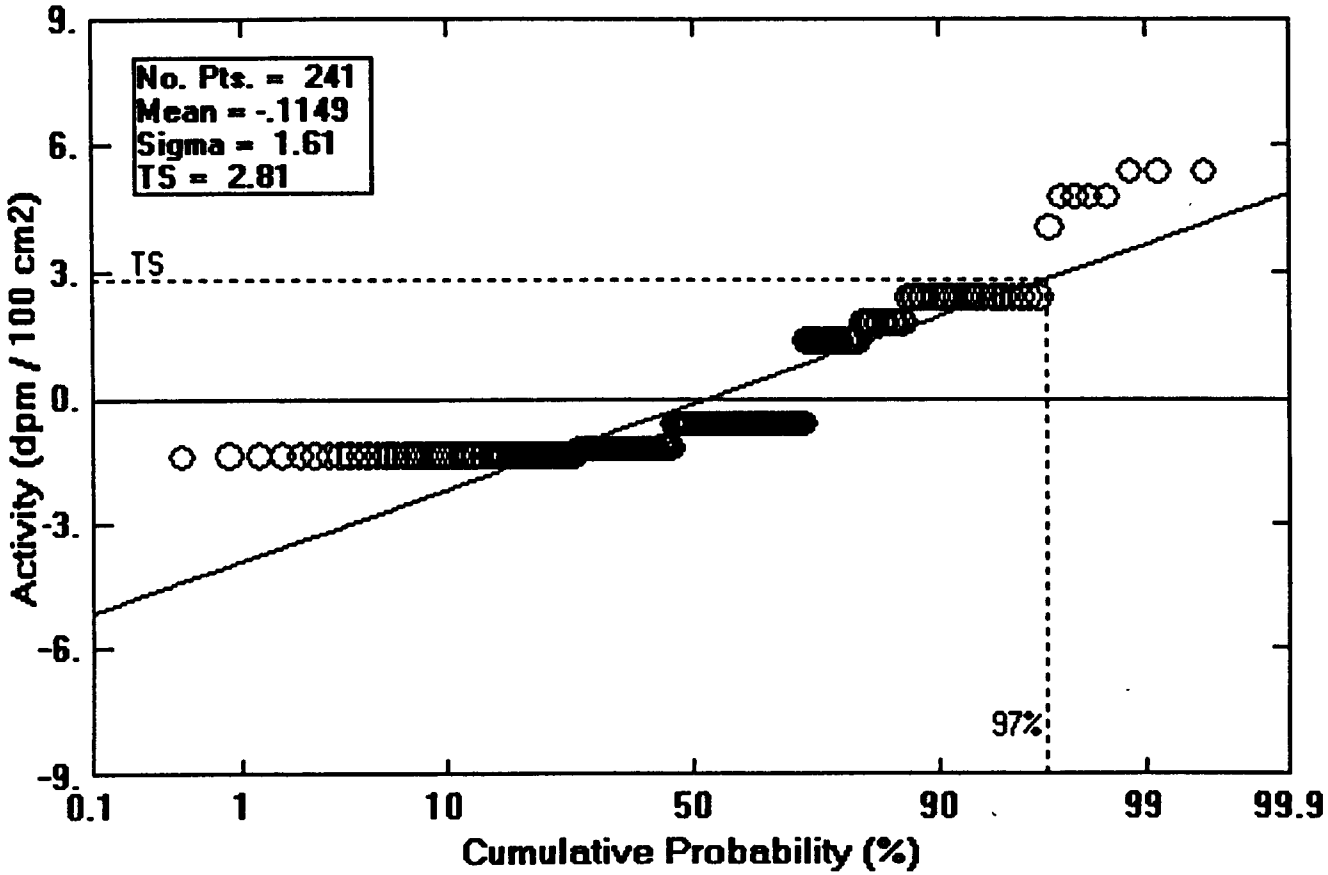
APPENDIX B

Removable Alpha Contamination

Removable Alpha Contamination (Mass Spec Lab)



Removable Alpha Contamination (Mass Spec Lab)



REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
AFFECTED AREAS					
GIF FOYER					
EILING GRID C04	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C04	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
CEILING GRID C06	07/23/1998	2.4	3.10	1000.0	dpm/100 cm2
EILING GRID C06	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C07	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
FLOOR GRID F031	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F037	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F040	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F046	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F056	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ASS SPECTROSCOPY LAB					
EILING GRID C41	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C42	07/21/1998	2.4	1.60	1000.0	dpm/100 cm2
CEILING GRID C43	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C44	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C44	07/21/1998	-0.6	1.60	1000.0	dpm/100 cm2
CEILING GRID C45	07/23/1998	2.4	3.10	1000.0	dpm/100 cm2
CEILING GRID C46	07/21/1998	-0.6	1.60	1000.0	dpm/100 cm2
EILING GRID C46	07/21/1998	-0.6	1.60	1000.0	dpm/100 cm2
EILING GRID C46	07/21/1998	-0.6	1.60	1000.0	dpm/100 cm2
CEILING GRID C47	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C47	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C48	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
CEILING GRID C53	07/16/1998	-0.6	2.30	1000.0	dpm/100 cm2
EILING GRID C54	07/17/1998	-0.6	2.60	1000.0	dpm/100 cm2
EILING GRID C54	07/23/1998	2.4	3.10	1000.0	dpm/100 cm2
CEILING GRID C55	07/23/1998	2.4	3.10	1000.0	dpm/100 cm2
CEILING GRID C55	07/17/1998	2.4	2.60	1000.0	dpm/100 cm2
EILING GRID C56	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
EILING GRID C57	07/16/1998	-0.6	2.30	1000.0	dpm/100 cm2
CEILING GRID C59	07/17/1998	-0.6	2.60	1000.0	dpm/100 cm2
EILING GRID C59	07/17/1998	-0.6	2.60	1000.0	dpm/100 cm2
EILING GRID C60	07/23/1998	-0.6	3.10	1000.0	dpm/100 cm2
CEILING GRID C61	07/17/1998	-0.6	2.60	1000.0	dpm/100 cm2
CEILING GRID C62	07/23/1998	2.4	3.10	1000.0	dpm/100 cm2
EILING GRID C62	07/16/1998	-0.6	2.30	1000.0	dpm/100 cm2
CEILING GRID C63	07/17/1998	-0.6	2.60	1000.0	dpm/100 cm2
FLOOR GRID F185	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F199	07/24/1998	5.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F207	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F214	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F219	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F227	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F234	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F237	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2

REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
FLOOR GRID F239	07/24/1998	5.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F244	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F246	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F250	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F306	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F311	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F319	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F322	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
LOOR GRID F328	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
LOOR GRID F333	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F341	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F364	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F368	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
FLOOR GRID F372	07/24/1998	-1.3	2.30	1000.0	dpm/100 cm2
FLOOR GRID F384	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
LOOR GRID F392	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F395	07/24/1998	5.4	2.30	1000.0	dpm/100 cm2
FLOOR GRID F402	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W004	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W008	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W009	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W010	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W015	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W023E	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W023N	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
ALL GRID W023S	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W025	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W027	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W034	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W036	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W037	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W051	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W059	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W063	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W076	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W088	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W092	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W096	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
ALL GRID W104	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
ALL GRID W117	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W123	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W130	07/24/1998	2.4	2.30	1000.0	dpm/100 cm2
WALL GRID W134	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W154	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W161	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W166	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W170	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2
WALL GRID W174	07/24/1998	-0.6	2.30	1000.0	dpm/100 cm2

REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

UNAFFECTED AREAS

HALLWAY AREAS

		Result	MDA	Limit	Units
HALLWAY CEILING	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2

OFFICE AREAS

		Result	MDA	Limit	Units
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2

REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOM 104-1-AB-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-AB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-AB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/09/1998	4.1	3.40	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	-1.4	3.40	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	1.4	3.40	1000.0	dpm/100 cm2
OOF AREA					
ROOF LOCATION 01	08/20/1998	4.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 02	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 03	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 04	08/20/1998	4.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 05	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2

ppendix B
rage 5
08/31/1998
ALPH_REM]

REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOF LOCATION 06	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 07	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 08	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 09	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 10	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 11	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 12	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 13	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 14	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 15	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 16	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 17	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 18	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 19	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 20	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 21	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 22	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 23	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 24	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 25	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 26	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 27	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 28	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 29	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 30	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 31	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 32	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 33	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 34	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 35	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 36	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 37	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 38	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 39	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 40	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 41	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 42	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 43	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 44	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 45	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 46	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 47	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 48	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 49	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 50	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 51	08/20/1998	4.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 52	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 53	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
OOF LOCATION 54	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
OOF LOCATION 55	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 56	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 57	08/20/1998	4.8	3.10	1000.0	dpm/100 cm2

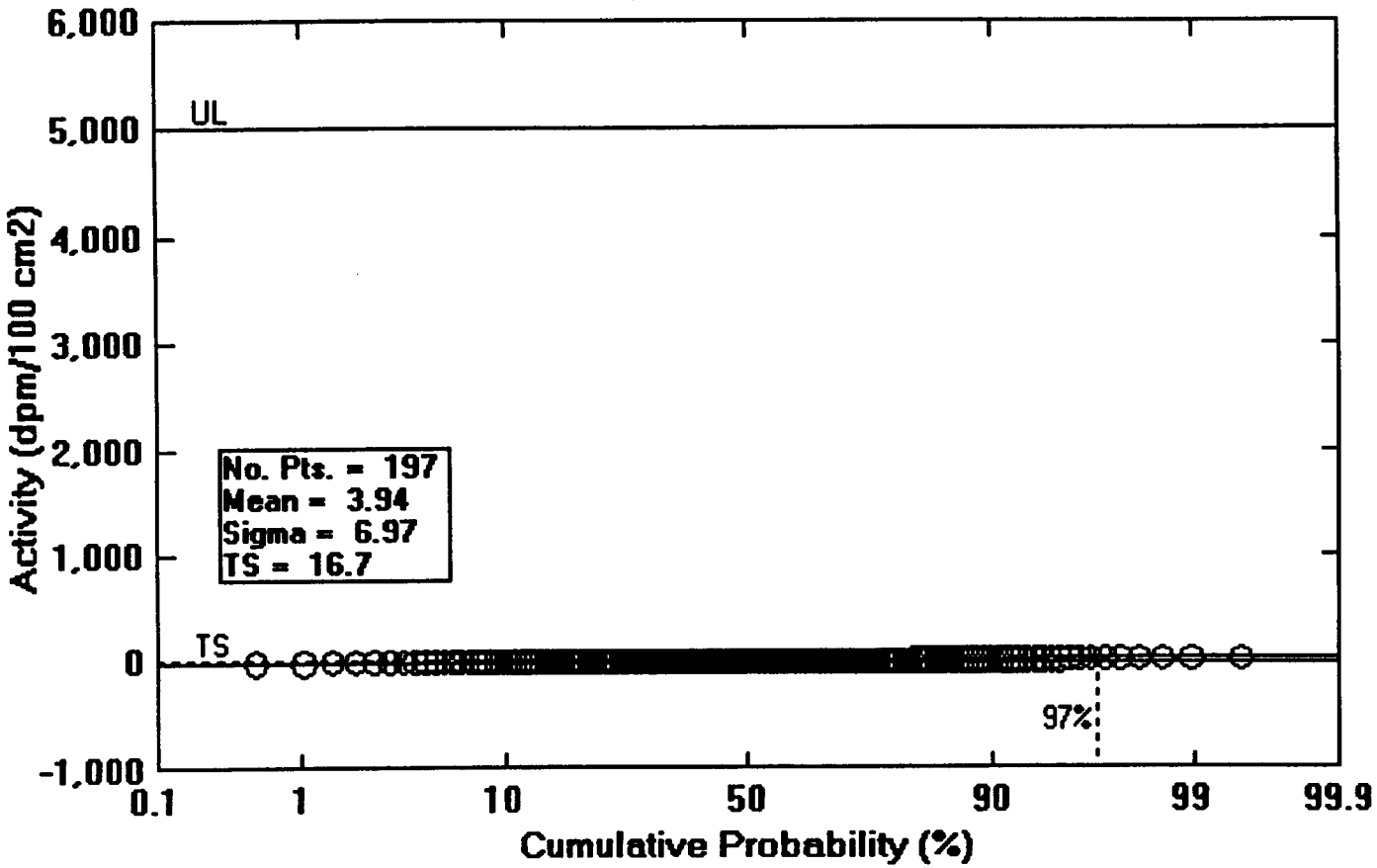
REMOVABLE ALPHA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOF LOCATION 58	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 59	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 60	08/20/1998	-1.2	3.10	1000.0	dpm/100 cm2
ROOF LOCATION 61	08/20/1998	1.8	3.10	1000.0	dpm/100 cm2

APPENDIX C

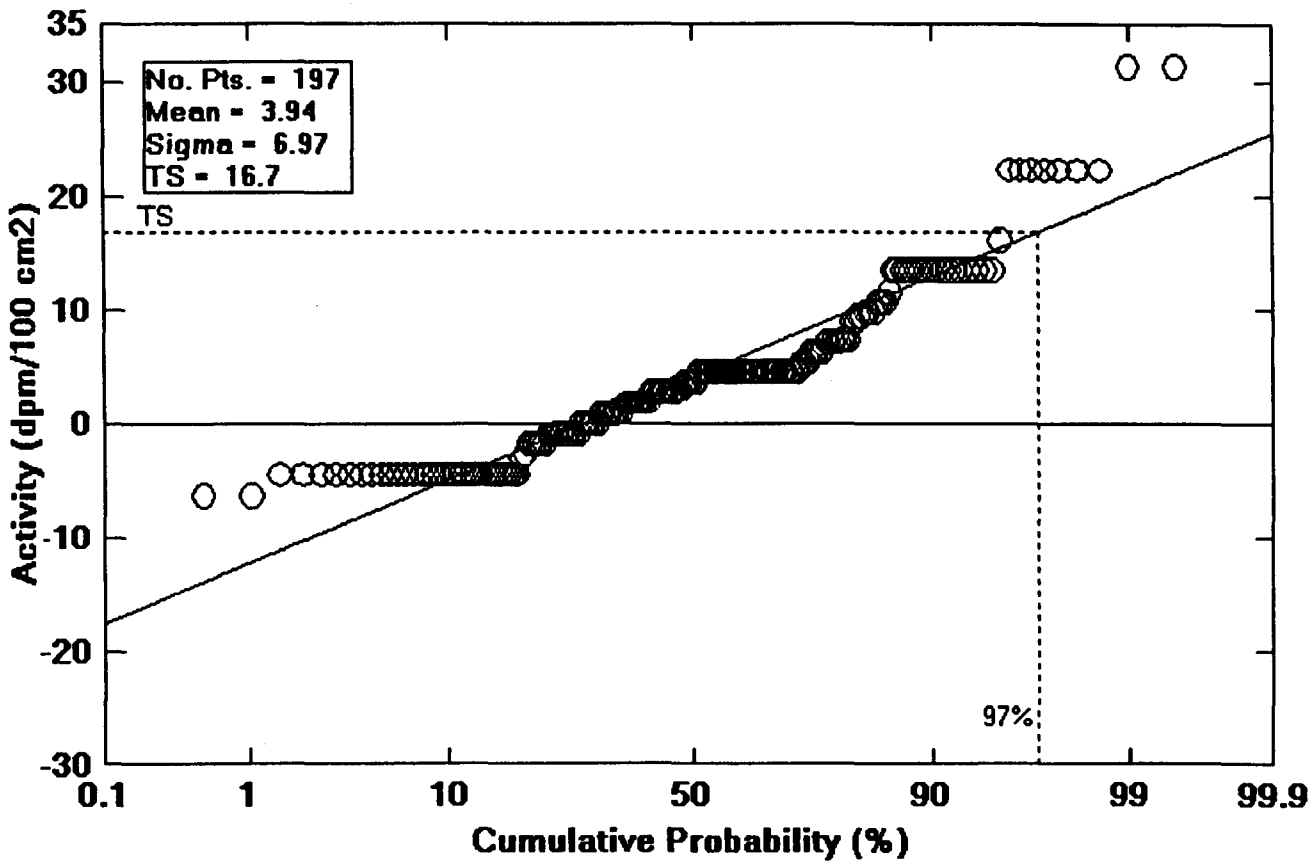
Quantitative Total Alpha Measurement

Quantitative Total Alpha Measurements (Mass Spec Lab)



D:\FILES\DESOTO\ALPHQAN2.CMP 08-31-98

Quantitative Total Alpha Measurements (Mass Spec Lab)



D:\FILES\DESOTO\ALPHQAN1.CMP

11-30-98

Appendix C
Page 1
08/31/1998
[ALPH_QAN]

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

AFFECTED AREA		COUNT DATA Counts Gross	Bkgd	Time (Min)	Eff.	RESULT DATA Result	MDA	Limit	Result Units
GIF FOYER									
CEILING GRID C063	07/23/1998	5.0	3.0	5.0	0.28	3.6	7.0	5000	dpm/100 cm2
CEILING GRID C069	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
CEILING GRID C079	07/23/1998	3.0	3.0	5.0	0.28	0.0	7.0	5000	dpm/100 cm2
FLOOR GRID F031	07/23/1998	7.0	3.0	5.0	0.28	7.1	7.0	5000	dpm/100 cm2
FLOOR GRID F037	07/23/1998	3.0	3.0	5.0	0.28	0.0	7.0	5000	dpm/100 cm2
FLOOR GRID F040	07/23/1998	2.0	3.0	5.0	0.28	-1.8	7.0	5000	dpm/100 cm2
FLOOR GRID F046	07/23/1998	3.0	3.0	5.0	0.28	0.0	7.0	5000	dpm/100 cm2
FLOOR GRID F056	07/23/1998	2.0	3.0	5.0	0.28	-1.8	7.0	5000	dpm/100 cm2
MASS SPECTROSCOPY LAB									
CEILING GRID C415	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
CEILING GRID C429	07/21/1998	3.0	3.5	5.0	0.28	-0.9	7.8	5000	dpm/100 cm2
CEILING GRID C437	07/23/1998	5.0	3.0	5.0	0.28	3.6	7.0	5000	dpm/100 cm2
CEILING GRID C444	07/23/1998	3.0	3.0	5.0	0.28	0.0	7.0	5000	dpm/100 cm2
CEILING GRID C449	07/21/1998	3.0	3.5	5.0	0.28	-0.9	7.8	5000	dpm/100 cm2
CEILING GRID C457	07/23/1998	7.0	3.0	5.0	0.28	7.1	7.0	5000	dpm/100 cm2
CEILING GRID C464	07/21/1998	6.0	3.5	5.0	0.28	4.5	7.8	5000	dpm/100 cm2
CEILING GRID C467	07/21/1998	4.0	3.5	5.0	0.28	0.9	7.8	5000	dpm/100 cm2
CEILING GRID C469	07/21/1998	2.0	3.5	5.0	0.28	-2.7	7.8	5000	dpm/100 cm2
CEILING GRID C474	07/23/1998	5.0	3.0	5.0	0.28	3.6	7.0	5000	dpm/100 cm2
CEILING GRID C476	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
CEILING GRID C480	07/23/1998	5.0	3.0	5.0	0.28	3.6	7.0	5000	dpm/100 cm2
CEILING GRID C536	07/16/1998	6.0	3.5	5.0	0.28	4.5	7.5	5000	dpm/100 cm2
CEILING GRID C541	07/17/1998	7.0	3.5	5.0	0.28	6.3	8.0	5000	dpm/100 cm2
CEILING GRID C549	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
CEILING GRID C552	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
CEILING GRID C558	07/17/1998	3.0	3.5	5.0	0.28	-0.9	8.0	5000	dpm/100 cm2
CEILING GRID C563	07/23/1998	3.0	3.0	5.0	0.28	0.0	7.0	5000	dpm/100 cm2
CEILING GRID C571	07/16/1998	6.0	3.5	5.0	0.28	4.5	7.5	5000	dpm/100 cm2
CEILING GRID C594	07/17/1998	3.0	3.5	5.0	0.28	-0.9	8.0	5000	dpm/100 cm2

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
CEILING GRID C598	07/17/1998	7.0	3.5	5.0	0.28	6.3	8.0	5000	dpm/100 cm2
CEILING GRID C602	07/23/1998	8.0	3.0	5.0	0.28	8.9	7.0	5000	dpm/100 cm2
CEILING GRID C614	07/17/1998	6.0	3.5	5.0	0.28	4.5	8.0	5000	dpm/100 cm2
CEILING GRID C622	07/23/1998	8.0	3.0	5.0	0.28	8.9	7.0	5000	dpm/100 cm2
CEILING GRID C625	07/16/1998	5.0	3.5	5.0	0.28	2.7	7.5	5000	dpm/100 cm2
CEILING GRID C632	07/17/1998	7.0	3.5	5.0	0.28	6.3	8.0	5000	dpm/100 cm2
FLOOR GRID F185	07/21/1998	5.0	3.5	5.0	0.28	2.7	7.8	5000	dpm/100 cm2
FLOOR GRID F199	07/21/1998	9.0	3.5	5.0	0.28	9.8	7.8	5000	dpm/100 cm2
FLOOR GRID F207	07/21/1998	7.0	3.5	5.0	0.28	6.3	7.8	5000	dpm/100 cm2
FLOOR GRID F214	07/22/1998	6.0	5.0	5.0	0.28	1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F219	07/21/1998	3.0	3.5	5.0	0.28	-0.9	7.8	5000	dpm/100 cm2
FLOOR GRID F227	07/22/1998	5.0	5.0	5.0	0.28	0.0	9.3	5000	dpm/100 cm2
FLOOR GRID F234	07/21/1998	9.0	3.5	5.0	0.28	9.8	7.8	5000	dpm/100 cm2
FLOOR GRID F237	07/21/1998	9.0	3.5	5.0	0.28	9.8	7.8	5000	dpm/100 cm2
FLOOR GRID F239	07/21/1998	5.0	3.5	5.0	0.28	2.7	7.8	5000	dpm/100 cm2
FLOOR GRID F244	07/22/1998	4.0	5.0	5.0	0.28	-1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F246	07/22/1998	4.0	5.0	5.0	0.28	-1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F250	07/22/1998	4.0	5.0	5.0	0.28	-1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F306	07/22/1998	6.0	5.0	5.0	0.28	1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F311	07/22/1998	6.0	5.0	5.0	0.28	1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F319	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
FLOOR GRID F322	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
FLOOR GRID F328	07/22/1998	4.0	5.0	5.0	0.28	-1.8	9.3	5000	dpm/100 cm2
FLOOR GRID F333	07/23/1998	5.0	3.0	5.0	0.28	3.6	7.0	5000	dpm/100 cm2
FLOOR GRID F341	07/22/1998	9.0	5.0	5.0	0.28	7.1	9.3	5000	dpm/100 cm2
FLOOR GRID F364	07/22/1998	5.0	5.0	5.0	0.28	0.0	9.3	5000	dpm/100 cm2
FLOOR GRID F368	07/22/1998	9.0	5.0	5.0	0.28	7.1	9.3	5000	dpm/100 cm2
FLOOR GRID F372	07/23/1998	4.0	3.0	5.0	0.28	1.8	7.0	5000	dpm/100 cm2
FLOOR GRID F384	07/22/1998	7.0	5.0	5.0	0.28	3.6	9.3	5000	dpm/100 cm2
FLOOR GRID F392	07/23/1998	9.0	3.0	5.0	0.28	10.7	7.0	5000	dpm/100 cm2
FLOOR GRID F395	07/16/1998	4.0	3.5	5.0	0.28	0.9	7.5	5000	dpm/100 cm2
FLOOR GRID F402	07/17/1998	7.0	3.5	5.0	0.28	6.3	8.0	5000	dpm/100 cm2
WALL GRID W004	07/10/1998	4.0	2.5	5.0	0.24	3.1	7.4	5000	dpm/100 cm2
WALL GRID W008	07/10/1998	3.0	2.5	5.0	0.24	1.0	7.4	5000	dpm/100 cm2
WALL GRID W009	07/10/1998	8.0	2.5	5.0	0.24	11.5	7.4	5000	dpm/100 cm2

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
WALL GRID W010	07/10/1998	5.0	2.5	5.0	0.24	5.2	7.4	5000	dpm/100 cm2
WALL GRID W015	07/10/1998	6.0	2.5	5.0	0.24	7.3	7.4	5000	dpm/100 cm2
WALL GRID W023E	07/10/1998	1.0	2.5	5.0	0.24	-3.1	7.4	5000	dpm/100 cm2
WALL GRID W023N	07/10/1998	3.0	2.5	5.0	0.24	1.0	7.4	5000	dpm/100 cm2
WALL GRID W023S	07/10/1998	7.0	2.5	5.0	0.24	9.4	7.4	5000	dpm/100 cm2
WALL GRID W025	07/10/1998	5.0	2.5	5.0	0.24	5.2	7.4	5000	dpm/100 cm2
WALL GRID W027	07/10/1998	2.0	2.5	5.0	0.24	-1.0	7.4	5000	dpm/100 cm2
WALL GRID W034	07/10/1998	2.0	2.5	5.0	0.24	-1.0	7.4	5000	dpm/100 cm2
WALL GRID W036	07/10/1998	2.0	2.5	5.0	0.24	-1.0	7.4	5000	dpm/100 cm2
WALL GRID W076	07/10/1998	6.0	2.5	5.0	0.24	7.3	7.4	5000	dpm/100 cm2
WALL GRID W088	07/10/1998	3.0	2.5	5.0	0.24	1.0	7.4	5000	dpm/100 cm2
WALL GRID W092	07/10/1998	4.0	2.5	5.0	0.24	3.1	7.4	5000	dpm/100 cm2
WALL GRID W096	07/10/1998	5.0	2.5	5.0	0.24	5.2	7.4	5000	dpm/100 cm2
WALL GRID W117	07/10/1998	4.0	2.5	5.0	0.24	3.1	7.4	5000	dpm/100 cm2
WALL GRID W130	07/16/1998	6.0	3.5	5.0	0.28	4.5	7.5	5000	dpm/100 cm2
WALL GRID W134	07/10/1998	7.0	2.5	5.0	0.24	9.4	7.4	5000	dpm/100 cm2
WALL GRID W154	07/10/1998	6.0	2.5	5.0	0.24	7.3	7.4	5000	dpm/100 cm2
SOUTH HALLWAY									
CEILING GRID S019	07/18/1998	7.0	6.5	5.0	0.28	0.9	10.8	5000	dpm/100 cm2
CEILING GRID S020	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
CEILING GRID S021	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
CEILING GRID S022	07/18/1998	7.0	6.5	5.0	0.28	0.9	10.8	5000	dpm/100 cm2
CEILING GRID S023	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
CEILING GRID S024	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
FLOOR GRID S013	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
FLOOR GRID S014	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
FLOOR GRID S015	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
FLOOR GRID S016	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
FLOOR GRID S017	07/18/1998	9.0	6.5	5.0	0.28	4.5	10.8	5000	dpm/100 cm2
FLOOR GRID S018	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
WALL GRID S001	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
WALL GRID S002	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
WALL GRID S003	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
WALL GRID S004	07/18/1998	8.0	6.5	5.0	0.28	2.7	10.8	5000	dpm/100 cm2
WALL GRID S005	07/18/1998	6.0	6.5	5.0	0.28	-0.9	10.8	5000	dpm/100 cm2
WALL GRID S006	07/18/1998	7.0	6.5	5.0	0.28	0.9	10.8	5000	dpm/100 cm2
WALL GRID S007	07/18/1998	4.0	6.5	5.0	0.28	-4.5	10.8	5000	dpm/100 cm2
WALL GRID S008	07/18/1998	6.0	6.5	5.0	0.28	-0.9	10.8	5000	dpm/100 cm2
WALL GRID S009	07/18/1998	3.0	6.5	5.0	0.28	-6.3	10.8	5000	dpm/100 cm2
WALL GRID S010	07/18/1998	3.0	6.5	5.0	0.28	-6.3	10.8	5000	dpm/100 cm2
WALL GRID S011	07/18/1998	6.0	6.5	5.0	0.28	-0.9	10.8	5000	dpm/100 cm2
WALL GRID S012	07/18/1998	7.0	6.5	5.0	0.28	0.9	10.8	5000	dpm/100 cm2

Appendix C
Page 5
08/31/1998
[ALPH_QAN]

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
UNAFFECTED AREA									
HALLWAY AREAS									
HALLWAY CEILING	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY CEILING	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY CEILING	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY CEILING	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY CEILING	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY DOOR	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY EAST WALL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
HALLWAY SOUTH WAL	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
HALLWAY WEST WALL	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
OFFICE AREAS									
ROOM 104-1-AB-35	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-35	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AB-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-AC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BB-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2

QUANTITATIVE TOTAL ALPHA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
ROOM 104-1-BC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	4.0	0.5	1.0	0.28	31.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	4.0	0.5	1.0	0.28	31.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	0.0	0.5	1.0	0.28	-4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	2.0	0.5	1.0	0.28	13.4	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	3.0	0.5	1.0	0.28	22.3	11.8	5000	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	1.0	0.5	1.0	0.28	4.5	11.8	5000	dpm/100 cm2
ROOF AREA									
ROOF LOCATION R1	08/20/1998	10.0	7.0	5.0	0.28	5.4	11.1	5000	dpm/100 cm2
ROOF LOCATION R2	08/20/1998	13.0	7.0	5.0	0.28	10.7	11.1	5000	dpm/100 cm2
ROOF LOCATION R3	08/20/1998	11.0	7.0	5.0	0.28	7.1	11.1	5000	dpm/100 cm2
ROOF LOCATION R4	08/20/1998	13.0	7.0	5.0	0.28	10.7	11.1	5000	dpm/100 cm2
ROOF LOCATION R5	08/20/1998	16.0	7.0	5.0	0.28	16.1	11.1	5000	dpm/100 cm2

APPENDIX D

Direct Beta Frisk

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ASS SPECTROSCOPY LAB					
FLOOR GRID F120	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F122	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F123	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F124	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F125	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F126	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F127	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F128	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F129	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F130	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F131	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F144	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F157	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F170	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F171	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F172	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F173	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F174	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F175	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F176	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F177	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F178	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F179	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F180	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F181	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F182	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F183	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F184	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F185	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F186	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F187	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F188	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F189	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F190	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F191	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F192	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F193	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F194	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F195	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F196	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F197	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F198	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F199	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F200	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F201	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F202	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F203	06/08/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
FLOOR GRID F204	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F205	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F206	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F207	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F208	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F209	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F210	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F211	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F212	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F213	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F214	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F215	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F216	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F217	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F218	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F219	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F220	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F221	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F222	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F223	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F224	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F225	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F226	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F227	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F228	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F229	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F230	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F231	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F232	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F233	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F234	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F235	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F236	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F237	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F238	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F239	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F240	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F241	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F242	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F243	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F244	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F245	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F246	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F247	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F248	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F249	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F250	06/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F251	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F252	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F253	06/05/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
LOOR GRID F254	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F255	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F256	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F257	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F258	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F259	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F260	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F261	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F262	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F263	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F264	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F265	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F266	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F267	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F268	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F269	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F270	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F271	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F272	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F273	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F274	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F275	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F276	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F277	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F278	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F279	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F280	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F281	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F282	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F283	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F284	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F285	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F286	06/05/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F287	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F288	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F289	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F290	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F291	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F292	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F293	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F294	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F295	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F296	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F297	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F298	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F299	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F300	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F301	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
LOOR GRID F302	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F303	07/09/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
FLOOR GRID F304	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F305	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F306	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F307	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F308	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F309	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F310	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F311	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F312	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F313	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F314	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F315	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F316	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F317	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F318	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F319	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F321	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F322	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F323	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F326	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F327	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F328	07/07/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F329	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F330	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F331	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F332	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F333	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F334	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F335	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F336	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F337	07/08/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F338	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F339	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F340	07/09/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F372	07/11/1998	< MDA	725.2	5000	dpm/100 cm2
FLOOR GRID F393	07/11/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W001	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W002	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W003	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W004	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W005	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W006	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W007	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W008	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W009	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W010	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W011	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W012	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W013	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W014	06/16/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
WALL GRID W015	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W016	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W017	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W018	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W019	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W020	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W021	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W022	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W023	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W023N	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W024	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W025	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W026	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W027	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W028	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W029	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W030	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W031	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W032	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W033	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W034	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W035	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W036	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W037	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W038	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W039	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W040	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W041	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W042	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W043	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W044	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W045	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W046	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W047	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W048	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W049	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W050	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W051	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W052	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W053	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W054	06/16/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W066	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W067	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W068	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W069	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W070	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W071	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W072	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W073	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W074	06/28/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ALL GRID W075	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W076	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W077	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W078	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W079	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W080	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W081	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W082	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W083	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W084	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W085	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W086	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W087	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W088	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W089	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W090	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W091	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W092	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W093	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W094	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W095	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W096	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W097	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W098	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W099	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W100	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W101	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W102	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W103	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W104	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W105	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W106	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W107	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W108	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W109	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W110	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W111	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W112	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W113	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W114	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W115	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W116	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W117	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W118	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W119	06/28/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W132	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W133	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W134	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W135	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W136	06/19/1998	< MDA	725.2	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
WALL GRID W137	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W138	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W139	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W140	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W141	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W142	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W143	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W145	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W146	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W147	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W148	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W149	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W150	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W151	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W152	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W153	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W154	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W155	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W156	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W158	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W159	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W160	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W161	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W162	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W163	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W164	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W165	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W166	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
ALL GRID W167	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W168	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
WALL GRID W169	06/19/1998	< MDA	725.2	5000	dpm/100 cm2
SOUTH HALLWAY					
EILING GRID S019	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
EILING GRID S020	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
CEILING GRID S021	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
CEILING GRID S022	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
EILING GRID S023	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
CEILING GRID S024	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
FLOOR GRID S013	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
LOOR GRID S014	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
FLOOR GRID S015	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
FLOOR GRID S016	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
LOOR GRID S017	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
LOOR GRID S018	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S001	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S002	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
ALL GRID S003	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S004	07/18/1998	< MDA	839.7	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
WALL GRID S005	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
ALL GRID S006	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S007	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S008	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
ALL GRID S009	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S010	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
WALL GRID S011	07/18/1998	< MDA	839.7	5000	dpm/100 cm2
ALL GRID S012	07/18/1998	< MDA	839.7	5000	dpm/100 cm2

DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
NAFFECTED AREA					
HALLWAY AREAS					
HALLWAY AREAS (UNSPE	06/23/1998	< MDA	725.2	5000	dpm/100 cm2
FFICE AREAS					
ROOM 104-1-AB-35	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
OOM 104-1-AB-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
OOM 104-1-AC-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
ROOM 104-1-BB-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
ROOM 104-1-BC-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
OOM 104-1-BD-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
OOM 104-1-CB-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
ROOM 104-1-CC-39	06/24/1998	< MDA	725.2	5000	dpm/100 cm2
OOF AREA					
OOF LOCATION 01	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 02	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 03	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 04	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 05	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 06	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 07	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 08	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 09	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 10	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 11	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 12	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 13	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 14	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 15	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 16	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 17	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 18	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 19	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 20	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 21	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 22	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 23	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 24	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 25	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 26	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 27	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 28	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 29	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 30	08/20/1998	< MDA	725.2	5000	dpm/100 cm2

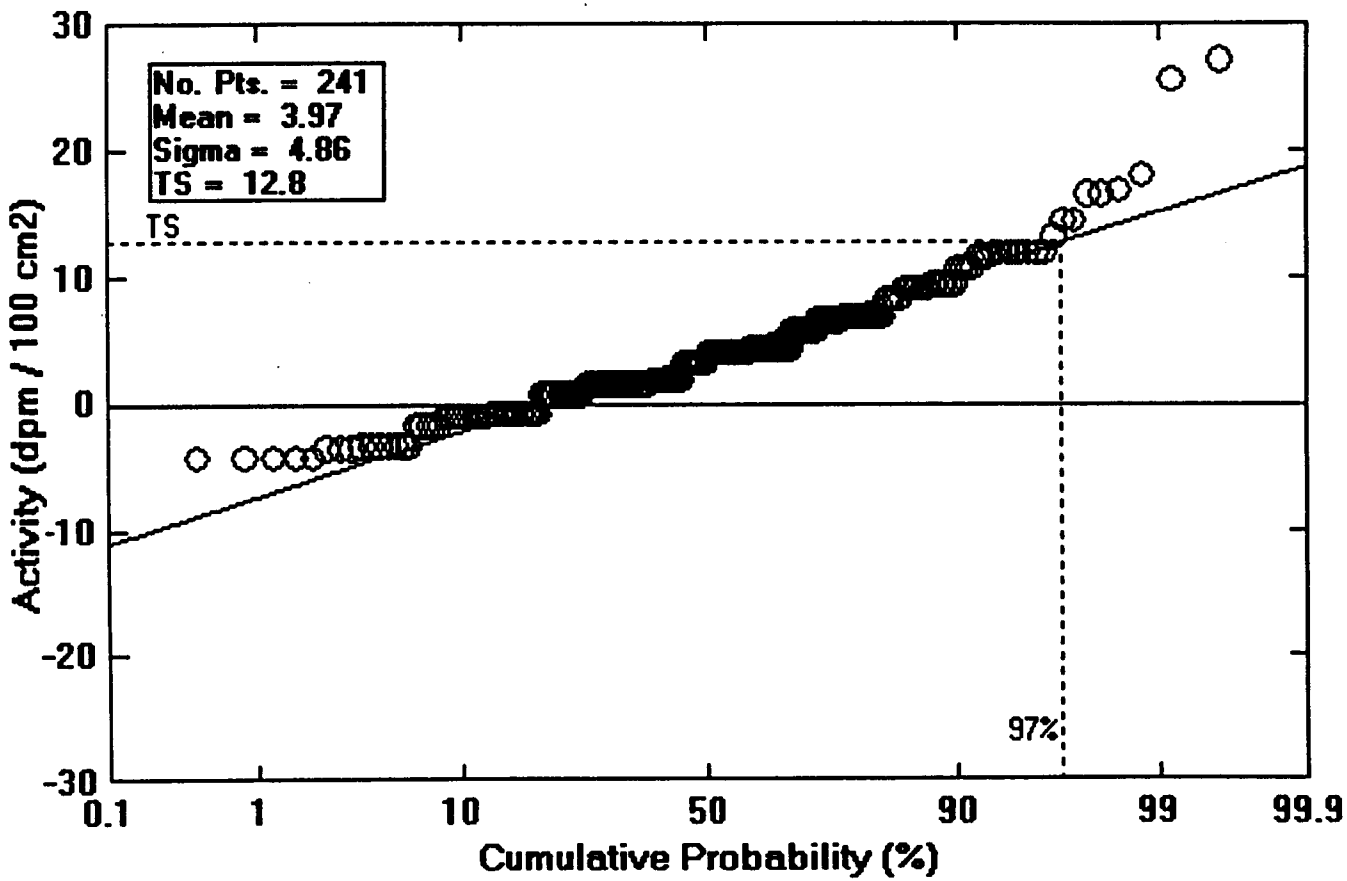
DIRECT BETA FRISK
SUMMARY OF RESULTS
DeSoto Building 104 Mass Spec Laboratory

LOCATION	DATE	RESULTS	MDA	LIMIT	
ROOF LOCATION 31	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 32	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 33	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 34	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 35	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 36	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 37	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 38	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 39	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 40	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 41	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 42	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 43	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 44	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 45	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 46	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 47	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 48	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 49	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 50	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 51	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 52	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 53	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 54	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 55	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 56	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 57	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 58	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
OOF LOCATION 59	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 60	08/20/1998	< MDA	725.2	5000	dpm/100 cm2
ROOF LOCATION 61	08/20/1998	< MDA	725.2	5000	dpm/100 cm2

APPENDIX E

Removable Beta Contamination

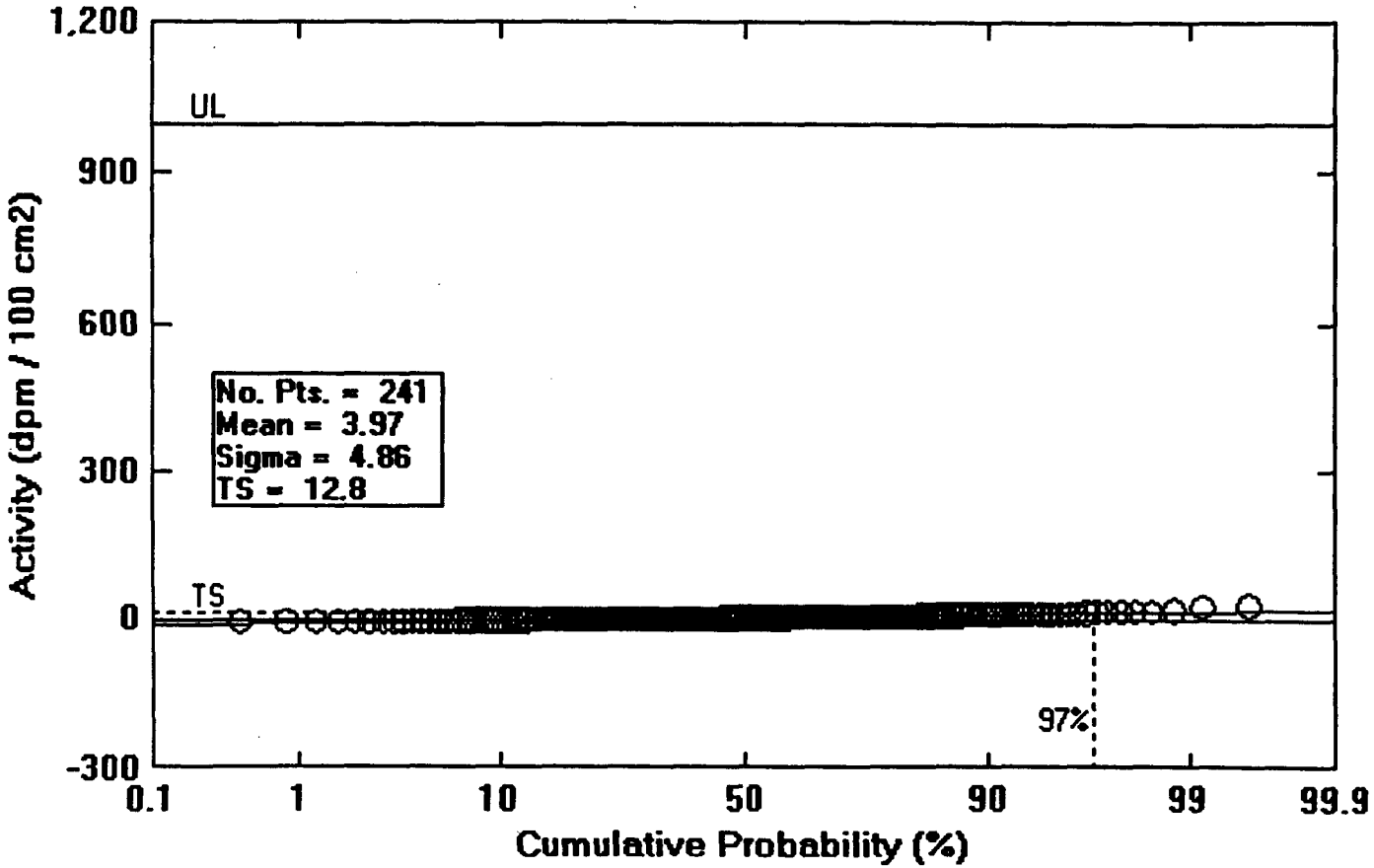
Removable Beta Contamination (Mass Spec Lab)



D:\FILES\DESOTO\BETAREM1.CMP

08-31-98

Removable Beta Contamination (Mass Spec Lab)



D:\FILES\DESOTO\BETAREM2.CMP 08-31-98

REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
AFFECTED AREAS					
GIF FOYER					
EILING GRID C04	07/23/1998	4.3	5.30	1000.0	dpm/100 cm2
EILING GRID C04	07/23/1998	17.0	5.30	1000.0	dpm/100 cm2
CEILING GRID C06	07/23/1998	1.8	5.30	1000.0	dpm/100 cm2
EILING GRID C06	07/23/1998	-0.8	5.30	1000.0	dpm/100 cm2
EILING GRID C07	07/23/1998	-3.3	5.30	1000.0	dpm/100 cm2
FLOOR GRID F031	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
LOOR GRID F037	07/24/1998	-3.3	5.00	1000.0	dpm/100 cm2
LOOR GRID F040	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F046	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
FLOOR GRID F056	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
ASS SPECTROSCOPY LAB					
EILING GRID C41	07/23/1998	1.8	5.30	1000.0	dpm/100 cm2
EILING GRID C42	07/21/1998	4.3	6.40	1000.0	dpm/100 cm2
CEILING GRID C43	07/23/1998	1.8	5.30	1000.0	dpm/100 cm2
EILING GRID C44	07/23/1998	4.3	5.30	1000.0	dpm/100 cm2
EILING GRID C44	07/21/1998	6.9	6.40	1000.0	dpm/100 cm2
CEILING GRID C45	07/23/1998	12.0	5.30	1000.0	dpm/100 cm2
CEILING GRID C46	07/21/1998	4.3	6.40	1000.0	dpm/100 cm2
EILING GRID C46	07/21/1998	4.3	6.40	1000.0	dpm/100 cm2
EILING GRID C46	07/21/1998	1.8	6.40	1000.0	dpm/100 cm2
CEILING GRID C47	07/23/1998	1.8	5.30	1000.0	dpm/100 cm2
EILING GRID C47	07/23/1998	4.3	5.30	1000.0	dpm/100 cm2
EILING GRID C48	07/23/1998	12.0	5.30	1000.0	dpm/100 cm2
CEILING GRID C53	07/16/1998	4.3	5.80	1000.0	dpm/100 cm2
EILING GRID C54	07/17/1998	1.8	5.40	1000.0	dpm/100 cm2
EILING GRID C54	07/23/1998	9.4	5.30	1000.0	dpm/100 cm2
CEILING GRID C55	07/23/1998	-0.8	5.30	1000.0	dpm/100 cm2
CEILING GRID C55	07/17/1998	6.8	5.40	1000.0	dpm/100 cm2
EILING GRID C56	07/23/1998	27.2	5.30	1000.0	dpm/100 cm2
EILING GRID C57	07/16/1998	-0.8	5.80	1000.0	dpm/100 cm2
CEILING GRID C59	07/17/1998	-3.3	5.40	1000.0	dpm/100 cm2
EILING GRID C59	07/17/1998	4.3	5.40	1000.0	dpm/100 cm2
EILING GRID C60	07/23/1998	14.5	5.30	1000.0	dpm/100 cm2
CEILING GRID C61	07/17/1998	4.3	5.40	1000.0	dpm/100 cm2
EILING GRID C62	07/23/1998	1.8	5.30	1000.0	dpm/100 cm2
EILING GRID C62	07/16/1998	11.9	5.80	1000.0	dpm/100 cm2
CEILING GRID C63	07/17/1998	-3.3	5.40	1000.0	dpm/100 cm2
FLOOR GRID F185	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
LOOR GRID F199	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
LOOR GRID F207	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
FLOOR GRID F214	07/24/1998	11.9	5.00	1000.0	dpm/100 cm2
LOOR GRID F219	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
LOOR GRID F227	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F234	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
LOOR GRID F237	07/24/1998	9.4	5.00	1000.0	dpm/100 cm2

REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
FLOOR GRID F239	07/24/1998	-3.3	5.00	1000.0	dpm/100 cm2
FLOOR GRID F244	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F246	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F250	07/24/1998	11.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F306	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
FLOOR GRID F311	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F319	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F322	07/24/1998	12.0	5.00	1000.0	dpm/100 cm2
FLOOR GRID F328	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F333	07/24/1998	6.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F341	07/24/1998	9.4	5.00	1000.0	dpm/100 cm2
FLOOR GRID F364	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F368	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
FLOOR GRID F372	07/24/1998	-3.3	5.00	1000.0	dpm/100 cm2
FLOOR GRID F384	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
FLOOR GRID F392	07/24/1998	9.4	5.00	1000.0	dpm/100 cm2
FLOOR GRID F395	07/24/1998	14.5	5.00	1000.0	dpm/100 cm2
FLOOR GRID F402	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W004	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W008	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W009	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W010	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W015	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
WALL GRID W023E	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W023N	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W023S	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W025	07/24/1998	9.4	5.00	1000.0	dpm/100 cm2
WALL GRID W027	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W034	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W036	07/24/1998	11.9	5.00	1000.0	dpm/100 cm2
WALL GRID W037	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
WALL GRID W051	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
WALL GRID W059	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W063	07/24/1998	9.4	5.00	1000.0	dpm/100 cm2
WALL GRID W076	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W088	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W092	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W096	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W104	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W117	07/24/1998	11.9	5.00	1000.0	dpm/100 cm2
WALL GRID W123	07/24/1998	-3.3	5.00	1000.0	dpm/100 cm2
WALL GRID W130	07/24/1998	1.8	5.00	1000.0	dpm/100 cm2
WALL GRID W134	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W154	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W161	07/24/1998	6.9	5.00	1000.0	dpm/100 cm2
WALL GRID W166	07/24/1998	-0.8	5.00	1000.0	dpm/100 cm2
WALL GRID W170	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2
WALL GRID W174	07/24/1998	4.3	5.00	1000.0	dpm/100 cm2

REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
UNAFFECTED AREAS					
HALLWAY AREAS					
HALLWAY CEILING	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY CEILING	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	4.0	5.10	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY FLOORS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-3.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	11.6	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	-3.5	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
HALLWAY WALLS	07/09/1998	16.7	5.10	1000.0	dpm/100 cm2
OFFICE AREAS					
ROOM 104-1-AB-35	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	-3.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-35	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2

REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOF LOCATION 06	08/20/1998	8.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 07	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 08	08/20/1998	-1.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 09	08/20/1998	-1.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 10	08/20/1998	8.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 11	08/20/1998	-4.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 12	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 13	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 14	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 15	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 16	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 17	08/20/1998	8.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 18	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 19	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 20	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 21	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 22	08/20/1998	-4.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 23	08/20/1998	-1.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 24	08/20/1998	-1.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 25	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 26	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 27	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 28	08/20/1998	8.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 29	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 30	08/20/1998	10.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 31	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 32	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 33	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 34	08/20/1998	-4.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 35	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 36	08/20/1998	25.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 37	08/20/1998	-4.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 38	08/20/1998	-4.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 39	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 40	08/20/1998	8.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 41	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 42	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 43	08/20/1998	10.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 44	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 45	08/20/1998	13.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 46	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 47	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 48	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 49	08/20/1998	10.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 50	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 51	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 52	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 53	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 54	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 55	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 56	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 57	08/20/1998	18.2	5.50	1000.0	dpm/100 cm2

REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOM 104-1-AB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AB-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-AB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AC-39	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-AC-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-AC-39	07/09/1998	16.7	5.10	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	1.4	5.10	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-BB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	11.6	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-BC-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/09/1998	-1.0	5.10	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-BD-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-CB-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	4.1	5.10	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	6.6	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	1.5	5.10	1000.0	dpm/100 cm2
OOM 104-1-CC-39	07/09/1998	9.1	5.10	1000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/09/1998	11.6	5.10	1000.0	dpm/100 cm2
OOF AREA					
ROOF LOCATION 01	08/20/1998	3.2	5.50	1000.0	dpm/100 cm2
OOF LOCATION 02	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2
OOF LOCATION 03	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 04	08/20/1998	10.7	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 05	08/20/1998	-1.7	5.50	1000.0	dpm/100 cm2

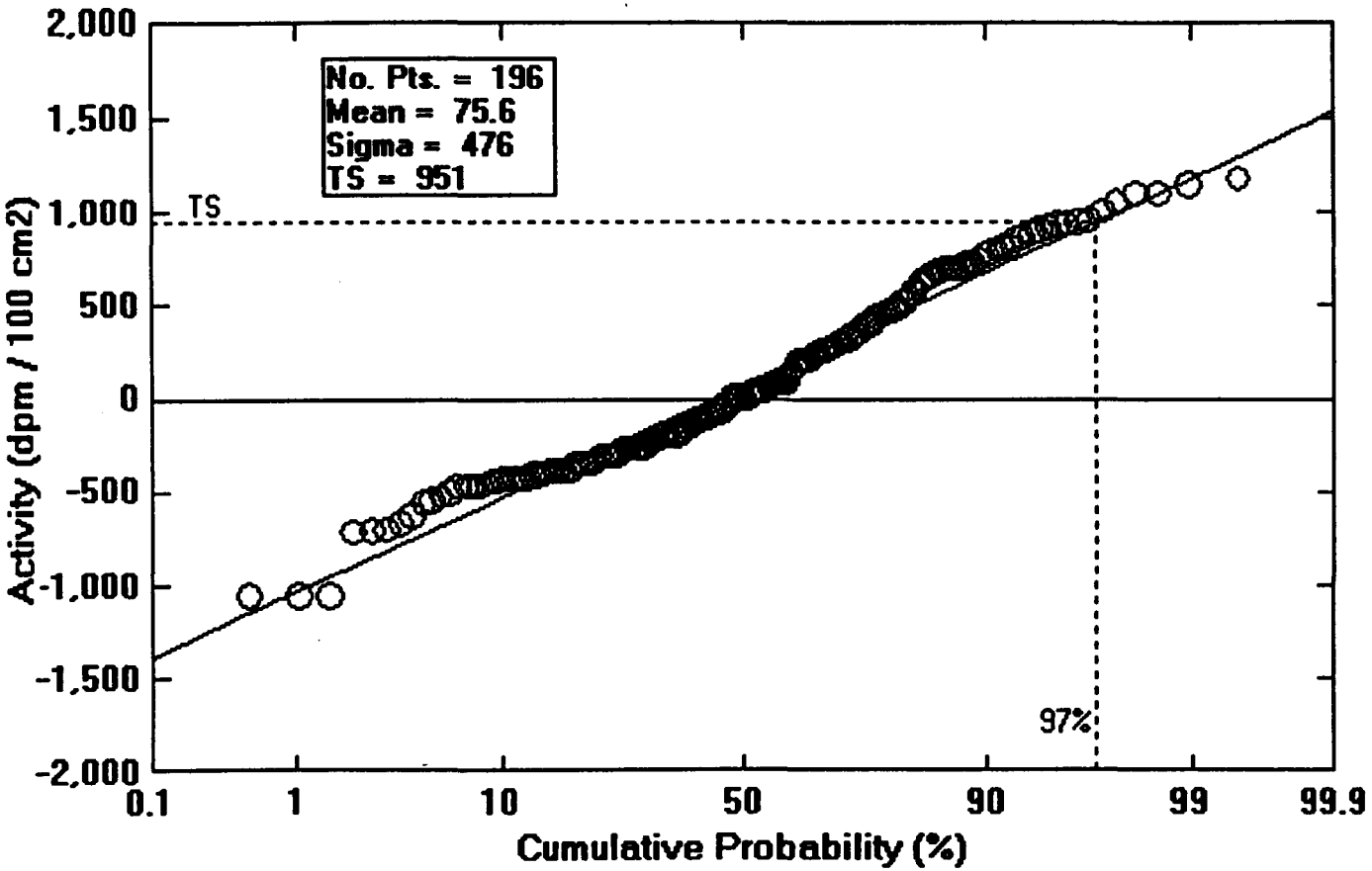
REMOVABLE BETA CONTAMINATION
SUMMARY OF RESULTS
DESOTO BUILDING 104

		Result	MDA	Limit	Units
ROOF LOCATION 58	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
ROOF LOCATION 59	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
OOF LOCATION 60	08/20/1998	0.8	5.50	1000.0	dpm/100 cm2
..OOF LOCATION 61	08/20/1998	5.7	5.50	1000.0	dpm/100 cm2

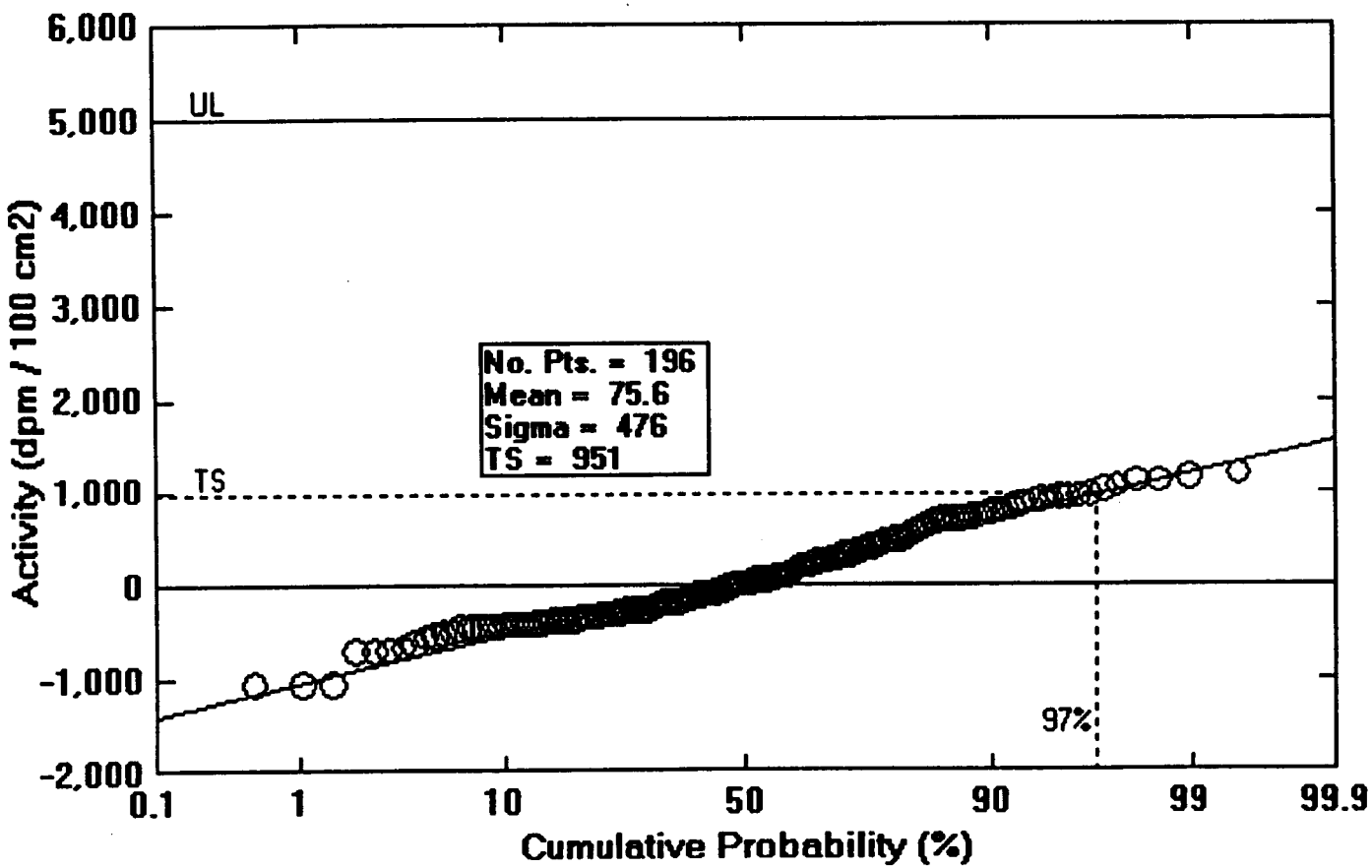
APPENDIX F

Quantitative Total Beta Measurements

Quantitative Total Beta Measurements (Mass Spec Lab)



Quantitative Total Beta Measurements (Mass Spec Lab)



D:\FILES\DESOTO\BETAQAN2.CMP

08-31-98

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

AFFECTED AREA		COUNT DATA Counts Gross	Bkgd	Time (Min)	Eff.	RESULT DATA Result	MDA	Limit	Result Units
GIF FOYER									
CEILING GRID C063	07/23/1998	329.0	284.5	5.0	0.13	350.4	308.90	5000.0	dpm/100 cm2
CEILING GRID C069	07/23/1998	346.0	284.5	5.0	0.13	484.3	308.90	5000.0	dpm/100 cm2
CEILING GRID C079	07/23/1998	306.0	284.5	5.0	0.13	169.3	308.90	5000.0	dpm/100 cm2
FLOOR GRID F031	07/23/1998	374.0	284.5	5.0	0.13	704.7	308.90	5000.0	dpm/100 cm2
FLOOR GRID F037	07/23/1998	359.0	284.5	5.0	0.13	586.6	308.90	5000.0	dpm/100 cm2
FLOOR GRID F040	07/23/1998	373.0	284.5	5.0	0.13	696.9	308.90	5000.0	dpm/100 cm2
FLOOR GRID F046	07/23/1998	376.0	284.5	5.0	0.13	720.5	308.90	5000.0	dpm/100 cm2
FLOOR GRID F056	07/23/1998	383.0	284.5	5.0	0.13	775.6	308.90	5000.0	dpm/100 cm2
MASS SPECTROSCOPY LAB									
CEILING GRID C415	07/23/1998	294.0	284.5	5.0	0.13	74.8	308.90	5000.0	dpm/100 cm2
CEILING GRID C429	07/21/1998	312.0	279.5	5.0	0.13	255.9	306.20	5000.0	dpm/100 cm2
CEILING GRID C437	07/23/1998	287.0	284.5	5.0	0.13	19.7	308.90	5000.0	dpm/100 cm2
CEILING GRID C444	07/23/1998	311.0	284.5	5.0	0.13	208.7	308.90	5000.0	dpm/100 cm2
CEILING GRID C449	07/21/1998	323.0	279.5	5.0	0.13	342.5	306.20	5000.0	dpm/100 cm2
CEILING GRID C457	07/23/1998	310.0	284.5	5.0	0.13	200.8	308.90	5000.0	dpm/100 cm2
CEILING GRID C464	07/21/1998	322.0	279.5	5.0	0.13	334.6	306.20	5000.0	dpm/100 cm2
CEILING GRID C467	07/21/1998	338.0	279.5	5.0	0.13	460.6	306.20	5000.0	dpm/100 cm2
CEILING GRID C469	07/21/1998	312.0	279.5	5.0	0.13	255.9	306.20	5000.0	dpm/100 cm2
CEILING GRID C474	07/23/1998	293.0	284.5	5.0	0.13	66.9	308.90	5000.0	dpm/100 cm2
CEILING GRID C476	07/23/1998	324.0	284.5	5.0	0.13	311.0	308.90	5000.0	dpm/100 cm2
CEILING GRID C480	07/23/1998	320.0	284.5	5.0	0.13	279.5	308.90	5000.0	dpm/100 cm2
CEILING GRID C536	07/16/1998	312.0	267.5	5.0	0.13	350.4	299.50	5000.0	dpm/100 cm2
CEILING GRID C541	07/17/1998	334.0	278.5	5.0	0.13	437.0	305.80	5000.0	dpm/100 cm2
CEILING GRID C549	07/23/1998	363.0	284.5	5.0	0.13	618.1	308.90	5000.0	dpm/100 cm2
CEILING GRID C552	07/23/1998	319.0	284.5	5.0	0.13	271.7	308.90	5000.0	dpm/100 cm2
CEILING GRID C558	07/17/1998	335.0	278.5	5.0	0.13	444.9	305.80	5000.0	dpm/100 cm2
CEILING GRID C563	07/23/1998	373.0	284.5	5.0	0.13	696.9	308.90	5000.0	dpm/100 cm2
CEILING GRID C571	07/16/1998	329.0	267.5	5.0	0.13	484.3	299.50	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
CEILING GRID C594	07/17/1998	329.0	278.5	5.0	0.13	397.6	305.80	5000.0	dpm/100 cm2
CEILING GRID C598	07/17/1998	311.0	278.5	5.0	0.13	255.9	305.80	5000.0	dpm/100 cm2
CEILING GRID C602	07/23/1998	303.0	284.5	5.0	0.13	145.7	308.90	5000.0	dpm/100 cm2
CEILING GRID C614	07/17/1998	318.0	278.5	5.0	0.13	311.0	305.80	5000.0	dpm/100 cm2
CEILING GRID C622	07/23/1998	310.0	284.5	5.0	0.13	200.8	308.90	5000.0	dpm/100 cm2
CEILING GRID C625	07/16/1998	304.0	267.5	5.0	0.13	287.4	299.50	5000.0	dpm/100 cm2
CEILING GRID C632	07/17/1998	308.0	278.5	5.0	0.13	232.3	305.80	5000.0	dpm/100 cm2
FLOOR GRID F185	07/21/1998	383.0	279.5	5.0	0.13	815.0	306.20	5000.0	dpm/100 cm2
FLOOR GRID F199	07/21/1998	388.0	279.5	5.0	0.13	854.3	306.20	5000.0	dpm/100 cm2
FLOOR GRID F207	07/21/1998	426.0	279.5	5.0	0.13	1153.5	306.20	5000.0	dpm/100 cm2
FLOOR GRID F214	07/22/1998	339.0	279.0	5.0	0.13	472.4	306.00	5000.0	dpm/100 cm2
FLOOR GRID F219	07/21/1998	408.0	279.5	5.0	0.13	1011.8	306.20	5000.0	dpm/100 cm2
FLOOR GRID F227	07/22/1998	375.0	279.0	5.0	0.13	755.9	306.00	5000.0	dpm/100 cm2
FLOOR GRID F234	07/21/1998	390.0	279.5	5.0	0.13	870.1	306.20	5000.0	dpm/100 cm2
FLOOR GRID F237	07/21/1998	384.0	279.5	5.0	0.13	.3E+7	306.20	5000.0	dpm/100 cm2
FLOOR GRID F239	07/21/1998	397.0	279.5	5.0	0.13	925.2	306.20	5000.0	dpm/100 cm2
FLOOR GRID F244	07/22/1998	363.0	279.0	5.0	0.13	661.4	306.00	5000.0	dpm/100 cm2
FLOOR GRID F246	07/22/1998	401.0	279.0	5.0	0.13	960.6	306.00	5000.0	dpm/100 cm2
FLOOR GRID F250	07/22/1998	413.0	279.0	5.0	0.13	1055.1	306.00	5000.0	dpm/100 cm2
FLOOR GRID F306	07/22/1998	364.0	279.0	5.0	0.13	669.3	306.00	5000.0	dpm/100 cm2
FLOOR GRID F311	07/22/1998	360.0	279.0	5.0	0.13	637.8	306.00	5000.0	dpm/100 cm2
FLOOR GRID F319	07/23/1998	388.0	284.5	5.0	0.13	815.0	308.90	5000.0	dpm/100 cm2
FLOOR GRID F322	07/23/1998	404.0	284.5	5.0	0.13	940.9	308.90	5000.0	dpm/100 cm2
FLOOR GRID F328	07/22/1998	371.0	279.0	5.0	0.13	724.4	306.00	5000.0	dpm/100 cm2
FLOOR GRID F333	07/23/1998	372.0	284.5	5.0	0.13	689.0	308.90	5000.0	dpm/100 cm2
FLOOR GRID F341	07/22/1998	367.0	279.0	5.0	0.13	692.9	306.00	5000.0	dpm/100 cm2
FLOOR GRID F364	07/22/1998	379.0	279.0	5.0	0.13	787.4	306.00	5000.0	dpm/100 cm2
FLOOR GRID F368	07/22/1998	398.0	279.0	5.0	0.13	937.0	306.00	5000.0	dpm/100 cm2
FLOOR GRID F372	07/23/1998	377.0	284.5	5.0	0.13	728.3	308.90	5000.0	dpm/100 cm2
FLOOR GRID F384	07/22/1998	392.0	279.0	5.0	0.13	889.8	306.00	5000.0	dpm/100 cm2
FLOOR GRID F392	07/23/1998	333.0	284.5	5.0	0.13	381.9	308.90	5000.0	dpm/100 cm2
FLOOR GRID F395	07/16/1998	340.0	267.5	5.0	0.13	570.9	299.50	5000.0	dpm/100 cm2
FLOOR GRID F402	07/17/1998	313.0	278.5	5.0	0.13	271.7	305.80	5000.0	dpm/100 cm2
WALL GRID W004	07/10/1998	245.0	296.5	5.0	0.13	-402.3	313.10	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
WALL GRID W008	07/10/1998	261.0	296.5	5.0	0.13	-277.3	313.10	5000.0	dpm/100 cm2
WALL GRID W009	07/10/1998	294.0	296.5	5.0	0.13	-19.5	313.10	5000.0	dpm/100 cm2
WALL GRID W010	07/10/1998	259.0	296.5	5.0	0.13	-293.0	313.10	5000.0	dpm/100 cm2
WALL GRID W015	07/10/1998	244.0	296.5	5.0	0.13	-410.2	313.10	5000.0	dpm/100 cm2
WALL GRID W023E	07/10/1998	282.0	296.5	5.0	0.13	-113.3	313.10	5000.0	dpm/100 cm2
WALL GRID W023N	07/10/1998	286.0	296.5	5.0	0.13	-82.0	313.10	5000.0	dpm/100 cm2
WALL GRID W023S	07/10/1998	285.0	296.5	5.0	0.13	-89.8	313.10	5000.0	dpm/100 cm2
WALL GRID W025	07/10/1998	257.0	296.5	5.0	0.13	-308.6	313.10	5000.0	dpm/100 cm2
WALL GRID W027	07/10/1998	244.0	296.5	5.0	0.13	-410.2	313.10	5000.0	dpm/100 cm2
WALL GRID W034	07/10/1998	225.0	296.5	5.0	0.13	-558.6	313.10	5000.0	dpm/100 cm2
WALL GRID W036	07/10/1998	268.0	296.5	5.0	0.13	-222.7	313.10	5000.0	dpm/100 cm2
WALL GRID W076	07/10/1998	242.0	296.5	5.0	0.13	-425.8	313.10	5000.0	dpm/100 cm2
WALL GRID W088	07/10/1998	238.0	296.5	5.0	0.13	-457.0	313.10	5000.0	dpm/100 cm2
WALL GRID W092	07/10/1998	271.0	296.5	5.0	0.13	-199.2	313.10	5000.0	dpm/100 cm2
WALL GRID W096	07/10/1998	256.0	296.5	5.0	0.13	-316.4	313.10	5000.0	dpm/100 cm2
WALL GRID W117	07/10/1998	275.0	296.5	5.0	0.13	-168.0	313.10	5000.0	dpm/100 cm2
WALL GRID W130	07/16/1998	277.0	267.5	5.0	0.13	74.8	299.50	5000.0	dpm/100 cm2
WALL GRID W134	07/10/1998	288.0	296.5	5.0	0.13	-66.4	313.10	5000.0	dpm/100 cm2
WALL GRID W154	07/10/1998	282.0	296.5	5.0	0.13	-113.3	313.10	5000.0	dpm/100 cm2
SOUTH HALLWAY									
CEILING GRID S019	07/18/1998	285.0	295.5	5.0	0.13	-82.7	315.00	5000.0	dpm/100 cm2
CEILING GRID S020	07/18/1998	321.0	295.5	5.0	0.13	200.8	315.00	5000.0	dpm/100 cm2
CEILING GRID S021	07/18/1998	307.0	295.5	5.0	0.13	90.6	315.00	5000.0	dpm/100 cm2
CEILING GRID S022	07/18/1998	354.0	295.5	5.0	0.13	460.6	315.00	5000.0	dpm/100 cm2
CEILING GRID S023	07/18/1998	282.0	295.5	5.0	0.13	-106.3	315.00	5000.0	dpm/100 cm2
CEILING GRID S024	07/18/1998	325.0	295.5	5.0	0.13	232.3	315.00	5000.0	dpm/100 cm2
FLOOR GRID S013	07/18/1998	283.0	295.5	5.0	0.13	-98.4	315.00	5000.0	dpm/100 cm2
FLOOR GRID S014	07/18/1998	322.0	295.5	5.0	0.13	208.7	315.00	5000.0	dpm/100 cm2
FLOOR GRID S015	07/18/1998	304.0	295.5	5.0	0.13	66.9	315.00	5000.0	dpm/100 cm2
FLOOR GRID S016	07/18/1998	384.0	295.5	5.0	0.13	696.9	315.00	5000.0	dpm/100 cm2
FLOOR GRID S017	07/18/1998	383.0	295.5	5.0	0.13	689.0	315.00	5000.0	dpm/100 cm2
FLOOR GRID S018	07/18/1998	270.0	295.5	5.0	0.13	-200.8	315.00	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
WALL GRID S001	07/18/1998	236.0	295.5	5.0	0.13	-468.5	315.00	5000.0	dpm/100 cm2
WALL GRID S002	07/18/1998	277.0	295.5	5.0	0.13	-145.7	315.00	5000.0	dpm/100 cm2
WALL GRID S003	07/18/1998	236.0	295.5	5.0	0.13	-468.5	315.00	5000.0	dpm/100 cm2
WALL GRID S004	07/18/1998	239.0	295.5	5.0	0.13	-444.9	315.00	5000.0	dpm/100 cm2
WALL GRID S005	07/18/1998	244.0	295.5	5.0	0.13	-405.5	315.00	5000.0	dpm/100 cm2
WALL GRID S006	07/18/1998	216.0	295.5	5.0	0.13	-626.0	315.00	5000.0	dpm/100 cm2
WALL GRID S007	07/18/1998	247.0	295.5	5.0	0.13	-381.9	315.00	5000.0	dpm/100 cm2
WALL GRID S008	07/18/1998	257.0	295.5	5.0	0.13	-303.1	315.00	5000.0	dpm/100 cm2
WALL GRID S009	07/18/1998	239.0	295.5	5.0	0.13	-444.9	315.00	5000.0	dpm/100 cm2
WALL GRID S010	07/18/1998	253.0	295.5	5.0	0.13	-334.6	315.00	5000.0	dpm/100 cm2
WALL GRID S011	07/18/1998	247.0	295.5	5.0	0.13	-381.9	315.00	5000.0	dpm/100 cm2
WALL GRID S012	07/18/1998	283.0	295.5	5.0	0.13	-98.4	315.00	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
UNAFFECTED AREA									
HALLWAY AREAS									
HALLWAY CEILING	07/15/1998	68.0	56.9	1.0	0.13	437.0	535.20	5000.0	dpm/100 cm2
HALLWAY CEILING	07/15/1998	48.0	56.9	1.0	0.13	-350.4	535.20	5000.0	dpm/100 cm2
HALLWAY CEILING	07/15/1998	87.0	56.9	1.0	0.13	1185.0	535.20	5000.0	dpm/100 cm2
HALLWAY CEILING	07/15/1998	80.0	56.9	1.0	0.13	909.4	535.20	5000.0	dpm/100 cm2
HALLWAY CEILING	07/15/1998	70.0	56.9	1.0	0.13	515.7	535.20	5000.0	dpm/100 cm2
HALLWAY DOOR	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
HALLWAY EAST WALL	07/15/1998	39.0	56.9	1.0	0.13	-704.7	535.20	5000.0	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	59.0	56.9	1.0	0.13	82.7	535.20	5000.0	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	59.0	56.9	1.0	0.13	82.7	535.20	5000.0	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	62.0	56.9	1.0	0.13	200.8	535.20	5000.0	dpm/100 cm2
HALLWAY FLOOR	07/15/1998	65.0	56.9	1.0	0.13	318.9	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	46.0	56.9	1.0	0.13	-429.1	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	53.0	56.9	1.0	0.13	-153.5	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	47.0	56.9	1.0	0.13	-389.8	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	56.0	56.9	1.0	0.13	-35.4	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	30.0	56.9	1.0	0.13	-1059	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
HALLWAY NORTH WAL	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	55.0	56.9	1.0	0.13	-74.8	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	47.0	56.9	1.0	0.13	-389.8	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	49.0	56.9	1.0	0.13	-311.0	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	49.0	56.9	1.0	0.13	-311.0	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	46.0	56.9	1.0	0.13	-429.1	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
HALLWAY SOUTH WAL	07/15/1998	40.0	56.9	1.0	0.13	-665.4	535.20	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
IALLWAY SOUTH WAL	07/15/1998	47.0	56.9	1.0	0.13	-389.8	535.20	5000.0	dpm/100 cm2
IALLWAY SOUTH WAL	07/15/1998	47.0	56.9	1.0	0.13	-389.8	535.20	5000.0	dpm/100 cm2
IALLWAY SOUTH WAL	07/15/1998	54.0	56.9	1.0	0.13	-114.2	535.20	5000.0	dpm/100 cm2
IALLWAY WEST WALL	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
)FFICE AREAS									
?OOM 104-1-AB-35	07/15/1998	67.0	56.9	1.0	0.13	397.6	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	56.0	56.9	1.0	0.13	-35.4	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	51.0	56.9	1.0	0.13	-232.3	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	48.0	56.9	1.0	0.13	-350.4	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	49.0	56.9	1.0	0.13	-311.0	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	30.0	56.9	1.0	0.13	-1059	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-35	07/15/1998	30.0	56.9	1.0	0.13	-1059	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	59.0	56.9	1.0	0.13	82.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	70.0	56.9	1.0	0.13	515.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	53.0	56.9	1.0	0.13	-153.5	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AB-39	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	47.0	56.9	1.0	0.13	-389.8	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	67.0	56.9	1.0	0.13	397.6	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	59.0	56.9	1.0	0.13	82.7	535.20	5000.0	dpm/100 cm2
?OOM 104-1-AC-39	07/15/1998	44.0	56.9	1.0	0.13	-507.9	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	81.0	56.9	1.0	0.13	948.8	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	48.0	56.9	1.0	0.13	-350.4	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	46.0	56.9	1.0	0.13	-429.1	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	71.0	56.9	1.0	0.13	555.1	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	65.0	56.9	1.0	0.13	318.9	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	48.0	56.9	1.0	0.13	-350.4	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BB-39	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
?OOM 104-1-BC-39	07/15/1998	85.0	56.9	1.0	0.13	1106.3	535.20	5000.0	dpm/100 cm2

QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
ROOM 104-1-BC-39	07/15/1998	51.0	56.9	1.0	0.13	-232.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	51.0	56.9	1.0	0.13	-232.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	43.0	56.9	1.0	0.13	-547.2	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	46.0	56.9	1.0	0.13	-429.1	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BC-39	07/15/1998	53.0	56.9	1.0	0.13	-153.5	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	45.0	56.9	1.0	0.13	-468.5	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	63.0	56.9	1.0	0.13	240.2	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	52.0	56.9	1.0	0.13	-192.9	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	69.0	56.9	1.0	0.13	476.4	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	60.0	56.9	1.0	0.13	122.0	535.20	5000.0	dpm/100 cm2
ROOM 104-1-BD-39	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	85.0	56.9	1.0	0.13	1106.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	55.0	56.9	1.0	0.13	-74.8	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	48.0	56.9	1.0	0.13	-350.4	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	45.0	56.9	1.0	0.13	-468.5	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CB-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	77.0	56.9	1.0	0.13	791.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	46.0	56.9	1.0	0.13	-429.1	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	57.0	56.9	1.0	0.13	3.9	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	50.0	56.9	1.0	0.13	-271.7	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	58.0	56.9	1.0	0.13	43.3	535.20	5000.0	dpm/100 cm2
ROOM 104-1-CC-39	07/15/1998	54.0	56.9	1.0	0.13	-114.2	535.20	5000.0	dpm/100 cm2
ROOF AREA									
ROOF LOCATION R1	08/20/1998	224.0	290.5	5.0	0.13	-523.6	312.20	5000.0	dpm/100 cm2
ROOF LOCATION R2	08/20/1998	246.0	290.5	5.0	0.13	-350.4	312.20	5000.0	dpm/100 cm2
ROOF LOCATION R3	08/20/1998	252.0	290.5	5.0	0.13	-303.1	312.20	5000.0	dpm/100 cm2
ROOF LOCATION R4	08/20/1998	200.0	290.5	5.0	0.13	-712.6	312.20	5000.0	dpm/100 cm2

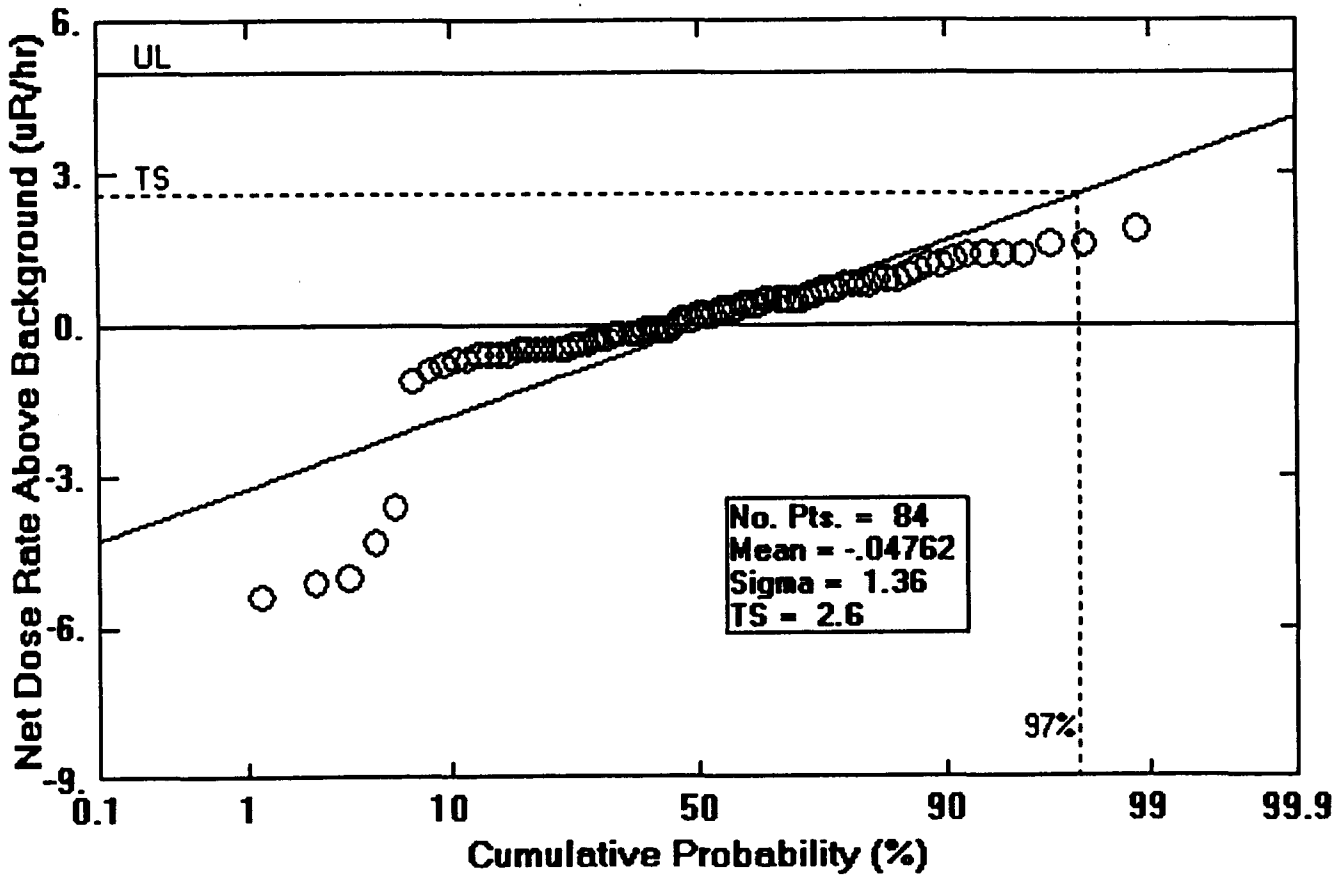
QUANTITATIVE TOTAL BETA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA				RESULT DATA			
		Counts		Time					
		Gross	Bkgd	(Min)	Eff.	Result	MDA	Limit	Result Units
ROOF LOCATION R5	08/20/1998	202.0	290.5	5.0	0.13	-696.9	312.20	5000.0	dpm/100 cm2

APPENDIX G

Quantitative Gamma Measurements

Quantitative Gamma Measurements (Mass Spec Lab)



D:\FILES\DESOTO\GAMQAN2.CMP

08-31-98

QUANTITATIVE GAMMA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

AFFECTED AREA		COUNT DATA Counts Gross	Bkgd	Time (Min)	RESULT DATA Result	MDA	Limit	Result Units
:IF FOYER								
:EILING GRID C023	07/07/1998	2695.0	2584.3	1.0	0.5	0.40	5.0	uR/hr [net]
:EILING GRID C027	07/07/1998	2708.0	2584.3	1.0	0.6	0.40	5.0	uR/hr [net]
:EILING GRID C042	07/07/1998	2617.0	2584.3	1.0	0.2	0.40	5.0	uR/hr [net]
:EILING GRID C048	07/07/1998	2695.0	2584.3	1.0	0.5	0.40	5.0	uR/hr [net]
:EILING GRID C063	07/07/1998	2636.0	2584.3	1.0	0.2	0.40	5.0	uR/hr [net]
:EILING GRID C069	07/07/1998	2651.0	2584.3	1.0	0.3	0.40	5.0	uR/hr [net]
:EILING GRID C079	07/07/1998	2429.0	2584.3	1.0	-0.7	0.40	5.0	uR/hr [net]
'LOOR GRID F037	07/07/1998	2777.0	2584.3	1.0	0.9	0.40	5.0	uR/hr [net]
'LOOR GRID F040	07/07/1998	2772.0	2584.3	1.0	0.9	0.40	5.0	uR/hr [net]
'LOOR GRID F046	07/07/1998	2822.0	2584.3	1.0	1.1	0.40	5.0	uR/hr [net]
'LOOR GRID F056	07/07/1998	2619.0	2584.3	1.0	0.2	0.40	5.0	uR/hr [net]
IASS SPECTROSCOPY LAB								
'LOOR GRID F031	07/07/1998	2877.0	2584.3	1.0	1.4	0.40	5.0	uR/hr [net]
'LOOR GRID F185	07/06/1998	2597.0	2608.7	1.0	-0.1	0.40	5.0	uR/hr [net]
'LOOR GRID F199	07/06/1998	2711.0	2608.7	1.0	0.5	0.40	5.0	uR/hr [net]
'LOOR GRID F207	07/06/1998	2660.0	2608.7	1.0	0.2	0.40	5.0	uR/hr [net]
'LOOR GRID F214	07/06/1998	2764.0	2608.7	1.0	0.7	0.40	5.0	uR/hr [net]
'LOOR GRID F219	07/06/1998	2790.0	2608.7	1.0	0.8	0.40	5.0	uR/hr [net]
'LOOR GRID F227	07/06/1998	2752.0	2608.7	1.0	0.7	0.40	5.0	uR/hr [net]
'LOOR GRID F234	07/06/1998	2692.0	2608.7	1.0	0.4	0.40	5.0	uR/hr [net]
'LOOR GRID F237	07/06/1998	2942.0	2608.7	1.0	1.6	0.40	5.0	uR/hr [net]
'LOOR GRID F239	07/06/1998	2796.0	2608.7	1.0	0.9	0.40	5.0	uR/hr [net]
'LOOR GRID F244	07/06/1998	2871.0	2608.7	1.0	1.2	0.40	5.0	uR/hr [net]
'LOOR GRID F246	07/06/1998	3008.0	2608.7	1.0	1.9	0.40	5.0	uR/hr [net]
'LOOR GRID F250	07/06/1998	2905.0	2608.7	1.0	1.4	0.40	5.0	uR/hr [net]
'LOOR GRID F306	07/06/1998	2730.0	2608.7	1.0	0.6	0.40	5.0	uR/hr [net]
'LOOR GRID F311	07/06/1998	2881.0	2608.7	1.0	1.3	0.40	5.0	uR/hr [net]
'LOOR GRID F319	07/06/1998	2752.0	2608.7	1.0	0.7	0.40	5.0	uR/hr [net]
'LOOR GRID F322	07/06/1998	2781.0	2608.7	1.0	0.8	0.40	5.0	uR/hr [net]

QUANTITATIVE GAMMA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA			RESULT DATA			
		Counts		Time				
		Gross	Bkgd	(Min)	Result	MDA	Limit	Result Units
FLOOR GRID F328	07/06/1998	2918.0	2608.7	1.0	1.4	0.40	5.0	uR/hr [net]
FLOOR GRID F333	07/06/1998	2714.0	2608.7	1.0	0.5	0.40	5.0	uR/hr [net]
FLOOR GRID F341	07/06/1998	2677.0	2608.7	1.0	0.3	0.40	5.0	uR/hr [net]
FLOOR GRID F364	07/06/1998	2781.0	2608.7	1.0	0.8	0.40	5.0	uR/hr [net]
FLOOR GRID F368	07/06/1998	2827.0	2608.7	1.0	1.0	0.40	5.0	uR/hr [net]
FLOOR GRID F372	07/06/1998	2725.0	2608.7	1.0	0.5	0.40	5.0	uR/hr [net]
FLOOR GRID F384	07/06/1998	2685.0	2608.7	1.0	0.4	0.40	5.0	uR/hr [net]
FLOOR GRID F392	07/06/1998	2668.0	2608.7	1.0	0.3	0.40	5.0	uR/hr [net]
FLOOR GRID F395	07/06/1998	2420.0	2608.7	1.0	-0.9	0.40	5.0	uR/hr [net]
FLOOR GRID F402	07/06/1998	2491.0	2608.7	1.0	-0.5	0.40	5.0	uR/hr [net]
WALL GRID W004	07/07/1998	2764.0	2584.3	1.0	0.8	0.40	5.0	uR/hr [net]
WALL GRID W008	07/06/1998	2466.0	2608.7	1.0	-0.7	0.40	5.0	uR/hr [net]
WALL GRID W009	07/07/1998	2937.0	2584.3	1.0	1.6	0.40	5.0	uR/hr [net]
WALL GRID W010	07/06/1998	2364.0	2608.7	1.0	-1.1	0.40	5.0	uR/hr [net]
WALL GRID W015	07/06/1998	2536.0	2608.7	1.0	-0.3	0.40	5.0	uR/hr [net]
WALL GRID W023E	07/06/1998	2589.0	2608.7	1.0	-0.1	0.40	5.0	uR/hr [net]
WALL GRID W023N	07/06/1998	2707.0	2608.7	1.0	0.5	0.40	5.0	uR/hr [net]
WALL GRID W025	07/06/1998	2529.0	2608.7	1.0	-0.4	0.40	5.0	uR/hr [net]
WALL GRID W034	07/06/1998	2474.0	2608.7	1.0	-0.6	0.40	5.0	uR/hr [net]
WALL GRID W036	07/06/1998	2489.0	2608.7	1.0	-0.6	0.40	5.0	uR/hr [net]
WALL GRID W037	07/06/1998	2564.0	2608.7	1.0	-0.2	0.40	5.0	uR/hr [net]
WALL GRID W051	07/06/1998	2712.0	2608.7	1.0	0.5	0.40	5.0	uR/hr [net]
WALL GRID W059	07/06/1998	2435.0	2608.7	1.0	-0.8	0.40	5.0	uR/hr [net]
WALL GRID W063	07/06/1998	2621.0	2608.7	1.0	0.1	0.40	5.0	uR/hr [net]
WALL GRID W076	07/06/1998	2687.0	2608.7	1.0	0.4	0.40	5.0	uR/hr [net]
WALL GRID W088	07/06/1998	2519.0	2608.7	1.0	-0.4	0.40	5.0	uR/hr [net]
WALL GRID W092	07/06/1998	2555.0	2608.7	1.0	-0.2	0.40	5.0	uR/hr [net]
WALL GRID W096	07/06/1998	2577.0	2608.7	1.0	-0.1	0.40	5.0	uR/hr [net]
WALL GRID W104	07/06/1998	2509.0	2608.7	1.0	-0.5	0.40	5.0	uR/hr [net]
WALL GRID W117	07/06/1998	2568.0	2608.7	1.0	-0.2	0.40	5.0	uR/hr [net]
WALL GRID W123	07/06/1998	2536.0	2608.7	1.0	-0.3	0.40	5.0	uR/hr [net]
WALL GRID W130	07/06/1998	2478.0	2608.7	1.0	-0.6	0.40	5.0	uR/hr [net]
WALL GRID W134	07/06/1998	2560.0	2608.7	1.0	-0.2	0.40	5.0	uR/hr [net]
WALL GRID W154	07/06/1998	2630.0	2608.7	1.0	0.1	0.40	5.0	uR/hr [net]
WALL GRID W161	07/06/1998	2505.0	2608.7	1.0	-0.5	0.40	5.0	uR/hr [net]

QUANTITATIVE GAMMA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA			RESULT DATA			
		Counts		Time				
		Gross	Bkgd	(Min)	Result	MDA	Limit	Result Units
WALL GRID W166	07/06/1998	2673.0	2608.7	1.0	0.3	0.40	5.0	uR/hr [net]
WALL GRID W170	07/06/1998	2564.0	2608.7	1.0	-0.2	0.40	5.0	uR/hr [net]
WALL GRID W174	07/06/1998	2506.0	2608.7	1.0	-0.5	0.40	5.0	uR/hr [net]

QUANTITATIVE GAMMA MEASUREMENT
SUMMARY OF RESULTS
DESOTO BUILDING 104

		COUNT DATA			RESULT DATA			
		Counts		Time				
		Gross	Bkgd	(Min)	Result	MDA	Limit	Result Units
UNAFFECTED AREA								
HALLWAY AREAS								
HALLWAY	07/13/1998	2501.0	2611.4	1.0	-0.5	0.40	5.0	uR/hr [net]
HALLWAY	07/13/1998	2542.0	2611.4	1.0	-0.3	0.40	5.0	uR/hr [net]
HALLWAY	07/13/1998	2534.0	2611.4	1.0	-0.4	0.40	5.0	uR/hr [net]
HALLWAY	07/13/1998	2688.0	2611.4	1.0	0.4	0.40	5.0	uR/hr [net]
HALLWAY	07/13/1998	2504.0	2611.4	1.0	-0.5	0.40	5.0	uR/hr [net]
OFFICE AREAS								
ROOM 104-1-AB-35	07/13/1998	2903.0	2611.4	1.0	1.4	0.40	5.0	uR/hr [net]
ROOM 104-1-AB-39	07/13/1998	2864.0	2611.4	1.0	1.2	0.40	5.0	uR/hr [net]
ROOM 104-1-AC-39	07/13/1998	2512.0	2611.4	1.0	-0.5	0.40	5.0	uR/hr [net]
ROOM 104-1-BB-39	07/13/1998	2478.0	2611.4	1.0	-0.6	0.40	5.0	uR/hr [net]
ROOM 104-1-BC-39	07/13/1998	2598.0	2611.4	1.0	-0.1	0.40	5.0	uR/hr [net]
ROOM 104-1-BD-39	07/13/1998	2624.0	2611.4	1.0	0.1	0.40	5.0	uR/hr [net]
ROOM 104-1-CB-39	07/13/1998	2583.0	2611.4	1.0	-0.1	0.40	5.0	uR/hr [net]
ROOM 104-1-CC-39	07/13/1998	2619.0	2611.4	1.0	0.0	0.40	5.0	uR/hr [net]
ROOF AREA								
ROOF LOCATION R1	08/20/1998	1634.0	2569.0	1.0	-4.3	0.40	5.0	uR/hr [net]
ROOF LOCATION R2	08/20/1998	1786.0	2569.0	1.0	-3.6	0.40	5.0	uR/hr [net]
ROOF LOCATION R3	08/20/1998	1492.0	2569.0	1.0	-5.0	0.40	5.0	uR/hr [net]
ROOF LOCATION R4	08/20/1998	1480.0	2569.0	1.0	-5.1	0.40	5.0	uR/hr [net]
ROOF LOCATION R5	08/20/1998	1410.0	2569.0	1.0	-5.4	0.40	5.0	uR/hr [net]

APPENDIX H

Quantitative Gamma Measurements of Pipe Trenches

QUANTITATIVE GAMMA MEASUREMENT OF PIPING TRENCHES
SUMMARY OF RESULTS
DESOTO BUILDING 104

AFFECTED AREA

MASS SPECTROSCOPY LAB

		Counts	Time(min)
RENCH LOCATION T001	07/03/1998	7617.0	2.0
TRENCH LOCATION T002	07/03/1998	7498.0	2.0
RENCH LOCATION T003	07/03/1998	7494.0	2.0
RENCH LOCATION T004	07/03/1998	7891.0	2.0
TRENCH LOCATION T005	07/03/1998	7637.0	2.0
RENCH LOCATION T006	07/03/1998	8074.0	2.0
RENCH LOCATION T007	07/03/1998	7751.0	2.0
TRENCH LOCATION T008	07/03/1998	7773.0	2.0
TRENCH LOCATION T009	07/03/1998	7533.0	2.0
RENCH LOCATION T010	07/03/1998	8261.0	2.0
RENCH LOCATION T011	07/03/1998	7665.0	2.0
TRENCH LOCATION T012	07/03/1998	7875.0	2.0
RENCH LOCATION T013	07/03/1998	7921.0	2.0
RENCH LOCATION T014	07/03/1998	7872.0	2.0
TRENCH LOCATION T015	07/03/1998	8593.0	2.0
RENCH LOCATION T016	07/03/1998	8062.0	2.0
RENCH LOCATION T017	07/03/1998	8810.0	2.0
RENCH LOCATION T018	07/03/1998	8172.0	2.0
TRENCH LOCATION T019	07/03/1998	8111.0	2.0
RENCH LOCATION T020	07/03/1998	8317.0	2.0
RENCH LOCATION T021	07/03/1998	8224.0	2.0
TRENCH LOCATION T022	07/03/1998	8182.0	2.0
	Average:	7969.7	
	1-sigma:	341.9	
	2-sigma:	562.4	

APPENDIX I

Quantitative Soil Measurements of Pipe Trenches

QUANTITATIVE SOIL MEASUREMENTS OF PIPING TRENCHES
SUMMARY OF RESULTS
DESOTO BUILDING 104

Appendix I
Page 1
09/03/1998
[TREN_SOIL]

AFFECTED AREA MASS SPECTROSCOPY LAB

SAMPLE	LOCATION	DATE	RESULTS	MDA	LIMIT
ENV167	001	07/06/1998	0.01 pCi/g; Cs-137	0.022	9.20
ENV168	002	07/06/1998	NO ACTIVITY DETECTED		
ENV169	003	07/06/1998	NO ACTIVITY DETECTED		
ENV170	004	07/06/1998	NO ACTIVITY DETECTED		
ENV171	005	07/06/1998	0.01 pCi/g; Cs-137	0.022	9.20
ENV172	006	07/06/1998	7.10 pCi/g; U-234	15.900	30.0
ENV173	007	07/06/1998	NO ACTIVITY DETECTED		
ENV174	008	07/06/1998	NO ACTIVITY DETECTED		
ENV175	009	07/06/1998	NO ACTIVITY DETECTED		
ENV176	010	07/06/1998	0.013 pCi/g Cs-137	0.022	9.20
ENV177	011	07/06/1998	0.04 pCi/g Co-60	0.025	1.94
ENV178	012	07/06/1998	NO ACTIVITY DETECTED		
ENV179	013	07/06/1998	NO ACTIVITY DETECTED		
ENV180	014	07/06/1998	NO ACTIVITY DETECTED		
ENV181	015	07/06/1998	NO ACTIVITY DETECTED		
ENV182	016	07/06/1998	NO ACTIVITY DETECTED		
ENV183	017	07/06/1998	NO ACTIVITY DETECTED		
ENV184	018	07/06/1998	NO ACTIVITY DETECTED		
ENV185	019	07/06/1998	NO ACTIVITY DETECTED		
ENV186	020	07/06/1998	NO ACTIVITY DETECTED		
ENV187	021	07/06/1998	NO ACTIVITY DETECTED		
ENV188	022	07/06/1998	0.03 pCi/g; Am-241	0.061	5.44

BOEING

Space Systems
Rocketdyne Propulsion & Power
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, CA 91309-7922

SHEA

Radiation Safety Department

RADIOMETRIC ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

Sample		Collection Date	Analysis Requested								
			Gross		γ Spec	^3H	^{90}Sr	Isotopic			Other
Number	Type		α	β				U	Th	Pu	
ENV-98-155	SOIL	6/3/98	☐	☐	☒	☐	☐	☐	☐	☐	EUN-98-1
ENV-98-156	SOIL	6/3/98	☐	☐	☒	☐	☐	☐	☐	☐	EUN-98-15
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	☐	

Description of Item Sampled, Location, and Purpose of Sample:

Soil from TRENCH DESOTO 104

Sample Collector: Richard S. Garrett [signature]

(Print and Sign)

Date: 6/3/98

RECORD OF SAMPLE CUSTODY

Names of Custodians (Print and Sign)	Received		Transferred	
	Date	Time	Date	Time
BARNES & Robin Duncan [signature]	6/3/98	1:00		

Results Reported (To and How):

Sample Disposition (Describe):

SAMPO 90, 1990 PA,MN,JR. 4-Jun-1998 14:5

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

FOR ENV98155

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: DESOTO- SOIL Fm TREN(W/STATE), ENV980155, 6/3/98
Spectrum file name: ENV98155
Sample identifier : GARRETT
Sample size : 7.000E+02 g
Measured by : FCD

Date of Activity Calculation : 4-Jun-1998 at 8:13:46
Collect started on : 4-Jun-1998 at 8:13:46
Collect ended on : 4-Jun-1998 at 10:10:32

Decay time : 0 years 0 days 0 hours 0 minut
Live time: 7.000E+03 s real time: 7.006E+03 s dead time: .09 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 28-May-1998 15:26:23

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: _____ Date: 6/4/98
RP&HPS

Acceptable for Non-radioactive Disposal
(See Rocketdyne N001OP000034)

Spectrum file: ENV98155 Date: 4-Jun-1998 Time: 10:10:32

********** 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 *******

	number	nuclide	conf.value	Activity (pCi/g) measured		decay corrected	saturation
	1	K-40	.9977	1.774E+01	+- 4.76%	1.774E+01	0.000E+00
	2	Tl-208T	.9987	2.188E-01	+- 5.24%	2.188E-01	0.000E+00
	3	Pb-210U	.9999	7.921E-01	+- 19.43%	7.921E-01	0.000E+00
	4	Pb-212T	.9998	7.549E-01	+- 5.11%	7.549E-01	0.000E+00
	5	Pb-214U	.9022	9.884E-01	+- 3.21%	9.884E-01	0.000E+00
	6	Bi-212T	.9846	5.805E-01	+- 35.26%	5.805E-01	0.000E+00
	7	Bi-214U	.9289	8.641E-01	+- 3.23%	8.641E-01	0.000E+00
	8	Ra-223A	.9881	8.310E-02	+- 37.74%	8.310E-02	0.000E+00
	9	Ra-224T	1.0000	7.901E-01	+- 10.91%	7.901E-01	0.000E+00
C	10	Ra-226U	.9993	1.746E+00	+- 7.58%	1.746E+00	0.000E+00
	11	Ac-228T	.9679	6.060E-01	+- 3.30%	6.060E-01	0.000E+00
	12	Th-234U	.9993	8.566E-01	+- 11.15%	8.566E-01	0.000E+00
C	13	U-235	.9746	1.060E-01	+- 7.58%	1.060E-01	0.000E+00
				2.612E+01		2.612E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution

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

FOR ENV98156

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: DESOTO- SOIL SPLIT W/STATE, ENV980156, 6/3/98
Spectrum file name: ENV98156
Sample identifier : BARNES
Sample size : 6.820E+02 g
Measured by : FCD

Date of Activity Calculation : 3-Jun-1998 at 14: 4:42
Collect started on : 3-Jun-1998 at 14: 4:42
Collect ended on : 3-Jun-1998 at 16: 1:28

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.006E+03 s dead time: .09 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 28-May-1998 15:26:23

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: _____ Date: 6/4/98
RP&HPS

Acceptable for Non-radioactive Disposal
(See Rocketdyne N001OP000034)

Spectrum file: ENV98156 Date: 3-Jun-1998 Time: 16: 1:28

********** 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 *******

	number	nuclide	conf.value	Activity (pCi/g) measured		decay corrected	saturation
	1	K-40	.9905	2.145E+01	+- 4.47%	2.145E+01	0.000E+00
	2	Tl-208T	.9853	2.408E-01	+- 5.26%	2.408E-01	0.000E+00
	3	Pb-212T	.9994	7.215E-01	+- 5.12%	7.215E-01	0.000E+00
	4	Pb-214U	.8953	9.926E-01	+- 3.34%	9.926E-01	0.000E+00
	5	Bi-212T	.9753	7.377E-01	+- 27.78%	7.377E-01	0.000E+00
	6	Bi-214U	.8316	9.258E-01	+- 3.34%	9.258E-01	0.000E+00
	7	Ra-224T	.9995	8.114E-01	+- 10.99%	8.114E-01	0.000E+00
C	8	Ra-226U	1.0000	2.211E+00	+- 6.47%	2.211E+00	0.000E+00
	9	Ac-228T	.9870	6.410E-01	+- 3.64%	6.410E-01	0.000E+00
	10	Th-227A	1.0000	1.103E-01	+- 14.25%	1.103E-01	0.000E+00
	11	Th-234U	.9998	7.965E-01	+- 11.06%	7.965E-01	0.000E+00
C	12	U-235	.9815	1.343E-01	+- 6.47%	1.343E-01	0.000E+00
				2.978E+01		2.978E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution

BOEING

Space Systems
Rocketdyne Propulsion & Power
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, CA 91309-7922

SHEA

Radiation Safety Department

RADIOMETRIC ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

Sample Number	Sample Type	Collection Date	Analysis Requested: Gross α	Gross β	γ Spec	^{3}H	^{90}Sr	Isotopic U	Isotopic Th	Isotopic Pu	Other
ENV-98-0167	Soil	7/3/98	☐	☐	☒	☐	☐	☐	☐	☐	
-0168			☐	☐	☒	☐	☐	☐	☐	☐	
-0169			☐	☐	☒	☐	☐	☐	☐	☐	
-0170			☐	☐	☒	☐	☐	☐	☐	☐	
-0171			☐	☐	☒	☐	☐	☐	☐	☐	
-0172			☐	☐	☒	☐	☐	☐	☐	☐	
-0173			☐	☐	☒	☐	☐	☐	☐	☐	
-0174			☐	☐	☒	☐	☐	☐	☐	☐	
-0175			☐	☐	☒	☐	☐	☐	☐	☐	
-0176			☐	☐	☒	☐	☐	☐	☐	☐	
-0177			☐	☐	☒	☐	☐	☐	☐	☐	

Description of Item Sampled, Location, and Purpose of Sample: Soil From MASS SPEC LAB TRENCH 104 DESOTO PART of FINAL Survey Requirements

Sample Collector: R.S.G. Richard S. GARRETT

(Print and Sign)

Date: 7/3/98

RECORD OF SAMPLE CUSTODY

Names of Custodians (Print and Sign)	Received Date	Received Time	Transferred Date	Transferred Time
L.C. Dahl	7/6/98	1100		

Results Reported (To and How):

Sample Disposition (Describe):

SAMPO 90, 1990 PA,MN,JR. 11-Aug-1998 13:13:59

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

FOR ENV98176

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: DS104- FS TERNCH SOIL, ENV980176, 7.6.98
Spectrum file name: ENV98176
Sample identifier : GARRETT
Sample size : 7.960E+02 g
Measured by : FCD

Date of Activity Calculation : 14-Jul-1998 at 18:47:10
Collect started on : 14-Jul-1998 at 18:47:10
Collect ended on : 14-Jul-1998 at 20:43:56

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.006E+03 s dead time: .09 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 22-Jul-1998 11:20:21

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 39 isotopes and 192 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: _____ Date: 8/11/98
RP&HPS

Acceptable for Non-radioactive Disposal
(See Rocketdyne N001OP000034)

Cs-137 0.13 pCi/g

Spectrum file: ENV98176 Date: 14-Jul-1998 Time: 20:43:56

********** 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 *******

	number	nuclide	conf.value	Activity (pCi/g) measured	decay corrected	saturation
	1	K-40	.9979	2.056E+01 +- 4.68%	2.056E+01	0.000E+00
	2	CS-137	.9986	1.291E-02 +- 23.90%	1.291E-02	0.000E+00
	3	Tl-208T	.9932	1.966E-01 +- 5.80%	1.966E-01	0.000E+00
	4	Pb-210U	.9979	9.323E-01 +- 15.37%	9.323E-01	0.000E+00
	5	Pb-212T	.9982	6.556E-01 +- 5.19%	6.556E-01	0.000E+00
	6	Pb-214U	.9123	9.217E-01 +- 3.31%	9.217E-01	0.000E+00
	7	Bi-214U	.9434	8.930E-01 +- 3.29%	8.930E-01	0.000E+00
	8	Ra-224T	.9989	6.745E-01 +- 13.26%	6.745E-01	0.000E+00
C	9	Ra-226U	.9996	2.030E+00 +- 6.61%	2.030E+00	0.000E+00
	10	Ac-228T	.9933	4.940E-01 +- 3.55%	4.940E-01	0.000E+00
	11	Th-234U	.9999	9.110E-01 +- 9.32%	9.110E-01	0.000E+00
C	12	U-235	.9766	1.233E-01 +- 6.61%	1.233E-01	0.000E+00
				2.840E+01	2.840E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution

SAMPO 90, 1990 PA,MN,JR. 11-Aug-1998 13:16:11

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

FOR ENV98177

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: DS104- FS TRENCH SOIL, ENV980177, 7/6/98
Spectrum file name: ENV98177
Sample identifier : GARRETT
Sample size : 7.500E+02 g
Measured by : FCD

Date of Activity Calculation : 15-Jul-1998 at 14:40: 0
Collect started on : 15-Jul-1998 at 14:40: 0
Collect ended on : 15-Jul-1998 at 16:36:46

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.006E+03 s dead time: .09 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 22-Jul-1998 11:20:21

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 39 isotopes and 192 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Thréshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N0010P000028 By: _____ Date: 8/11/98
RP&HPS

Co-60 0.038 pCi/g
Cs-137 0.13 pCi/g

Spectrum file: ENV98177 Date: 15-Jul-1998 Time: 16:36:46

********** 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 *******

	number	nuclide	conf.value	Activity (pCi/g) measured			decay corrected	saturation
	1	K-40	.9991	2.042E+01	+-	4.70%	2.042E+01	0.000E+00
	2	CO-60	.9979	3.796E-02	+-	7.53%	3.796E-02	0.000E+00
	3	CS-137	.9998	1.300E-01	+-	5.73%	1.300E-01	0.000E+00
	4	Tl-208T	.9918	1.928E-01	+-	5.54%	1.928E-01	0.000E+00
	5	Pb-210U	.9967	1.001E+00	+-	13.30%	1.001E+00	0.000E+00
	6	Pb-212T	.9988	6.952E-01	+-	5.06%	6.952E-01	0.000E+00
	7	Pb-214U	.9109	8.734E-01	+-	3.31%	8.734E-01	0.000E+00
	8	Bi-214U	.9242	8.923E-01	+-	3.12%	8.923E-01	0.000E+00
	9	Ra-223A	.9755	6.701E-02	+-	45.33%	6.701E-02	0.000E+00
	10	Ra-224T	.9976	8.909E-01	+-	9.34%	8.909E-01	0.000E+00
C	11	Ra-226U	1.0000	2.250E+00	+-	6.33%	2.250E+00	0.000E+00
	12	Ac-228T	.9533	5.971E-01	+-	3.51%	5.971E-01	0.000E+00
	13	Th-234U	1.0000	8.725E-01	+-	10.56%	8.725E-01	0.000E+00
C	14	U-235	.9832	1.367E-01	+-	6.33%	1.367E-01	0.000E+00
				2.905E+01			2.905E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution