

*Multi-Agency Radiation Survey and  
Site Investigation Manual  
Final Status Survey*

*FMC Corporation, Building 2,  
Princeton, New Jersey*



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**Prepared by:**



Radiological Assessment Services, Inc.  
2121 Jamieson Ave #1905  
Alexandria, VA 22314

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- B United States Nuclear Regulatory Safety and Inspection Reports
- C Monthly Survey Taken April 2, 2009
- D Instrument Calibration Certificate

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## Attachments

- 1 Case Narrative and Statistical Results
- 2 Survey Maps

## ***List of Abbreviations and Acronyms***

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ALARA	as low as reasonably achievable
ANSI	American National Standards Institute
CCC	Columbian Carbon Company
cpm	counts per minute
DCGL	derived concentration guideline level
DCGL <sub>EMC</sub>	derived concentration guideline level elevated measurement concentration
DCGL <sub>w</sub>	derived concentration guideline level(uniformly dispersed over a wide area)
dpm	disintegration per minute
DQO	Data Quality Objective
FMC	FMC Corporation
FSS	Final Status Survey
FSSP	Final Status Survey Plan
GM	Geiger Mueller
LBGR	lower boundary of the gray region
MARSSIM	Multi-Agency Radiation and Site Investigation Manual
MDA	minimum detectable activity
MDC	minimum detectable concentration
mrem/yr	millirem per year
NIST	National Institute of Standards and Technology
NJDEP	New Jersey Department of Environmental Protection
NUREG	Nuclear Regulations (NRC guidelines and regulations)
RASI	Radiological Assessment Services, Inc.
RSO	Radiation Safety Officer
TEDE	total effective dose equivalent
USEPA	Unites States Environmental Protection Agency
USNRC	United States Nuclear Regulatory Commission

# ***Executive Summary***

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FMC Corporation (FMC) retained Radiological Assessment Services, Inc. (RASI) to perform a *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM, Nuclear Regulations [NUREG]-1575, August 2000) Final Status Survey (FSS) at the Princeton Research Center located in Princeton, New Jersey (the site). The FSS was conducted following a detailed scoping survey of specific areas inside Building 2 where radioisotopes were used.

Results of the MARSSIM surveys are summarized as follows:

- A 100% scoping survey was conducted by FMC, prior to the FSS, to identify areas of concern and decontaminated to FMC's administration limit of <220 disintegration per minute (dpm)/100cm<sup>2</sup>.
- A total of 351 smears were taken over 27 laboratory rooms during the FSS - 13 samples per laboratory room.
- A 100% scan survey was conducted on all surfaces in laboratory rooms.
- The FSS smear results ranged from 175 dpm/100cm<sup>2</sup> (highest) to below detection limits. FMC maintained an administration cleanup limit of 220 dpm/100cm<sup>2</sup> during operations.
- Upon review of the data, it was determined that all survey units meet the release criteria. This document serves to report final status efforts and demonstrates compliance with methods and release criteria described within the report.

It is important to note that a simplified or MARSSIM Class 3 survey could have been used to demonstrate compliance with the release criteria. However, FMC Chemical Corporation considered the future use of the property and decided to conduct the most conservative survey approach. Therefore a Class 1 survey was designed and implemented.

# 1. Introduction

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FMC Corporation (FMC) retained Radiological Assessment Services, Inc. (RASI) to perform a *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM, Nuclear Regulations [NUREG]-1575, August 2000) Final Status Survey (FSS) at the Princeton Research Center located in Princeton, New Jersey (the site). The FSS was conducted following a detailed scoping survey of specific areas inside Building 2 where radioisotopes were used.

## 1.1 Objectives

The specific purposes of the FSS are as follows:

- fulfill the scope of data collection requirements defined in the Final Status Survey Plan (FSSP, RASI, 2009);
- adhere to the required methodologies during collection and analysis of data; and
- ensure that the data collected were of sufficient quality and quantity to make release decisions within acceptable probability of decision error.

The surveys that are the subject of this report were performed in accordance with the FSSP.

## 1.2 Report Organization

This report presents the site history, site investigation process, results of the site investigation, data quality, conclusions, and recommendations.

## **2. Background**

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### **2.1 Property Description and Features**

Between 1956 and 1971, FMC purchased a total of 161.8 acres of land, including three buildings and property purchased from Columbian Carbon Company (CCC). Prior to FMC's acquisition, most of the property was used for commercial farming, except for the property formerly owned by CCC. Research and development operations were primarily conducted on the 114 acres, excluding the farm area (40 acres).

There are multiple buildings across the 114-acre site. Except for three buildings that were purchased from CCC in 1968, FMC constructed all the existing structures on the site. Building 2 is FMC's primary research and development building. It was completed in 1982.

### **2.2 Property History and Land Use**

FMC, a Philadelphia, Pennsylvania-based firm that manufactures industrial, agricultural, and other chemicals, will move its research and development operations to the Princeton South Corporation Center located on Route 31 in Ewing, New Jersey. FMC plans to relocate 230 scientists and other company employees from this Route 1, Princeton, New Jersey site to a new site this fall, when construction is completed. The Route 1 site was sold to Princeton HealthCare System. Due to the use of several radioisotopes at portions of the site (building 2) at the Princeton location, an FSS is required to determine the presence or absence of residual radioactivity.

FMC's research and development activities at the site were to discover new products, improve or enhance existing products, or determine new applications for existing products, for itself and for FMC customers. In 1982, Building 2 became fully operational and devoted much of its research to FMC's agricultural chemicals business.

Building 2 is located on the north side of Plainsboro Road and contains laboratories, offices, greenhouses, and is used for research and development of agricultural chemicals. Storage of radioactive waste and source materials were moved from Building 22 to Building 2 in 1995. According to FMC's radioactive material license (Appendix A), FMC has been permitted to store and use radioactive isotopes since 1982, when Building 2 was constructed and fully operational.

### **2.3 Historical Radiological Assessment**

RASI conducted a Site Reconnaissance or site visit to gather and review existing records and to interview employees to collect first hand information concerning the site and use of radioactive materials. The site visit was also used to orientate identified areas of concern. Reconnaissance activity is not a risk assessment, a survey, or study of the full extent of potential contamination at the site.

An interview with the FMC Radiation Safety Officer (RSO), Sha'aban ElNaggar, Ph.D., took place on June 3, 2008. The RSO provided information regarding the site's survey requirements and existing records of past surveys, NRC license, NRC audits, license requirements, isotopes used, quantity of isotopes used, storage of isotopes, and shipment of sources offsite after last used. Dr. Sha'aban also conducted a tour of areas of concern, including the lower level sump areas and radioactive material storage area.

FMC maintained a strict cleanup level at Building 2 based on Minimum Detectable Activity (MDA) of approximately 220 dpm/100cm<sup>2</sup> for Carbon-14. Carbon-14 was the most widely used isotopes in Building 2.

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Each month, surveys were conducted in Building 2's areas where radioactive isotopes were used to maintain radiological control and to meet requirements of their Nuclear Regulatory radioactive materials license (Appendix A).

## 2.4 Summary of Previous Assessments

Prior radiological assessments conducted at the site are documented in the following reports:

- United States Nuclear Regulatory Commission (USNRC). December 2, 1991. *Safety Inspection*. Docket Number 03005249. License Number 29-01035-01;
- USNRC. October 28, 1996. *Safety Inspection Report and Compliance Inspection*. Docket Number 03005249. License Number 29-01035-01;
- USNRC. November 14, 2002. *Safety Inspection Report and Compliance Inspection*. Docket Number 03005249. License Number 29-01035-01; and
- USNRC. October 31, 2007. *Safety Inspection Report and Compliance Inspection*. Docket Number 03005249. License Number 29-01035-01.

All USNRC inspections and safety reports show no violations or findings (Appendix B).

## 2.5 Radionuclide of Concern

The isotopes used onsite were Carbon-14 ( $^{14}\text{C}$ , ~1,200 mCi) and Tritium ( $^3\text{H}$ , ~65 mCi, in inventory, not in use currently). These two isotopes were the main isotopes that FMC research operations had used (~99% + of all isotopes used) since occupancy of building 2 in 1982. In addition to the above-mentioned two isotopes, from 1989 to 2003, the research operations at FMC had sporadically used other minor isotopes that included the following:

- Chlorine-36 ( $^{36}\text{Cl}$ - Half-Life  $3 \times 10^5$  Y): The last shipment was in October 1997 (0.1 mCi) and current inventory balance is zero;
- Phosphorous-32 ( $^{32}\text{P}$ - Half-Life 14 days): The last shipment was in July 2003 (0.5 mCi) and current inventory balance is zero;
- Iodine-125 ( $^{125}\text{I}$ - Half-Life 59.9 days): The last shipment was in April 2005 (10 mCi) and current inventory balance is zero; and
- Sulfur-35 ( $^{35}\text{S}$ - Half-Life 87.2 days): The last shipment was in January 1990 (0.127 mCi) and current inventory balance is zero.

RASI did not survey and sample for short-lived isotopes no longer present at the site. Site records indicate that three short-lived isotopes were shipped offsite and are no longer used at FMC. The time since last used and absence of these isotopes at FMC are greater than several half-lives. Therefore these isotopes would not be present at FMC site.

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It would not have been cost-effective or good science to investigate for the presence of isotopes that no longer exist at the site. The following isotopes were eliminated from investigation:

- Phosphorous-32 ( $^{32}\text{P}$ - Half-Life 14 days): The last shipment was in July 2003 (0.5 mCi) and current inventory balance is zero;
- Iodine-125 ( $^{125}\text{I}$ - Half-Life 59.9 days): The last shipment was in April 2005 (10 mCi) and current inventory balance is zero; and
- Sulfur-35 ( $^{35}\text{S}$ - Half-Life 87.2 days): The last shipment was in January 1990 (0.127 mCi) and current inventory balance is zero.

## 3. Final Status Survey

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### 3.1 Objectives

The specific purposes of the FSS are as follows:

- fulfill the scope of data collection requirements defined in the FSSP (RASI, 2009);
- adhere to the required methodologies during collection and analysis of data; and
- ensure that the data collected were of sufficient quality and quantity to make remediation and release decisions within acceptable probability of decision error.

The surveys that are the subject of this report were performed in accordance with the FSSP (RASI, 2009).

MARSSIM (NUREG-1575) and the Nonparametric Statistical Methodology for the Design and Analysis of the Final Status Decommissioning Survey Guide (NUREG-1505) were used as guidance in designing and conducting the FSS. The process of planning and designing the FSS was developed using Data Quality Objectives (DQOs).

#### 3.1.1 Project Quality Objectives

The field quality control objectives described here are defined in Section 5 of MARSSIM. These objectives ensure that the data collected provided information needed to assess the adequacy of the data and the suitability of the FSS design.

Derived Concentration Guideline Level (DCGL). The DCGL for the average concentrations of C-14, H-3, and Cl-36 averaged over the entire survey unit (derived concentration guideline level [uniformly dispersed over a wide area], DCGL<sub>w</sub>) for unrestricted use was obtained from taking the contaminants potentially present in Building 2 and converting the values established in Table H-1 of NUREG-1757 (volume 2) from the USNRC's 25 millirem per year (mrem/yr) dose criterion to the New Jersey Department of Environmental Protection's (NJDEP's) 15 mrem/yr dose criterion. The relative ratios of use were also considered in the calculation. The DCGL<sub>w</sub> is the average concentration that cannot be exceeded to demonstrate compliance with the release criterion (2.36e6 dpm/100cm<sup>2</sup>).

Identification of Survey Units and Survey Unit Boundaries. All areas in Building 2 where radioactive sources were used are an area of concern for FSS based on historical use of each area. All laboratories, storage rooms, piping, sumps, and associated equipment utilized for radioactive work will be classified as a Class 1 survey unit (MARSSIM, Section 4.6).

Null Hypothesis. The null hypothesis is that the residual radioactivity in the survey unit exceeds the release criterion. The null hypothesis is treated like a baseline condition, assumed true in the absence of strong evidence. Decision errors occur when the null hypothesis is rejected when it is true (Type I), or when null hypothesis is not rejected (accepted) when it is false (Type II).

Radionuclide Concentration Variability ( $\sigma$ ). There is no discernable difference between natural background radiation levels and any potential contamination in Building 2. During operations, the limit used for cleanup was minimum detection limits, or approximately 220 dpm/100cm<sup>2</sup>. The radionuclide variability is narrow between

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natural background radioactivity and residual levels. The variability is substantial between the DCGL<sub>w</sub> and the expected low residual levels.

Gray Region. The gray region is the range of concentrations where the consequences of decision errors are relatively minor. The upper bound of the gray region is defined in MARSSIM as equal to the DCGL<sub>w</sub> (2.36e6 dpm/100cm<sup>2</sup>). The LBGR is the concentration where the decision maker is concerned with making a Type II decision error. For planning purposes, the LBGR was selected to be 1.18e6 dpm/100cm<sup>2</sup> (MARSSIM recommends using one half the DCGL<sub>w</sub>).

Type I and Type II Decision Errors. A Type I decision error would occur if the decision maker determined the residual radioactivity in the survey unit was less than the release criterion when the actual concentration was greater than the release criterion (i.e., deciding to release a contaminated site). The probability of making a Type I decision error has been set at 0.05 or 5% per MARSSIM. A Type II decision error would occur when the decision maker decides the residual radioactivity exceeds the release criterion when the actual concentration is less than the release criterion (i.e., failed to release a clean site). The probability of making a Type II decision error has been set at 0.05 or 5%. This is consistent with decision error rates used to design the FSS.

Relative Shift. The relative shift is equal to  $\Delta/\sigma$ , where  $\Delta$  is equal to DCGL minus the LBGR, and  $\sigma$  is an estimate of the standard deviation of the measured values in the survey unit. The estimate of  $\sigma$  includes both the real spatial variability in the quantity being measured and the precision of the chosen measurement system. The relative shift,  $\Delta/\sigma$ , is an expression of the resolution of the measurements in units of measurement uncertainty. The DCGL is also the upper boundary of the gray region (area of radiation readings where the consequences of a decision error are relatively minor). The LBGR is a site-specific variable generally selected to equal one half the DCGL. The relative shift is used, with other parameters, to determine the number of measurements required to perform the statistical test. For this survey design, the relative shift is equal to  $(DCGL_w - LBGR)/\sigma$ . MARSSIM recommends a relative shift of 1-3 in survey design; however, a much larger relative shift is expected due to the low levels of residual radioactive concentrations at the site and the dose-based release criterion. FMC maintained work areas at approximately 220 dpm/100cm<sup>2</sup> (MDA) and the dose-based release criterion was calculated to 2.36e6 dpm/100cm<sup>2</sup>. The LBGR is 1.18e6 dpm/100cm<sup>2</sup>/ $\sigma$ . Utilizing data from the April 2, 2009 monthly survey (Appendix C), a standard deviation was calculated to be 33.13. The number of samples (N) will be 13 samples per survey unit. Additional judgmental smears were taken of high traffic areas and areas of concern.

Detection Limit. The detection limits for these isotopes are limited to C-14 and Cl-36. H-3 cannot be measured with field instruments with a high confidence level. A Ludlum 17cm<sup>2</sup> frisker probe was used to scan for any indications above background that may indicate C-14 activity. The majority of survey release data will be focused on smear data. Laboratory detection limits are less than 50pCi per smear.

Number of Measurements. The number of measurements in each survey unit is based on the relative shift and the acceptable decision error rates. Thirteen measurement locations are planned for the survey units (Table 2). In addition to the required number of smears per survey unit, judgmental smears were taken in area to ensure proper survey coverage.

Determine Pr. Pr is defined as the probability that a random measurement from a survey unit exceeds a random measurement from the background reference area by less than the DCGL when the survey unit median is equal to the LBGR above background. Pr is used in identifying the number of measurements to be performed during an FSS. Table 5.1 in the MARSSIM lists relative shift values and values for Pr. Using the relative shift calculated in the preceding section, the value of Pr was obtained from Table 5.1 in the MARSSIM. Pr = 1.

### 3.2 Defining Survey Unit

Survey unit is a physical area divided such that a separate decision is made as to whether or not that survey unit exceeds the release criteria. Each survey unit includes only one area classification (i.e., a survey unit cannot contain multiple class areas).

All surveyed areas were classified as Class 1. The main purpose of classifying areas as Class 1 was to allow for the most conservative survey approach based on the future use of Building 2.

### 3.3 Dose Release Limit

Building 2 will be considered acceptable for unrestricted use if:

- The residual radioactivity that is distinguishable from background radiation results in a total effective dose equivalent (TEDE) to an average member of the critical group that does not exceed 15 mrem/yr; and
- The residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA).

The NJDEP has established a TEDE limit of 15 mrem/yr.

### 3.4 Release Criterion (DCGL) for Radionuclide of Concern

Total DCGL for the three nuclides of interest adjusted for the 15 mrem/yr limits for New Jersey are presented in Table 1 below.

**Table 1  
Release Criteria and Radionuclide of Concern**

$$DCGL_{NJ} = \frac{DCGL_{1757}(\text{nuclide of interest})}{25 \text{ mrem/yr}} \times 15 \text{ mrem/yr}$$

Nuclide	Beta Energy MeV (max)	Beta Energy MeV (ave)	DCGL 25 mrem/yr dpm/100cm2 NUREG-1757 Table H-1 to meet 10CFR20.1402	DCGL** 15 mrem/yr dpm/100cm2 (no wipe collection efficiency applied)	Recommended Inst. Efficiency Per ISO-7503 $\epsilon_s$
H-3	0.01860	0.005685	1.2e8	7.2e7	0
C-14	0.156480	0.049470	3.7e6	2.22e6	0.25
Cl-36	0.709	0.251	5e5	3e5	0.5

$$DCGL_{NJT} = \frac{1}{\left(\frac{0.94}{2.22e6}\right) + \left(\frac{0.06}{7.2e7}\right) + \left(\frac{0.001}{5e5}\right)} = 2.36e6 \text{ dpm/100cm}^2$$

The release criterion for all isotopes combined = 2.36e6 dpm/100cm2.

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### 3.5 Establishing the Systematic Sampling Grid

For balanced coverage of a survey unit, sampling locations must be distributed in a pattern. The number of survey data points needed is established and the points are positioned throughout the survey unit by first randomly selecting a start point and establishing a systematic pattern. The triangle grid was applied for this FSS because it is generally more efficient than the square grid for locating small areas of elevated activity (MARSSIM, 2000).

### 3.6 Reference (Background) Areas

For sites where the contaminants are not present in background or present in such small fractions of the DCGL<sub>w</sub> as to be considered insignificant, a background reference area is not necessary. Instead the contaminants are compared directly to the DCGL value.

A natural background check (survey) was performed on building materials and different surfaces to eliminate any unexpected high background survey interference.

### 3.7 Survey Units

A survey unit is a physical area consisting of a specified size and shape for which a separate decision will be made. The survey units for potentially impacted areas will be divided into grids and the data collected at the grid points will be recorded in accordance with MARSSIM. The Class 1 survey unit will be 100m<sup>2</sup> (1,076 square feet).

The survey units will consist of the following areas:

Areas to be Surveyed	Square Feet
2-1130	858
2-1135	858
2-1140	858
2-1150	858
2-1155	784
2-1160 (small freezer)	858
2-1162 (Freezer)	110
2-1165	858
2-1175	858
2-1205 (Refrigerator)	858
2-1210	858
2-1230	1,078
2-1245	1,067
2-1250	657
2-1255	1,067
2-1474	983

Areas to be Surveyed	Square Feet
2-2135	858
2-2240	858
2-2260	858
2-2265	858
Growth Chamber 8	150
Growth Chamber 10	150
Growth Chamber 15	150
Growth Chamber 19	150
Green House #5	561
2-1465 Rad waste storage	704
2-Basement wastewater	

### 3.8 Number of Data Points

The Sign test evaluates whether the median of the data is above or below the  $DCGL_W$ . As a practical matter, if every measurement in the survey unit is below the  $DCGL_W$ , the survey unit clearly meets the objective. If the set of samples fails the Sign test, a retrospective power analysis for the statistical test may be performed and the number of samples required will be recalculated.

For radionuclides not present in background (insignificant), MARSSIM recommends application of the Sign test. Based on a relative shift of 35617, the minimum number of samples (N) for each survey unit required to meet the DQOs is 13 (Table 2).

**Table 2**  
**Calculated Number of Data Points/Samples (N)**

Sample	C-14 (dpm100cm2)
1	14
2	25
3	24
4	8
5	28
6	14
7	20
8	3
9	153
10	23
11	23
12	44
13	18
Average:	30.54
Sigma:	38.13
Delta:	1.18e6
Delta/sigma:	35617
N:	13

N can be calculated using the following formula escalated by a factor of 1.2 and rounded up, or N can be looked up in Table 5.4 of the MARSSIM. The 20% escalation factor is used to account for uncertainty in the parameters used to calculate N and to allow flexibility to account for lost or unusable data. This calculation was also calculated using COMPASS software. COMPASS was developed under sponsorship of the USNRC for implementation of MARSSIM.

$$N = \frac{(Z_{1-\alpha} + Z_{1-\beta})^2}{4(\text{Sign}P - 0.5)^2}$$

where:

$Z_{1-\alpha}$  = percentile represented by selected value of  $\alpha = 0.05$ , Table 5.2 of the MARSSIM;  
 $Z_{1-\beta}$  = percentile represented by selected value of  $\beta = 0.05$ , Table 5.2 of the MARSSIM; and  
 $P_r$  = value obtained from Table 5.1 of the MARSSIM.

### 3.8.1 Area Factors

The small areas of elevated activity are accounted for by comparing the DCGL for small areas (derived concentration guideline level elevated measurement concentration [DCGL<sub>EMC</sub>]) with the detection limit of the field scanning measurements. Multiplying the area factor by the DCGL<sub>w</sub> insures that the DCGL<sub>EMC</sub> is always greater than the detection limit and the survey design is adequate. The DCGL<sub>EMC</sub> is established as:

$$\text{DCGL}_{\text{EMC}} = \text{Area Factor} * \text{DCGL}_w$$

However, due to the high dose-based release criterion and the low level of detection efficiency using field instruments for these isotopes, area factors were not used in this survey design. Field scanning measurements that indicated greater than background were investigated. A 100% scanning survey was conducted in each survey unit of the floor, work areas, and lower walls.

### 3.8.2 Determine Decision Error Percentiles

A decision error is one where the results of the sampling produce a statistical test result that is incorrect due to random chance alone. Because random chance cannot be completely eliminated, it is important to explicitly limit the likelihood of an incorrect conclusion. There are two types of decision errors as shown below.

**Table 3**  
**Decision/Outcome of Statistical Test**

True Condition of Survey Unit	Reject $H_0$	Accept $H_0$
Meets the acceptance criterion (below DCGL)	No decision error (probability = $1 - \alpha$ )	Incorrectly fail to release survey unit Type II error (probability = $\beta$ )
Exceeds the acceptance criterion (exceeds DCGL)	Incorrectly release survey unit Type I error (probability = $\alpha$ )	No decision error (probability = $1 - \beta$ )

Examination of this table highlights the importance of limiting the Type I error rate (or  $\alpha$ ) in terms of protection of human health and the environment. The DQO selected for both  $\alpha$  and  $\beta$  was 0.05, or 5%.

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### 3.8.3 Determining Investigation Levels

Because there is an expectation of residual radioactivity in a Class 1 area, surveys and decontamination was conducted prior to the FSS. There were no areas that were close to the DCGL<sub>w</sub> (2.36e6 dpm/100cm<sup>2</sup>) or the LBGR (1.18e6 dpm/100cm<sup>2</sup>) levels of activity detected presumably due to FMC's policy to remediate any areas >220 dpm/100cm<sup>2</sup>. The Final Survey scanning investigation was any detectable activity greater than background for each survey unit. The background is approximately 30 cpm (counts per minute) using a Geiger Mueller (GM) detector calibrated for carbon-14. All areas were less than or equal to background activity.

### 3.8.4 Evaluating Survey Results

After measurement data was converted to DCGL units, the results were compared to the DCGLs. Individual measurements were first compared to DCGL levels for evidence of elevated activity. Data was then evaluated using statistical methods to identify whether they have exceeded the site's DCGL.

## 4. Field Measurement Methods

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### 4.1 Direct Instrument Measurements

RASI used a surface scan instrument calibrated for C-14. The surface scan meter was coupled to a GM detector used to detect C-14. Carbon-14 was the most used isotope at FMC. The detector was held ¼-inch away from the surface and a scan rate of 2 inches per second. In the scanning mode, the audio response was used to prevent lack of detection of an elevated area due to meter response (analog needle) lag time.

All audible indication of activity above background was investigated. FMC remediated any areas greater than their 220 dpm/100cm<sup>2</sup> or 220 dpm/probe area to stay consistent with their radiation protection program. Those limits are magnitudes below the release limit of 2.36E6 dpm/100cm<sup>2</sup>.

In addition to a scan survey, static one-minute measurements were taken at each smear location. The static MDC for surface activity measurements was relatively high for these low energy beta emitters. However, the DCGLs for these same low energy emitters are even higher (dose-based).

Instrument and surface efficiency are shown below using a one-minute count time.

$$C_f_p := \frac{100}{17} \quad \begin{array}{l} \text{probe area} \\ \text{correction factor} \end{array}$$
$$\epsilon_i := 0.06 \quad \text{instrument efficiency}$$
$$\epsilon_s := 0.25 \quad \text{surface efficiency}$$
$$\epsilon_t := \epsilon_i \cdot \epsilon_s \cdot (0.94) \quad \begin{array}{l} \text{total efficiency} \\ \text{with C-14 fraction} \end{array}$$
$$C_b := \begin{pmatrix} 40 \\ 60 \\ 80 \\ 100 \\ 120 \end{pmatrix} T_s := 1 \quad \text{minute count time}$$

### 4.2 Smear Samples

Thirteen samples were collected from random locations inside each survey unit area. The random locations were identified using the RAND function in Microsoft Excel™, Version 8. Random numbers between zero and one were multiplied by the length and width for the area to generate coordinates based on a reference point. Judgmental smears were taken in known areas that are considered impacted and compared to the DCGL<sub>w</sub>.

Special smear requirements for liquid scintillation analysis required a wet smear to be taken and placed inside a labeled 20 ml glass vial.

## 5. Survey Instrumentation

### 5.1 Instrumentation Selection

Several instruments were used to support this project. These instruments were stored at the site and were used to identify the presence and levels of radiological activity associated with materials located in and around the site.

The following Table 4 presents the instruments used on the site.

**Table 4**  
**Instruments**

Reference Name	Instrument Manufacturer, Model, and Detector	Detector Model/Type	Radiation Detected	Usage
17cm	Ludlum-177	GM	Beta-Gamma	<ul style="list-style-type: none"> <li>Site Background Verification</li> <li>Surface Area Coverage of Survey Areas</li> </ul>
100 cm <sup>2</sup> /Probe area	Ludlum-2224	43-89	Alpha, Beta	<ul style="list-style-type: none"> <li>Static Measurements</li> </ul>
Off-site lab Smear Counter	Liquid Scintillation	Scintillation	Alpha, Beta	<ul style="list-style-type: none"> <li>Laboratory Analysis of Smear Samples</li> </ul>
MicroR - Meter	Ludlum 19	Internal NaI Scintillation	Gamma	<ul style="list-style-type: none"> <li>Gamma Rate Exposure Surveys</li> </ul>

Uses of these field instruments or acceptable equivalents are evaluated against the goal of achieving MDCs of less than the DCGL<sub>w</sub> for direct measurements and/or scanning measurements. MDCs were calculated for scanning instruments using the methods provided in MARSSIM for calculating MDC that controls both Type I and Type II errors (i.e., elimination of false negatives and false positives) as follows:

Projected count rate and activity detection based on ~2 inches per second based on 17 cm<sup>2</sup> probe size

$$i := 0.1 \quad \text{minute} \quad b_i := C_b \cdot i \quad \text{background counts adjusted for time interval}$$

$$d_1 := 2.32 \quad \text{values chosen for 95\% true detection and 25\% false positive}$$

$$p := 0.5 \quad \text{surveyor efficiency}$$

$$\text{MDCR}_{\text{scan}} := \frac{d_1 \cdot \sqrt{b_i}}{i \cdot \sqrt{p}} \cdot C_f \cdot p$$

Where MDCR is the minimum detectable count rate in cpm,  $\epsilon$  is the instrument efficiency (cpm/uR/hour), and p is the surveyor efficiency. The value of p has been estimated (MARSSIM) to be between 0.5 and 0.75. The value of 0.5 is conservative. The resulting scan MDCR is in units of cpm and can be converted to dpm.

Survey instruments were calibrated, maintained, controlled, and operated in accordance with criteria provided in American National Standards Institute (ANSI) Standards N323-1978 and N42.17A-1989. Field instruments will

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be calibrated on an annual schedule and following maintenance that may affect the instrument's calibration. Calibrations (including source data) will be documented.

Typical instrument and detector calibrations include:

- high-voltage calibration;
- discriminator/threshold calibration;
- window calibration;
- alarm operation verification;
- sealer calibration verification;
- detector operating voltage determination;
- calibration constant determination; and
- dead-time correction calibration.

Calibration labels showing the instrument identification number, calibration date, and calibration due date are attached to portable field instruments.

Sources used for calibration or efficiency determinations are representative of the instrument's response to the identified radionuclides and are traceable to the National Institute of Standards and Technology (NIST).

The instrument calibration certificate is provided in Appendix D.

## 6. Detection Sensitivity – MDA

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The detection sensitivity of a measurement system refers to a radiation level or quantity of radioactive material that can be measured or detected with some known or estimated level of confidence. This quantity is a factor of both the instrumentation and the technique or procedure being used.

The primary parameters that affect the detection capability of a radiation detector are the background counts, the detection efficiency of the detector and the counting time interval. Background counts from the reference areas and detection efficiencies are used in determining counting parameters.

### 6.1 Instrument Measurement Data Interpretation

The actual cpm equivalent used to implement the performance standard in the field is based on the scan MDA. The cpm equivalent is provided below.

Projected MDA based on static count time of one minute

$$MDA_{\text{static}} := \frac{3 + 4.65\sqrt{C_b}}{\epsilon_t \cdot T_s} \cdot Cf_p$$

$$MDA_{\text{static}} = \begin{pmatrix} 1.352 \times 10^4 \\ 1.628 \times 10^4 \\ 1.86 \times 10^4 \\ 2.065 \times 10^4 \\ 2.25 \times 10^4 \end{pmatrix} \frac{\text{dpm}}{100\text{cm}^2}$$

Projected count rate and activity detection based on ~2 inches per second based on 17 cm<sup>2</sup> probe size

$$i := 0.1 \quad \text{minute} \quad b_i := C_b \cdot i \quad \text{background counts adjusted for time interval}$$

$$d_1 := 2.32 \quad \text{values chosen for 95\% true detection and 25\% false positive}$$

$$p := 0.5 \quad \text{surveyor efficiency}$$

$$MDCR_{\text{scan}} := \frac{d_1 \cdot \sqrt{b_i}}{i \cdot \sqrt{p}} \cdot Cf_p$$

## 7. Results

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The results of the field activities are presented below. The survey unit section contains smear survey results. Hand held scan results were used as qualitative indicators of the presence or absence of elevated radioactivity where additional investigation may be needed. Liquid scintillation smear sample analytical results are the quantitative basis upon which the release of the survey unit is based. The certified offsite laboratory Case Narrative, followed by statistical results, can be found in Attachment 1.

For comparison, the FMC administration release limit has been 220 dpm/100cm<sup>2</sup>. The FSS release criterion for the survey units is 2.36E6 dpm/100cm<sup>2</sup>. All survey units meet the FMC administration release limit, and more importantly the DCGL<sub>w</sub> limit.

For smear locations, please see survey maps provided in Attachment 2. The survey maps indicate that smear locations were not skewed and represents the survey units.

### 7.1 Laboratory Room 2-1130

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 25.14;
- Median dpm/100cm<sup>2</sup> = 13.97;
- Standard deviation = 34.72;
- Highest smear sample activity = 136.47 dpm/100cm<sup>2</sup>;
- Lowest smear activity = 6.46 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.2 Laboratory Room 2-1135

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 14.75;
- Median dpm/100cm<sup>2</sup> = 7.99;
- Standard deviation = 16.33;
- Highest smear sample activity = 58.11 dpm/100cm<sup>2</sup>;
- Lowest smear activity = 0 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.3 Laboratory Room 2-1140

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 4.03;
- Median dpm/100cm<sup>2</sup> = 2.24;
- Standard deviation = 6.6;
- Highest smear sample activity = 17.81 dpm/100cm<sup>2</sup>;
- Lowest smear activity = 3.6 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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#### 7.4 Laboratory Room 2-1150

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 52.5;
- Median dpm/100cm<sup>2</sup> = 36.3;
- Standard deviation = 46.2;
- Highest smear sample activity = 175.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = 3.6 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.5 Laboratory Room 2-1155

- Area size = 72.84 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 3.7;
- Median dpm/100cm<sup>2</sup> = 2.2;
- Standard deviation = 6.9;
- Highest smear sample activity = 22.8 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.6 Laboratory Room 2-1160

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 3;
- Median dpm/100cm<sup>2</sup> = 2.2;
- Standard deviation = 3.9;
- Highest smear sample activity = 11 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.2 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.7 Laboratory Room 2-1162

- Area size = 10.21 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .24;
- Median dpm/100cm<sup>2</sup> = -1.1;
- Standard deviation = 7.1;
- Highest smear sample activity = 22.6 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -6.5 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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## 7.8 Laboratory Room 2-1165

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .93;
- Median dpm/100cm<sup>2</sup> = 1.1;
- Standard deviation = 4.24;
- Highest smear sample activity = 7.8 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -8.8 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.9 Laboratory Room 2-1175

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 3.6;
- Median dpm/100cm<sup>2</sup> = 0;
- Standard deviation = 12.9;
- Highest smear sample activity = 45.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -4.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.10 Laboratory Room 2-1205

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = -2.7;
- Median dpm/100cm<sup>2</sup> = -4.3;
- Standard deviation = 4;
- Highest smear sample activity = 5.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -7.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.11 Laboratory Room 2-1210

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .36;
- Median dpm/100cm<sup>2</sup> = -1.1;
- Standard deviation = 3.9;
- Highest smear sample activity = 6.7 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -7.8 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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### 7.12 Laboratory Room 2-1230

- Area size = 100 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 1.7;
- Median dpm/100cm<sup>2</sup> = 1.1;
- Standard deviation = 3.3;
- Highest smear sample activity = 9.7 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.2 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.13 Laboratory Room 2-1245

- Area size = 99.12 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 2.6;
- Median dpm/100cm<sup>2</sup> = 1.2;
- Standard deviation = 4.3;
- Highest smear sample activity = 15.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.2 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.14 Laboratory Room 2-1250

- Area size = 61 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 3.2;
- Median dpm/100cm<sup>2</sup> = 3.3;
- Standard deviation = 3.5;
- Highest smear sample activity = 10.9 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -5.4 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.15 Laboratory Room 2-1255

- Area size = 99 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = -3;
- Median dpm/100cm<sup>2</sup> = -3.2;
- Standard deviation = 2.5;
- Highest smear sample activity = 2.2 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -6.5 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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### 7.16 Laboratory Room 2-1474

- Area size = 91 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = -4.3;
- Median dpm/100cm<sup>2</sup> = -4.3;
- Standard deviation = 3.4;
- Highest smear sample activity = 3.2 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -9.6 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.17 Laboratory Room 2-2135

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 4.1;
- Median dpm/100cm<sup>2</sup> = 3.4;
- Standard deviation = 5.6;
- Highest smear sample activity = 17.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.18 Laboratory Room 2-2240

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .22;
- Median dpm/100cm<sup>2</sup> = 0;
- Standard deviation = 11.6;
- Highest smear sample activity = 28 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -2.2 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

### 7.19 Laboratory Room 2-2260

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = -3;
- Median dpm/100cm<sup>2</sup> = -3.5;
- Standard deviation = 3.6;
- Highest smear sample activity = 4.3 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -6.7 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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## 7.20 Laboratory Room 2-2265

- Area size = 79.71 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .2;
- Median dpm/100cm<sup>2</sup> = -1;
- Standard deviation = 5.1;
- Highest smear sample activity = 13.1 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -5.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.21 Growth Chamber 8

- Area size = 13.9 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 6.1;
- Median dpm/100cm<sup>2</sup> = -1;
- Standard deviation = 4.96;
- Highest smear sample activity = 20 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -1 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.22 Growth Chamber 10

- Area size = 13.9 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 2.2;
- Median dpm/100cm<sup>2</sup> = 2.2;
- Standard deviation = 5.8;
- Highest smear sample activity = 17 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -7.6 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## 7.23 Growth Chamber 15

- Area size = 13.9 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 1.1;
- Median dpm/100cm<sup>2</sup> = 1.1;
- Standard deviation = 3.96;
- Highest smear sample activity = 6.5 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -6.9 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

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#### 7.24 Growth Chamber 19

- Area size = 13.9 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = .16;
- Median dpm/100cm<sup>2</sup> = 0;
- Standard deviation = 2.5;
- Highest smear sample activity = 4.4 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -4.3 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.25 Green House 5

- Area size = 52.11 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 11.1;
- Median dpm/100cm<sup>2</sup> = 8.8;
- Standard deviation = 7.7;
- Highest smear sample activity = 25.3 dpm/100cm<sup>2</sup>;
- Lowest smear activity = 1.1 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.26 Radioactive Waste Storage Room 2-1465

- Area size = 65.4m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 1.5;
- Median dpm/100cm<sup>2</sup> = 1.1;
- Standard deviation = 6.8;
- Highest smear sample activity = 20.5 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -6.5 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

#### 7.27 Basement Wastewater

- Area size = 100 m<sup>2</sup>;
- Total number of smear measurements = 13;
- Average dpm/100cm<sup>2</sup> = 1.8;
- Median dpm/100cm<sup>2</sup> = 1.1;
- Standard deviation = 4.01;
- Highest smear sample activity = 6.7 dpm/100cm<sup>2</sup>;
- Lowest smear activity = -4.4 dpm/100cm<sup>2</sup>; and
- A 100% scan did not indicate any activity above background.

## **8. Discussion of Findings and Conclusions**

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### **8.1 Summary**

RASI conducted an FSS of the site between June 15, 2009 and June 17, 2009. Survey activities were conducted in accordance with the FSSP. The FSSP was developed and implemented using guidance from the MARSSIM and the *Nonparametric Statistical Methodology for the Design and Analysis of the Final Status Decommissioning Survey Guide* (NUREG-1505).

Upon completion of the FSS, the collected data were analyzed to ensure that all objectives of the FSSP were completed. Data presented in this report were collected in accordance to the requirements of the FSSP (RASI, 2009). The data were assessed according to the methods described in MARSSIM (United States Environmental Protection Agency [USEPA], 2000).

The survey units in this FSS meet the requirements for radiological release.

### **8.2 Conclusions**

It is concluded that the objectives of the FSSP (RASI, 2009) were completed, and all surveys were performed as described in the FSSP for all survey units. The collected data were analyzed and are of sufficient quality and quantity for the appropriate agencies to make property release decisions with an acceptable probability of decision error.

### **8.3 Final Status Determination**

The FMC Building 2 survey units meet the criteria for radiological release established in the FSSP. All smear samples taken were well below the release criteria. As a result, the surveyed areas can be released from radiological control.

## 9. References

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Abelquist, E.W. 2001. Decommissioning Health Physics – A Handbook for MARSSIM Users.

RASI. June 2009. Final Status Survey Plan.

USEPA. 1994. *Data Quality Objectives Process for Hazardous Waste Site Investigations*; Peer Review Draft. EPA QA/G4HW.

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USNRC. 1998. A Nonparametric Statistical Methodology for the Design and Analysis of Final Status Decommissioning Surveys; NUREG-1505, Rev. 1.

USNRC. 1998. *Consolidated Decommissioning Guidance* ; NUREG-1757, Vol 2 Rev.1

USNRC, USEPA, United States Department of Defense, United States Department of Energy. 2000. *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)*; NUREG-1575; EPA 402-R-97-016.

## **APPENDIX A**

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>1. FMC Corporation Chemical Research and Development Center</p> <p>2. P. O. Box 8 Princeton, New Jersey 08543</p>	<p>In accordance with the application dated June 21, 2004,</p> <p>3. License number 29-01035-01 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date November 30, 2014</p> <hr/> <p>5. Docket No. 030-05249 Reference No.</p>
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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Hydrogen 3	A. Any	A. 1 curie
B. Carbon 14	B. Any	B. 2 curies
C. Phosphorus 32	C. Any	C. 20 millicuries
D. Sulfur 35	D. Any	D. 20 millicuries
E. Chlorine 36	E. Any	E. 20 millicuries
F. Calcium 45	F. Any	F. 10 millicuries
G. Iodine 125	G. Non-volatile Compounds	G. 10 millicuries
H. Nickel 63	H. Plated Foils	H. 800 millicuries
I. Cesium 137	I. Sealed Source	I. 0.001 microcuries

9. Authorized use:
- A. Through G. Research and development as defined in 10 CFR 30.4; animal studies.
  - H. To be used for sample analysis in compatible gas chromatography devices that have been registered either with the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State and have been distributed in accordance with a Commission or Agreement State specific license authorizing distribution to persons specifically authorized by a Commission or Agreement State license to receive, possess, and use the devices.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
29-01035-01Docket or Reference Number  
030-05249

Amendment No. 32

- I. Calibration and checking of the licensee's instruments.

**CONDITIONS**

10. Licensed material may be used or stored only at the licensee's facilities located at U. S. Route 1 and Plainsboro Road, Princeton, New Jersey.
11. Licensed material shall be used by, or under the supervision of, John M. Becker, Bruce Black, M. K. Chaguturu, Audrey W. Chen, Peter Dierks, James R. Eldridge, Sha'aban El Naggar, Robert Henrie, David Kiefer, Lyle P. Kinne, G. Russell Peters, or Sandra Simpson.
12. The Radiation Safety Officer for this license is Sha'aban El Naggar.
13. The licensee shall not use licensed material in or on human beings.
14. The licensee shall not use licensed material in field applications where it is released except as provided otherwise by specific condition of this license.
15. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
16. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- C. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.
- D. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
29-01035-01Docket or Reference Number  
030-05249

Amendment No. 32

- E. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- G. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. The licensee shall conduct a physical inventory every six months, or at other interval approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license.
19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
20. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.
- B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
- C. A record of each such disposal permitted under this license condition shall be retained for 3 years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
21. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**License Number  
29-01035-01Docket or Reference Number  
030-05249

Amendment No. 32

22. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated June 21, 2004



For the U.S. Nuclear Regulatory Commission

Date November 8, 2004

By

*Original signed by Jenny Johansen*

Jenny Johansen  
Security and Industrial Branch  
Division of Nuclear Materials Safety  
Region I  
King of Prussia, Pennsylvania 19406

89241935

## **APPENDIX B**

# SAFETY INSPECTION

1. LICENSEE

*FMC Corporation*

2. REGIONAL OFFICE

REGION I  
U S NUCLEAR REGULATORY COMMISSION  
475 ALLENDALE ROAD  
KING OF PRUSSIA PA 19406-1415

3. DOCKET NUMBER(S)

*030-05249*

4. LICENSE NUMBER(S)

*29-01035-01*

5. DATE OF INSPECTION

*December 2, 1991*

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The findings as a result of this inspection are as follows:

Within the scope of this inspection, no violations were observed.



**BETSY ULLRICH**  
Health Physicist

U. S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406

(215) 337-5040  
(215) 337-5000

Correct the violations identified during the last inspection. We have no further

\_\_\_\_\_bed below or attached, were in violation of NRC requirements. This form is a  
\_\_\_\_\_in accordance with 10 CFR 19.11.

\_\_\_\_\_ was not properly posted to  
\_\_\_\_\_. 10 CFR 20.203(b),(c),(d),(e) or 34.42.

B. \_\_\_\_\_ of sealed sources were not performed at the proper frequencies. 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.

C. Records of \_\_\_\_\_ were not properly maintained. 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.

D. Documents were not properly posted or otherwise made available. 10 CFR 19.11.

E. Reports or notification of \_\_\_\_\_ were not made in accordance with 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.

F. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified in the items checked above. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201. No further response will be submitted unless required by the NRC.

SIGNATURE -- LICENSEE

*William E. Hyman*

DATE

*12/2/91*

SIGNATURE -- NRC INSPECTOR

*Betsy Ullrich*

DATE

*12/2/91*

# SAFETY INSPECTION

1. LICENSEE <i>FMC Corporation</i> <i>Chemical Research and Development Center</i> <i>Princeton, New Jersey 08543</i>	2. REGIONAL OFFICE REGION I U S NUCLEAR REGULATORY COMMISSION 475 ALLENDALE ROAD KING OF PRUSSIA PA 19406-1415
--	--

3. DOCKET NUMBER(S)  <i>030-05249</i>	4. LICENSE NUMBER(S)  <i>29-01035-01</i>	5. DATE OF INSPECTION <i>October 28, 1996</i> <i>October 29, 1996</i>
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**LICENSEE:**  
 The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The findings as a result of this inspection are as follows:

- 1. Within the scope of this inspection, no violations were observed.
- 2. The inspector also verified the steps you have taken to correct the violations identified during the last inspection. We have no further questions on those actions at this time.
- 3. During this inspection certain of your activities, as described below or attached, were in violation of NRC requirements. This form is a **NOTICE OF VIOLATION**, which is required to be posted in accordance with 10 CFR 19.11.
  - A. \_\_\_\_\_ was not properly posted to indicate the presence of a \_\_\_\_\_, 10 CFR 20.203(b),(c),(d),(e) or 34.42.
  - B. \_\_\_\_\_ of sealed sources were not performed at the proper frequencies. 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.
  - C. Records of \_\_\_\_\_ were not properly maintained. 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.
  - D. Documents were not properly posted or otherwise made available. 10 CFR 19.11.
  - E. Reports or notification of \_\_\_\_\_ were not made in accordance with 10 CFR \_\_\_\_\_ or License Condition Number \_\_\_\_\_.
  - F. \_\_\_\_\_

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified in the items checked above. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201. No further response will be submitted unless required by the NRC.

SIGNATURE -- LICENSEE	DATE	SIGNATURE -- NRC INSPECTOR <i>Richard Gibson, Jr.</i>	DATE <i>10/29/96</i>
-----------------------	------	--	-------------------------

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED: FMC Corporation P.O. Box 8 Princeton, NJ 08543		2. NRC/REGIONAL OFFICE Region I 475 Allendale Road King of Prussia, PA 19406-1415	
REPORT 2002-001			
3. DOCKET NUMBER(S) 03005249	4. LICENSEE NUMBER(S) 29-01035-01	5. DATE(S) OF INSPECTION November 14, 2002	

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.

\_\_\_\_\_ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

- 4. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

(Violations and Corrective Actions)



**UNITED STATES NUCLEAR REGULATORY COMMISSION**

**Judith A. Joustra**

Senior Health Physicist  
Division of Nuclear Materials Safety

475 Allendale Road  
King of Prussia, PA 19406

Telephone: (610) 337-5355  
Fax: (610) 337-5269  
E-mail: jaj@nrc.gov

**STATEMENT OF CORRECTIVE ACTIONS**

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE			
NRC INSPECTOR	Judith A. Joustra	<i>Judith A. Joustra</i>	11/14/02

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

1. LICENSEE/LOCATION INSPECTED: FMC Corporation Chemical Research and Development Center Princeton, New Jersey 08543		2. NRC/REGIONAL OFFICE  U.S. Nuclear Regulatory Commission Region I, 475 Allendale Road King of Prussia, Pennsylvania 19406-1415	
REPORT Nos 03005249/2007-001			
3. DOCKET NUMBER(S) 03005249	4. LICENSE NUMBER(S) 29-01035-01	5. DATE(S) OF INSPECTION 10/31/2007 and 11/2/07	

**LICENSEE:**

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied.
- Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):



Office: (610) 337-5075

**STEVEN R. COURTEMANCHE**  
Health Physicist

in violation of NRC requirements and in accordance with 10 CFR 19.11.

- 4. During this inspection being cited. This form

United States Nuclear  
Regulatory Commission  
Region 1

475 Allendale Road  
King of Prussia, PA 19406

**Licensee's Statement of Corrective Actions for Item 4, above.**

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Steven R. Courtemanche	<i>Steven R. Courtemanche</i>	11/5/07

## **APPENDIX C**

Interoffice

To: Shaaban ElNaggar

Date: 4/2/09

From: Scott Curry

cc:

Subject: Monthly Radiation Wipe Test Results: Bdg. 2/ Metabolism Group

Documentation for month: April 2009 - Lab Decommissioning

<u>LABS / AREAS</u>	<u>Radioactive Materials</u>	
	<u>USED</u>	<u>NOT USED</u>
2-1130	(X)	( )
2-1135	(X)	( )
2-1140	( )	( )
2-1150	( )	( )
2-1162 (hallway cooler)	( )	( )
Greenhouse #5	(X)	( )
Growth Chamber #8	( )	( )
Growth Chamber #15	( )	( )

RESULTS:

- ( ) No hot spots were found. All areas tested were found to have < 220 dpm/100 cm<sup>2</sup>.
- (X) Hot spots were found (see notes below). After decontamination, re-wipes were all found to be < 220 dpm/100 cm<sup>2</sup>.

NOTES:

Spot #103 - Balance Table in 2-1130

Spot #104 - Hood in 2-1130

Spot #203 - Centrifuge in 2-1135

Spot #208 - Glove box area in 2-1135

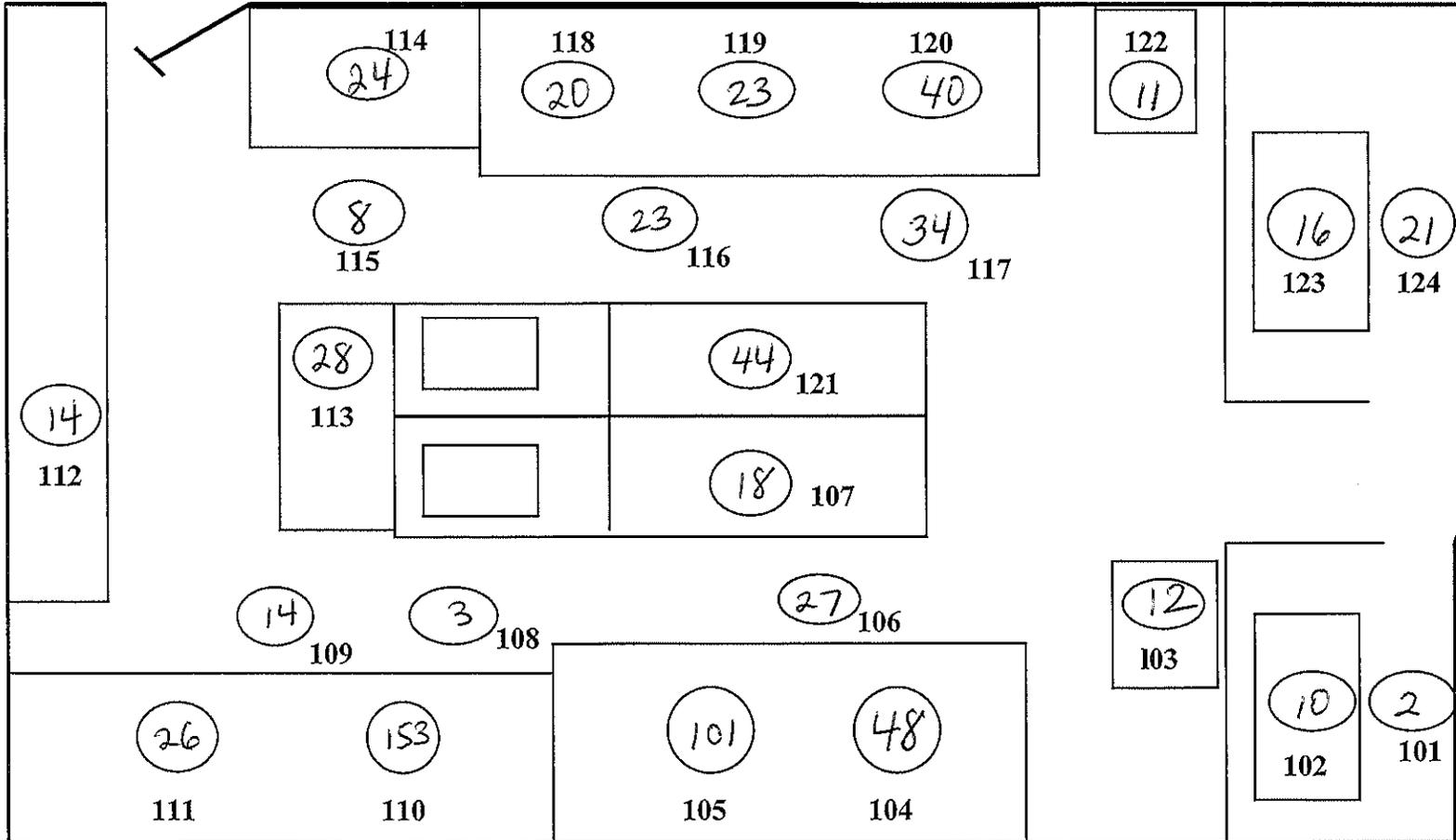
SIGNED: Scott Curry DATE: 4/2/09

LAB 2-1130

Date 4/2/09

WIPE TEST SCHEMATIC Initials SP

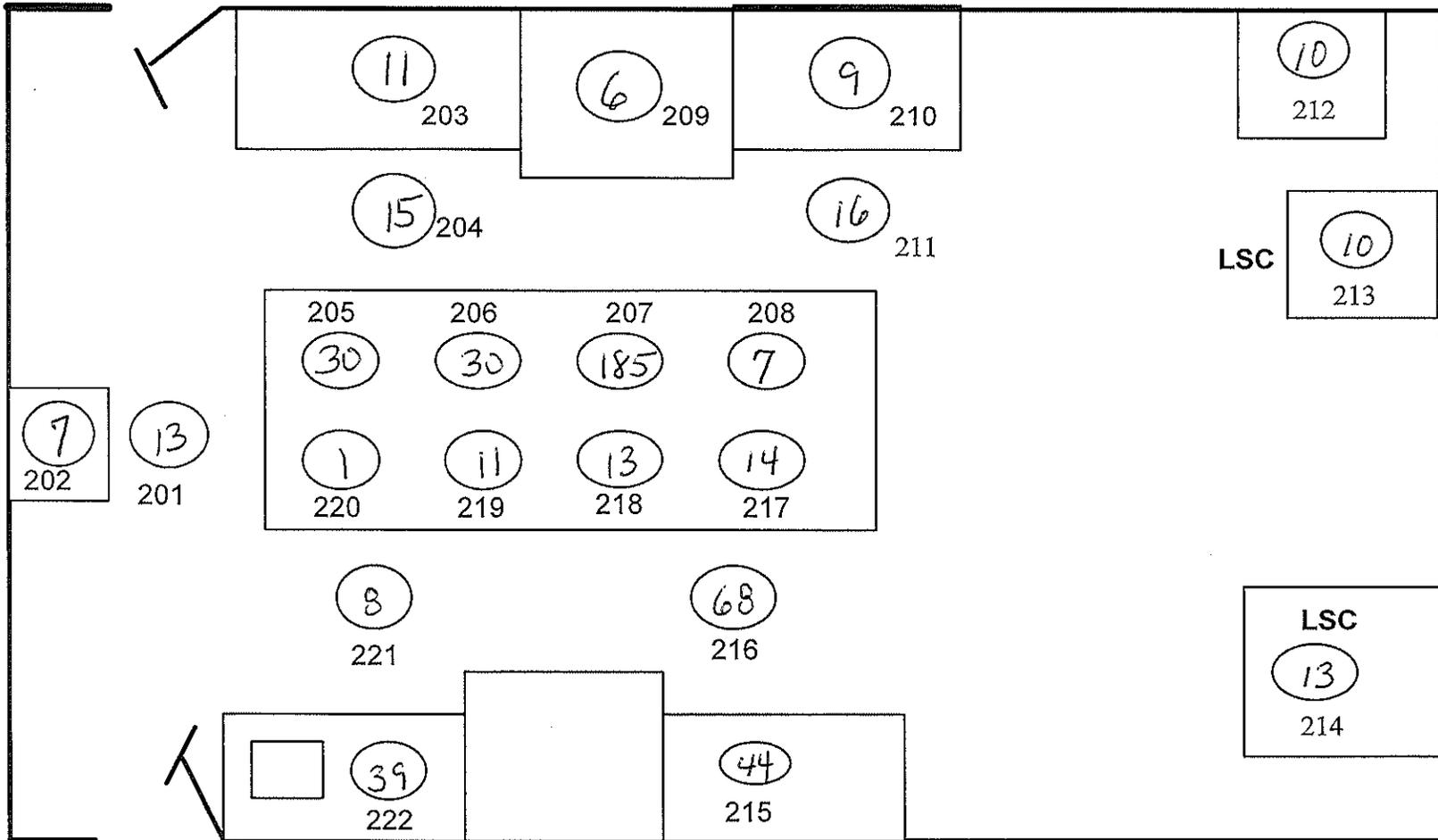
GEIGER MONTH YES \_\_\_ NO \_\_\_



LAB 2-1135

Date 4/2/09

WIPE TEST SCHEMATIC Initials SM GEIGER MONTH  YES  NO

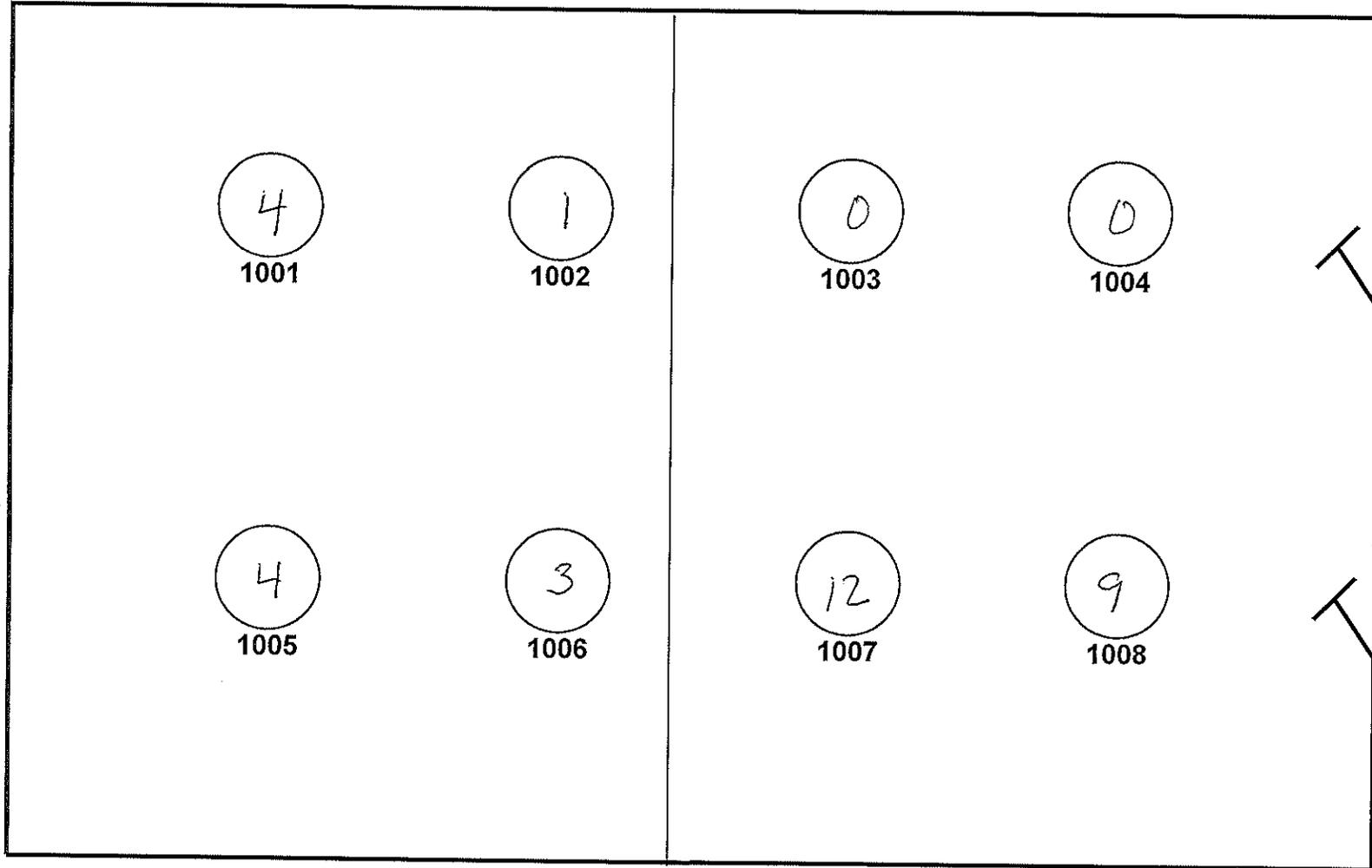


GREENHOUSE #5

Date 4/2/09

WIPE TEST SCHEMATIC Initials SP

GEIGER MONTH YES NO



Time: 2.00  
Data Mode: DPM Nuclide: 14C Quench Set: 14C  
Background Subtract: Manual

	LL	UL	LCR	25%	BKG
Region A:	0.0 - 156	0	2.0	24.00	
Region B:	4.0 - 156	0	0.0	0.00	
Region C:	0.0 - 0.0	0	0.0	0.00	

Quench Indicator: tSIE/AEC  
Ext Std Terminator: Count  
LS2700\_2  
Luminescence Correction On  
Coincidence Time(ns): 18  
Delay Before Burst(ns): Normal  
Protocol Data Filename: PROT.DAT

*Wipe Test Counts - Decommissioning of  
Labs + Greenhouse.*

*April 2009*

*SP 4/2/09*

S#	PID	TIME	DPM1	CPMA	Zeff	SIS	tSIE	FLAG	LUM	
1	9	2.00	2	2	91.75	42.607	405.25		26	—101
2	9	2.00	10	10	91.94	47.827	422.05		17	
3	9	2.00	213	192	89.87	46.043	318.57		8	—103 (hot)
4	9	2.00	905	814	89.89	54.495	319.33		2	—104 (hot)
5	9	2.00	101	92	90.92	47.420	362.01		7	
6	9	2.00	27	25	91.50	49.872	386.15		14	
7	9	2.00	18	17	91.77	50.986	407.36		12	
8	9	2.00	3	3	91.65	36.786	396.85		21	
9	9	2.00	14	13	91.62	50.342	394.65		13	
10	9	2.00	153	141	91.74	58.829	404.76		3	
11	9	2.00	26	24	91.60	56.106	392.98		10	
12	9	2.00	14	13	91.72	46.702	402.79		13	
13	16	2.00	28	26	91.28	45.341	377.33		9	
14	16	2.00	24	22	91.82	48.936	411.33		8	
15	16	2.00	8	8	92.06	48.351	432.02		16	
16	16	2.00	23	21	91.86	48.232	414.85		10	
17	16	2.00	34	31	90.72	43.355	353.86		14	
18	16	2.00	20	19	91.88	47.037	416.58		11	
19	16	2.00	23	22	91.70	46.664	401.63		12	
20	16	2.00	40	37	91.38	52.015	381.25		8	
21	16	2.00	44	41	91.31	52.947	378.42		7	
22	16	2.00	11	10	91.40	53.290	382.17		9	
23	16	2.00	16	15	90.81	41.655	357.47		13	
24	16	2.00	21	19	90.09	41.992	327.38		14	
25	20	2.00	13	12	91.42	48.030	382.91		14	—201
26	20	2.00	7	6	92.12	57.658	437.28		12	
27	20	1.82	6027	5469	90.74	56.764	354.59		0	—203 (hot)
28	20	2.00	15	14	91.51	54.560	386.90		12	
29	20	2.00	30	28	90.61	46.203	349.20		13	
30	20	2.00	30	27	91.18	49.492	372.83		9	
31	20	2.00	185	169	90.96	55.772	363.80		3	
32	20	2.00	425	385	90.57	52.970	347.39		2	—208 (hot)
33	20	2.00	6	6	91.16	44.393	372.31		19	
34	20	2.00	9	8	91.36	37.968	380.34		10	
35	20	2.00	16	15	91.31	48.820	378.91		10	
36	20	2.00	10	10	92.25	53.697	448.30		7	
37	20	2.00	10	9	90.40	43.232	349.61		12	
38	20	2.00	13	12	90.77	47.193	357.44		17	

Time: 2.00

Data Mode: DPK

Nuclide: 14C

Quench Set: 14C

Background Subtract: Manual

	LL	UL	LCR	28%	8KS
Region A:	0.0 - 156	0	2.0	24.00	
Region B:	4.0 - 156	0	0.0	0.00	
Region C:	0.0 - 0.0	0	0.0	0.00	

Quench Indicator: tSIE/AEC  
 Ext Std Terminator: Count  
 LS2700\_2

*Re-wipe of Decontaminated Areas.*

Luminescence Correction On

Coincidence Time(ns): 18

Delay Before Burst(ns): Normal

Protocol Data Filename: PRDT.DAT

SN#	PID	TIME	DPM1	CPMA	Zeff	SIS	tSIE	FLAG	LUM	
1	10	2.00	12	11	91.68	42.309	399.22		22	-103 rewipe
2	10	2.00	48	44	92.30	65.776	453.15		4	-104 "
3	10	2.00	1037	951	91.68	53.348	399.29		1	-203 "
4	10	2.00	7	6	92.30	54.958	453.05		8	-208 "

*Scott Cunningham*  
 4/2/09

02 Apr 09 11:41  
Protocol #: 33

TRI-CARB - 1.07  
EcoLite 10mL

Page #1  
User :

Time: 2.00  
Data Mode: DPM Nuclide: 14C Quench Set: 14C  
Background Subtract: Manual

	LL	UL	LCR	25%	BKG
Region A:	0.0 - 156	0	2.0	24.00	
Region B:	4.0 - 156	0	0.0	0.00	
Region C:	0.0 - 0.0	0	0.0	0.00	

Quench Indicator: tSIE/AEC  
Ext Std Terminator: Count  
LS2700\_2  
Luminescence Correction On  
Coincidence Time(ns): 18  
Delay Before Burst(ns): Normal  
Protocol Data Filename: PROT.DAT

*Wipe Test Counts - Room 2-1135*

S#	PTD	TIME	DPM1	CPMA	%eff	SIS	tSIE	FLAG	LUM
1	10	2.00	11	10	92.22	50.806	445.68		7

*203  
~~103~~ (3) sm  
4-2-09  
re-wipe*

*Scott Curry 4-2-09*

## **APPENDIX D**



**Safety and Ecology Corporation**  
 2800 Solway Road, Knoxville, TN 37931  
**Calibration Certificate**

SEC PROCEDURE # SEC-IS-404

Page 1 of 1

6/12/2009

**Calibration Certificate for 12, Serial # 186763, Bar Code # , Property # SEC-5640**

Date: 06/02/09

Date Last Cal. Expires: 06/15/07

Technician: Carl Hall

Location: 9999,

Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 500-2      SERIAL #: 132896      CAL DUE: 07/26/09  
 MODEL:            SERIAL #:                            CAL DUE:

AS FOUND DATA

Geotropism: SAT

AS FOUND Instrument Condition: SAT

AS LEFT Instrument Condition: SAT

<u>HIGH VOLTAGE</u> (+/- 10% tolerance)	<u>AS FOUND HV</u>	<u>AS LEFT HV</u>	New Batteries?	Battery Check: SAT	Alarm: N/A
500 V:	498	AF	AS FOUND Mechanical Zero: 0	AS LEFT Mechanical Zero: 0	
1000 V:	1001	AF	AS FOUND THRESHOLD: 10.0 mV	AS LEFT THRESHOLD: 35.0 mV	
1500 V:	1504	AF	AS FOUND HV Reading: 1000 V	AS LEFT HV Reading: 900 V	
HV Range 400-1500V:	N/A				

RATE METER

SCALE	RATE CPM	AS FOUND	% ERROR	AS LEFT	% ERROR
x.1 or x1	100	100	0.00%	AF	0.00%
	250	250	0.00%	AF	0.00%
	400	400	0.00%	AF	0.00%
x1 or x10	1000	1000	0.00%	AF	0.00%
	2500	2500	0.00%	AF	0.00%
	4000	4000	0.00%	AF	0.00%
x10 or x100	10K	10	0.00%	AF	0.00%
	25K	25	0.00%	AF	0.00%
	40K	40	0.00%	AF	0.00%
x100 or x1000	100K	100	0.00%	AF	0.00%
	250K	250	0.00%	AF	0.00%
	400K	400	0.00%	AF	0.00%

DIGITAL SCALER

AF 250:	250	% ERR: 0.00%	AL 250:	AF	% ERR: 0.00%
AF 2500:	2496	% ERR: 0.16%	AL 2500:	AF	% ERR: 0.16%
AF 25K:	24.96 K	% ERR: 0.16%	AL 25K:	AF K	% ERR: 0.16%
AF 100K:	100 K	% ERR: 60.00	AL 100K:	AF K	% ERR: 60.00%

✓ Is the As Found Data Within 20% of the Set Point?

REPRODUCIBILITY

x.1 or x1 Scale:	250	250	250
x1 or x10 Scale:	2500	2500	2500
x10 or x100 Scale:	25 K	25 K	25 K
x100 or x1000 Scale:	250 K	250 K	250 K

✓ Are the Individual Counts Within 10% of the Average?

✓ Fast / Slow Response Switch Functions Properly?

Audio Response: SAT      Audio Divide: N/A

Push Buttons: SAT      Lamp: N/A

Scaler/Digital: SAT

**Comments** Married as a set with: Model: 44-9      Serial #: PR194688      Bar Code #:

X1000 digital scale was checked at 100,000 cpm due to the meters digital limitations of 199,999 cpm.

✓ Does Instrument Meet Final Acceptance Criteria?

✓ Calibration Sticker Attached?

Date Instrument is Due For Next Calibration: 06/02/10

Performed by: Carl Hall

Reviewed by: [Signature]      Date: 6.2.2009

Printed Name: Carl Hall

Entered in Computer Inventory By: [Signature]      Date: 6/12/09



**Safety and Ecology Corporation**  
 2800 Solway Road, Knoxville, TN 37931  
**Calibration Certificate**

SEC PROCEDURE # SEC-IS-407

Page 1 of 1  
 6/12/2009

**Calibration Certificate for 44-9, Serial # PR194688, Bar Code # ,Property # SEC-5618**

Date: 06/02/09      Date Last Cal. Expires: 06/02/09      Technician: Carl Hall  
 Location: 9999,      Reason For Calibration: Due for Calibration

EQUIPMENT USED DURING CALIBRATION

MODEL: 12      SERIAL # 186763      CAL DUE: 06/02/10  
 MODEL:      SERIAL #      CAL DUE:

NIST TRACEABLE SOURCES USED

SOURCE	ISOTOPE	ACTIVITY	2 $\pi$	ASSAY DATE
5744-06	Sr-90	21700 dpm	15,200 cpm	12/6/2006
5746-06	Tc-99	34000 dpm	21,200 cpm	12/7/2006
77173-513	C-14	30600 dpm	19,100 cpm	6/3/2008

Geometry = in contact with surface unless otherwise specified.

PREVIOUS Tc-99 EFFICIENCY: 15.43 %      Calibration Voltage: 900 V      Calibration Threshold: 35 mV

AS FOUND Instrument Condition: SAT

AS LEFT Instrument Condition: SAT

**AS FOUND DATA**

1 MINUTE COUNTS (CPM)

AF Background: 31  
 Tc-99 Count: 5174      5116      5182      AVERAGE 5157.3  
 Sr-90 Count: 5046

Efficiencies

Tc-99 EFF: **15.08%**      Sr-90 EFF: **23.11%**

**AS LEFT DATA**

1 MINUTE COUNTS (CPM)

AL Background: AF  
 Tc-99 Count: AF      AF      AF      AVERAGE  
 Sr-90 Count: AF

Efficiencies

Tc-99 EFF:      Sr-90 EFF:     

- ✓ Is the AS FOUND efficiency within 20% of efficiency from last calibration?
- ✓ Reproducibility: Are the individual counts within 10% of the average?
- ✓ Does the probe meet final acceptance criteria?
- ✓ Calibration sticker attached?

**Comments:** Married as a set with:      Model: 12      Serial #: 186763      Bar Code #:

C-14 counts = 3334 cpm. C-14 efficiency = 10.79%.

Date Instrument is Due For Next Calibration: **06/02/10**  
 Performed by: Carl Hall      Reviewed by: JAH      Date: 6.2.2009  
 Printed Name: Carl Hall

Entered in Computer Inventory By: JAH      Date: 6/2/09



# Safety and Ecology Corporation

## Packing List

Property No.	Serial No.	DOE Bar Code	Cal. Due	Isotope	Activity	Comments	Instrument Description
<b>Shipped To Site/Project: 104311 RAS Inc.</b>							
<b>Date Shipped: 6/12/2009</b>							
<b>Model: 12</b>							
SEC-5640	186763		6/2/2010				Ratemeter
<b>Model: 44-9</b>							
SEC-5618	PR194688		6/2/2010				Beta Gamma Probe

Upon receipt of instrumentation, please sign as the accepting technician and fax back to the SEC instrumentation lab at (865) 675-5100. If there are any discrepancies, please call (865) 342-3924.

Transferring Technician Signature *[Signature]* Date 6/12/09  
 Printed Name CARL HALL

Accepting Technician Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Printed Name \_\_\_\_\_

## **ATTACHMENT 1**



EBERLINE ANALYTICAL CORPORATION  
601 SCARBORO ROAD  
OAK RIDGE, TENNESSEE 37830  
PHONE (865) 481-0683  
FAX (865) 483-4621

EBS-OR-28972

July 10, 2009

David Romaine  
Radiological Assessment Services, Inc.  
2121 Jamieson Avenue #1905  
Alexandria, VA 22314

CASE NARRATIVE

SAMPLE RECEIPT

This report contains data for 351 smear samples received 6/25/2009. These samples were analyzed for Total Activity.

ANALYTICAL METHODS

Total Activity was performed using Method WSRC-RP-89-387 Modified.

ANALYTICAL RESULTS

WORK ORDER 09-06115

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1130-01	09-06115-04	2-1130-10	09-06115-13
2-1130-02	09-06115-05	2-1130-11	09-06115-14
2-1130-03	09-06115-06	2-1130-12	09-06115-15
2-1130-04	09-06115-07	2-1130-13	09-06115-16
2-1130-05	09-06115-08	2-1135-01	09-06115-17
2-1130-06	09-06115-09	2-1135-02	09-06115-18
2-1130-07	09-06115-10	2-1135-03	09-06115-19
2-1130-08	09-06115-11	2-1135-04	09-06115-20
2-1130-09	09-06115-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

ANALYTICAL RESULTS CONTINUED

WORK ORDER 09-06116

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1135-05	09-06116-04	2-1140-01	09-06116-13
2-1135-06	09-06116-05	2-1140-02	09-06116-14
2-1135-07	09-06116-06	2-1140-03	09-06116-15
2-1135-08	09-06116-07	2-1140-04	09-06116-16
2-1135-09	09-06116-08	2-1140-05	09-06116-17
2-1135-10	09-06116-09	2-1140-06	09-06116-18
2-1135-11	09-06116-10	2-1140-07	09-06116-19
2-1135-12	09-06116-11	2-1140-08	09-06116-20
2-1135-13	09-06116-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06117

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1140-09	09-06117-04	2-1150-05	09-06117-13
2-1140-10	09-06117-05	2-1150-06	09-06117-14
2-1140-11	09-06117-06	2-1150-07	09-06117-15
2-1140-12	09-06117-07	2-1150-08	09-06117-16
2-1140-13	09-06117-08	2-1150-09	09-06117-17
2-1150-01	09-06117-09	2-1150-10	09-06117-18
2-1150-02	09-06117-10	2-1150-11	09-06117-19
2-1150-03	09-06117-11	2-1150-12	09-06117-20
2-1150-04	09-06117-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

ANALYTICAL RESULTS CONTINUED

WORK ORDER 09-06118

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1150-13	09-06118-04	2-1155-09	09-06118-13
2-1155-01	09-06118-05	2-1155-10	09-06118-14
2-1155-02	09-06118-06	2-1155-11	09-06118-15
2-1155-03	09-06118-07	2-1155-12	09-06118-16
2-1155-04	09-06118-08	2-1155-13	09-06118-17
2-1155-05	09-06118-09	2-1160-01	09-06118-18
2-1155-06	09-06118-10	2-1160-02	09-06118-19
2-1155-07	09-06118-11	2-1160-03	09-06118-20
2-1155-08	09-06118-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference and normalized difference. Due to the sample matrix, a reanalysis is not possible. In this case, the laboratory recommends using the highest value for all intents and proposes. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06119

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1160-04	09-06119-04	2-1160-09	09-06119-09
2-1160-05	09-06119-05	2-1160-10	09-06119-10
2-1160-06	09-06119-06	2-1160-11	09-06119-11
2-1160-07	09-06119-07	2-1160-12	09-06119-12
2-1160-08	09-06119-08	2-1160-13	09-06119-13

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

ANALYTICAL RESULTS CONTINUED

WORK ORDER 09-06120

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1162-01	09-06120-04	2-1162-10	09-06120-13
2-1162-02	09-06120-05	2-1162-11	09-06120-14
2-1162-03	09-06120-06	2-1162-12	09-06120-15
2-1162-04	09-06120-07	2-1162-13	09-06120-16
2-1162-05	09-06120-08	2-1165-01	09-06120-17
2-1162-06	09-06120-09	2-1165-02	09-06120-18
2-1162-07	09-06120-10	2-1165-03	09-06120-19
2-1162-08	09-06120-11	2-1165-04	09-06120-20
2-1162-09	09-06120-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06121

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1165-05	09-06121-04	2-1175-01	09-06121-13
2-1165-06	09-06121-05	2-1175-02	09-06121-14
2-1165-07	09-06121-06	2-1175-03	09-06121-15
2-1165-08	09-06121-07	2-1175-04	09-06121-16
2-1165-09	09-06121-08	2-1175-05	09-06121-17
2-1165-10	09-06121-09	2-1175-06	09-06121-18
2-1165-11	09-06121-10	2-1175-07	09-06121-19
2-1165-12	09-06121-11	2-1175-08	09-06121-20
2-1165-13	09-06121-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

ANALYTICAL RESULTS CONTINUED

WORK ORDER 09-06122

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1175-09	09-06122-04	2-1210-05	09-06122-13
2-1175-10	09-06122-05	2-1210-06	09-06122-14
2-1175-11	09-06122-06	2-1210-07	09-06122-15
2-1175-12	09-06122-07	2-1210-08	09-06122-16
2-1175-13	09-06122-08	2-1210-09	09-06122-17
2-1210-01	09-06122-09	2-1210-10	09-06122-18
2-1210-02	09-06122-10	2-1210-11	09-06122-19
2-1210-03	09-06122-11	2-1210-12	09-06122-20
2-1210-04	09-06122-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06123

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1210-13	09-06123-04	2-1205-09	09-06123-13
2-1205-01	09-06123-05	2-1205-10	09-06123-14
2-1205-02	09-06123-06	2-1205-11	09-06123-15
2-1205-03	09-06123-07	2-1205-12	09-06123-16
2-1205-04	09-06123-08	2-1205-13	09-06123-17
2-1205-05	09-06123-09	2-1230-01	09-06123-18
2-1205-06	09-06123-10	2-1230-02	09-06123-19
2-1205-07	09-06123-11	2-1230-03	09-06123-20
2-1205-08	09-06123-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06124

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1230-04	09-06124-04	2-1230-13	09-06124-13
2-1230-05	09-06124-05	2-1245-01	09-06124-14
2-1230-06	09-06124-06	2-1245-02	09-06124-15
2-1230-07	09-06124-07	2-1245-03	09-06124-16
2-1230-08	09-06124-08	2-1245-04	09-06124-17
2-1230-09	09-06124-09	2-1245-05	09-06124-18
2-1230-10	09-06124-10	2-1245-06	09-06124-19
2-1230-11	09-06124-11	2-1245-07	09-06124-20
2-1230-12	09-06124-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06125

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1245-08	09-06125-04	2-1250-04	09-06125-13
2-1245-09	09-06125-05	2-1250-05	09-06125-14
2-1245-10	09-06125-06	2-1250-06	09-06125-15
2-1245-11	09-06125-07	2-1250-07	09-06125-16
2-1245-12	09-06125-08	2-1250-08	09-06125-17
2-1245-13	09-06125-09	2-1250-09	09-06125-18
2-1250-01	09-06125-10	2-1250-10	09-06125-19
2-1250-02	09-06125-11	2-1250-11	09-06125-20
2-1250-03	09-06125-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06126

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1250-12	09-06126-04	2-1255-08	09-06126-13
2-1250-13	09-06126-05	2-1255-09	09-06126-14
2-1255-01	09-06126-06	2-1255-10	09-06126-15
2-1255-02	09-06126-07	2-1255-11	09-06126-16
2-1255-03	09-06126-08	2-1255-12	09-06126-17
2-1255-04	09-06126-09	2-1255-13	09-06126-18
2-1255-05	09-06126-10	2-1474-01	09-06126-19
2-1255-06	09-06126-11	2-1474-02	09-06126-20
2-1255-07	09-06126-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06127

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1474-03	09-06127-04	2-1474-09	09-06127-10
2-1474-04	09-06127-05	2-1474-10	09-06127-11
2-1474-05	09-06127-06	2-1474-11	09-06127-12
2-1474-06	09-06127-07	2-1474-12	09-06127-13
2-1474-07	09-06127-08	2-1474-13	09-06127-14
2-1474-08	09-06127-09		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06128

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-2135-01	09-06128-04	2-2135-10	09-06128-13
2-2135-02	09-06128-05	2-2135-11	09-06128-14
2-2135-03	09-06128-06	2-2135-12	09-06128-15
2-2135-04	09-06128-07	2-2135-13	09-06128-16
2-2135-05	09-06128-08	2-2240-01	09-06128-17
2-2135-06	09-06128-09	2-2240-02	09-06128-18
2-2135-07	09-06128-10	2-2240-03	09-06128-19
2-2135-08	09-06128-11	2-2240-04	09-06128-20
2-2135-09	09-06128-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06129

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-2240-05	09-06129-04	2-2260-01	09-06129-13
2-2240-06	09-06129-05	2-2260-02	09-06129-14
2-2240-07	09-06129-06	2-2260-03	09-06129-15
2-2240-08	09-06129-07	2-2260-04	09-06129-16
2-2240-09	09-06129-08	2-2260-05	09-06129-17
2-2240-10	09-06129-09	2-2260-06	09-06129-18
2-2240-11	09-06129-10	2-2260-07	09-06129-19
2-2240-12	09-06129-11	2-2260-08	09-06129-20
2-2240-13	09-06129-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06130

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-2260-09	09-06130-04	2-2265-05	09-06130-13
2-2260-10	09-06130-05	2-2265-06	09-06130-14
2-2260-11	09-06130-06	2-2265-07	09-06130-15
2-2260-12	09-06130-07	2-2265-08	09-06130-16
2-2260-13	09-06130-08	2-2265-09	09-06130-17
2-2265-01	09-06130-09	2-2265-10	09-06130-18
2-2265-02	09-06130-10	2-2265-11	09-06130-19
2-2265-03	09-06130-11	2-2265-12	09-06130-20
2-2265-04	09-06130-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06134

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-2265-13	09-06134-04	GC-8-9	09-06134-13
GC-8-1	09-06134-05	GC-8-10	09-06134-14
GC-8-2	09-06134-06	GC-8-11	09-06134-15
GC-8-3	09-06134-07	GC-8-12	09-06134-16
GC-8-4	09-06134-08	GC-8-13	09-06134-17
GC-8-5	09-06134-09	GC-10-1	09-06134-18
GC-8-6	09-06134-10	GC-10-2	09-06134-19
GC-8-7	09-06134-11	GC-10-3	09-06134-20
GC-8-8	09-06134-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06135

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
GC-10-4	09-06135-04	GC-10-13	09-06135-13
GC-10-5	09-06135-05	GC-15-01	09-06135-14
GC-10-6	09-06135-06	GC-15-02	09-06135-15
GC-10-7	09-06135-07	GC-15-03	09-06135-16
GC-10-8	09-06135-08	GC-15-04	09-06135-17
GC-10-9	09-06135-09	GC-15-05	09-06135-18
GC-10-10	09-06135-10	GC-15-06	09-06135-19
GC-10-11	09-06135-11	GC-15-07	09-06135-20
GC-10-12	09-06135-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06136

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
GC-15-08	09-06136-04	GH-5-4	09-06136-13
GC-15-09	09-06136-05	GH-5-5	09-06136-14
GC-15-10	09-06136-06	GH-5-6	09-06136-15
GC-15-11	09-06136-07	GH-5-7	09-06136-16
GC-15-12	09-06136-08	GH-5-8	09-06136-17
GC-15-13	09-06136-09	GH-5-9	09-06136-18
GH-5-1	09-06136-10	GH-5-10	09-06136-19
GH-5-2	09-06136-11	GH-5-11	09-06136-20
GH-5-3	09-06136-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent to slightly positive results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06138

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
GH-5-12	09-06138-04	GC-19-08	09-06138-13
GH-5-13	09-06138-05	GC-19-09	09-06138-14
GC-19-01	09-06138-06	GC-19-10	09-06138-15
GC-19-02	09-06138-07	GC-19-11	09-06138-16
GC-19-03	09-06138-08	GC-19-12	09-06138-17
GC-19-04	09-06138-09	GC-19-13	09-06138-18
GC-19-05	09-06138-10	WW-1	09-06138-19
GC-19-06	09-06138-11	WW-2	09-06138-20
GC-19-07	09-06138-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06139

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
WW-3	09-06139-04	WW-12	09-06139-13
WW-4	09-06139-05	WW-13	09-06139-14
WW-5	09-06139-06	2-1465-1	09-06139-15
WW-6	09-06139-07	2-1465-2	09-06139-16
WW-7	09-06139-08	2-1465-3	09-06139-17
WW-8	09-06139-09	2-1465-4	09-06139-18
WW-9	09-06139-10	2-1465-5	09-06139-19
WW-10	09-06139-11	2-1465-6	09-06139-20
WW-11	09-06139-12		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

WORK ORDER 09-06140

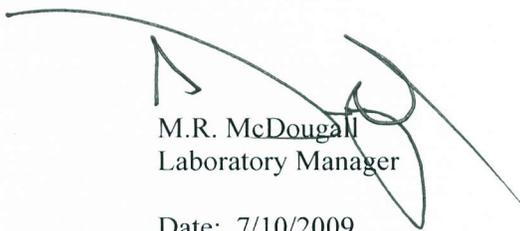
<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
2-1465-7	09-06140-04	2-1465-11	09-06140-08
2-1465-8	09-06140-05	2-1465-12	09-06140-09
2-1465-9	09-06140-06	2-1465-13	09-06140-10
2-1465-10	09-06140-07		

TOTAL ACTIVITY

Samples demonstrated non-detect equivalent results for Total Activity. Results for the Total Activity method blank demonstrated non-detect equivalent activity. Results for the Total Activity replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Total Activity laboratory control sample demonstrated an acceptable percent recovery.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.



M.R. McDougall  
Laboratory Manager

Date: 7/10/2009

<b>Eberline Analytical</b> <b>Final Report of Analysis</b>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06115				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06115-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	2.25E+03	4.94E+01			dpm/s
09-06115-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	2.37E+03	4.58E+01	5.28E+01	1.46E+01	dpm/s
09-06115-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	-4.42E+00	7.98E+00	7.98E+00	1.44E+01	dpm/s
09-06115-03	DUP	2-1130-01	06/15/09 09:22	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	3.44E+01	1.77E+01	1.77E+01	2.81E+01	dpm/s
09-06115-04	DO	2-1130-01	06/15/09 09:22	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	8.79E+00	1.68E+01	1.68E+01	2.87E+01	dpm/s
09-06115-05	TRG	2-1130-02	06/15/09 09:23	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.29E+01	8.64E+00	8.64E+00	1.41E+01	dpm/s
09-06115-06	TRG	2-1130-03	06/15/09 09:24	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.36E+02	1.33E+01	1.34E+01	1.41E+01	dpm/s
09-06115-07	TRG	2-1130-04	06/15/09 09:26	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	2.28E+01	9.19E+00	9.20E+00	1.42E+01	dpm/s
09-06115-08	TRG	2-1130-05	06/15/09 09:29	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	3.01E+01	9.43E+00	9.43E+00	1.41E+01	dpm/s
09-06115-09	TRG	2-1130-06	06/15/09 09:30	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.30E+01	8.69E+00	8.69E+00	1.41E+01	dpm/s
09-06115-10	TRG	2-1130-07	06/15/09 09:31	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.53E+01	8.89E+00	8.89E+00	1.43E+01	dpm/s
09-06115-11	TRG	2-1130-08	06/15/09 09:33	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	6.71E+00	8.66E+00	8.66E+00	1.46E+01	dpm/s
09-06115-12	TRG	2-1130-09	06/15/09 09:34	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	7.53E+00	8.38E+00	8.38E+00	1.41E+01	dpm/s
09-06115-13	TRG	2-1130-10	06/15/09 09:35	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.40E+01	8.69E+00	8.69E+00	1.41E+01	dpm/s
09-06115-14	TRG	2-1130-11	06/15/09 09:36	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	6.46E+00	8.33E+00	8.34E+00	1.41E+01	dpm/s
09-06115-15	TRG	2-1130-12	06/15/09 09:37	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	3.76E+01	9.75E+00	9.76E+00	1.41E+01	dpm/s
09-06115-16	TRG	2-1130-13	06/15/09 09:40	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.51E+01	8.76E+00	8.76E+00	1.41E+01	dpm/s
09-06115-17	TRG	2-1135-01	06/15/09 10:01	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	2.91E+01	9.70E+00	9.71E+00	1.46E+01	dpm/s
09-06115-18	TRG	2-1135-02	06/15/09 10:02	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.16E+00	8.16E+00	1.42E+01	dpm/s
09-06115-19	TRG	2-1135-03	06/15/09 10:03	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	9.73E+00	8.53E+00	8.53E+00	1.41E+01	dpm/s
09-06115-20	TRG	2-1135-04	06/15/09 10:04	6/25/2009	6/25/2009	09-06115	Total Activity	WSRC-RP-89-387 Mod.	5.81E+01	1.07E+01	1.08E+01	1.43E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06116				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06116-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	2.40E+03	5.27E+01			dpm/s
09-06116-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	2.46E+03	4.63E+01	5.37E+01	1.40E+01	dpm/s
09-06116-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	4.45E+00	8.27E+00	8.27E+00	1.41E+01	dpm/s
09-06116-03	DUP	2-1135-05	06/15/09 10:04	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	4.28E+00	1.57E+01	1.57E+01	2.72E+01	dpm/s
09-06116-04	DO	2-1135-05	06/15/09 10:04	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	1.51E+01	1.64E+01	1.64E+01	2.74E+01	dpm/s
09-06116-05	TRG	2-1135-06	06/15/09 10:05	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	1.07E+00	7.80E+00	7.80E+00	1.36E+01	dpm/s
09-06116-06	TRG	2-1135-07	06/15/09 10:05	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.68E+00	7.68E+00	1.35E+01	dpm/s
09-06116-07	TRG	2-1135-08	06/15/09 10:06	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	1.82E+01	8.66E+00	8.66E+00	1.36E+01	dpm/s
09-06116-08	TRG	2-1135-09	06/15/09 10:07	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	7.79E+00	8.45E+00	8.45E+00	1.42E+01	dpm/s
09-06116-09	TRG	2-1135-10	06/15/09 10:09	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	7.57E+00	8.21E+00	8.21E+00	1.38E+01	dpm/s
09-06116-10	TRG	2-1135-11	06/15/09 10:10	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	5.37E+00	8.05E+00	8.05E+00	1.37E+01	dpm/s
09-06116-11	TRG	2-1135-12	06/15/09 10:11	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	7.99E+00	8.67E+00	8.67E+00	1.45E+01	dpm/s
09-06116-12	TRG	2-1135-13	06/15/09 10:11	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	3.07E+01	9.12E+00	9.13E+00	1.35E+01	dpm/s
09-06116-13	TRG	2-1140-01	06/15/09 10:23	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	9.16E+00	8.75E+00	8.75E+00	1.46E+01	dpm/s
09-06116-14	TRG	2-1140-02	06/15/09 10:24	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	2.16E+00	7.93E+00	7.93E+00	1.38E+01	dpm/s
09-06116-15	TRG	2-1140-03	06/15/09 10:24	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	2.23E+00	8.19E+00	8.19E+00	1.42E+01	dpm/s
09-06116-16	TRG	2-1140-04	06/15/09 10:26	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	5.34E+00	8.00E+00	8.00E+00	1.36E+01	dpm/s
09-06116-17	TRG	2-1140-05	06/15/09 10:27	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	9.54E+00	8.15E+00	8.15E+00	1.35E+01	dpm/s
09-06116-18	TRG	2-1140-06	06/15/09 10:21	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	1.18E+01	8.37E+00	8.37E+00	1.37E+01	dpm/s
09-06116-19	TRG	2-1140-07	06/15/09 10:29	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.73E+00	7.73E+00	1.36E+01	dpm/s
09-06116-20	TRG	2-1140-08	06/15/09 10:29	6/25/2009	6/25/2009	09-06116	Total Activity	WSRC-RP-89-387 Mod.	3.18E+00	7.84E+00	7.84E+00	1.35E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06117					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
Alexandria, VA 22314					Sample Matrix:	SM								
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06117-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.16E+03	4.76E+01			dpm/s	
09-06117-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.20E+03	4.43E+01	5.06E+01	1.59E+01	dpm/s	
09-06117-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	-5.53E+00	8.72E+00	8.72E+00	1.57E+01	dpm/s	
09-06117-03	DUP	2-1140-09	06/15/09 10:31	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.19E+00	1.79E+01	1.79E+01	3.11E+01	dpm/s	
09-06117-04	DO	2-1140-09	06/15/09 10:31	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.24E+00	1.83E+01	1.83E+01	3.19E+01	dpm/s	
09-06117-05	TRG	2-1140-10	06/15/09 10:32	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	-5.50E+00	8.68E+00	8.68E+00	1.57E+01	dpm/s	
09-06117-06	TRG	2-1140-11	06/15/09 10:32	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	-2.16E+00	8.69E+00	8.69E+00	1.54E+01	dpm/s	
09-06117-07	TRG	2-1140-12	06/15/09 10:33	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	1.78E+01	9.85E+00	9.86E+00	1.58E+01	dpm/s	
09-06117-08	TRG	2-1140-13	06/15/09 10:33	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	-3.40E+00	9.04E+00	9.04E+00	1.61E+01	dpm/s	
09-06117-09	TRG	2-1150-01	06/15/09 10:35	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	3.63E+01	1.05E+01	1.05E+01	1.57E+01	dpm/s	
09-06117-10	TRG	2-1150-02	06/15/09 10:35	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	1.94E+01	9.61E+00	9.61E+00	1.53E+01	dpm/s	
09-06117-11	TRG	2-1150-03	06/15/09 10:36	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	1.75E+02	1.48E+01	1.49E+01	1.51E+01	dpm/s	
09-06117-12	TRG	2-1150-04	06/15/09 10:37	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	7.51E+01	1.18E+01	1.18E+01	1.53E+01	dpm/s	
09-06117-13	TRG	2-1150-05	06/15/09 10:38	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	8.52E+01	1.20E+01	1.21E+01	1.52E+01	dpm/s	
09-06117-14	TRG	2-1150-06	06/15/09 10:38	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	3.64E+00	1.00E+01	1.00E+01	1.73E+01	dpm/s	
09-06117-15	TRG	2-1150-07	06/15/09 10:39	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.03E+01	9.62E+00	9.62E+00	1.52E+01	dpm/s	
09-06117-16	TRG	2-1150-08	06/15/09 10:40	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	5.62E+01	1.10E+01	1.10E+01	1.51E+01	dpm/s	
09-06117-17	TRG	2-1150-09	06/15/09 10:40	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.08E+01	1.03E+01	1.03E+01	1.65E+01	dpm/s	
09-06117-18	TRG	2-1150-10	06/15/09 10:41	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	2.01E+01	9.49E+00	9.49E+00	1.50E+01	dpm/s	
09-06117-19	TRG	2-1150-11	06/15/09 10:42	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	9.16E+01	1.24E+01	1.24E+01	1.53E+01	dpm/s	
09-06117-20	TRG	2-1150-12	06/15/09 10:42	6/25/2009	6/25/2009	09-06117	Total Activity	WSRC-RP-89-387 Mod.	5.02E+01	1.08E+01	1.08E+01	1.52E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06118					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06118-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.26E+03	4.98E+01			dpm/s	
09-06118-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.35E+03	4.54E+01	5.24E+01	1.46E+01	dpm/s	
09-06118-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	-3.34E+00	8.22E+00	8.22E+00	1.47E+01	dpm/s	
09-06118-03	DUP	2-1150-13	06/15/09 10:43	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	9.04E+01	2.03E+01	2.03E+01	2.85E+01	dpm/s	
09-06118-04	DO	2-1150-13	06/15/09 10:43	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.85E+01	1.79E+01	1.79E+01	2.91E+01	dpm/s	
09-06118-05	TRG	2-1155-01	06/15/09 10:51	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.14E+00	8.14E+00	1.43E+01	dpm/s	
09-06118-06	TRG	2-1155-02	06/15/09 10:51	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.23E+00	8.23E+00	1.44E+01	dpm/s	
09-06118-07	TRG	2-1155-03	06/15/09 10:52	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.14E+00	8.14E+00	1.43E+01	dpm/s	
09-06118-08	TRG	2-1155-04	06/15/09 10:53	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.28E+01	9.29E+00	9.29E+00	1.44E+01	dpm/s	
09-06118-09	TRG	2-1155-05	06/15/09 10:54	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	4.32E+00	8.36E+00	8.36E+00	1.43E+01	dpm/s	
09-06118-10	TRG	2-1155-06	06/15/09 10:55	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.17E+00	8.17E+00	1.43E+01	dpm/s	
09-06118-11	TRG	2-1155-07	06/15/09 10:55	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	7.99E+00	7.99E+00	1.42E+01	dpm/s	
09-06118-12	TRG	2-1155-08	06/15/09 10:56	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	-2.31E+00	8.58E+00	8.58E+00	1.53E+01	dpm/s	
09-06118-13	TRG	2-1155-09	06/15/09 10:56	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.15E+00	8.22E+00	8.22E+00	1.43E+01	dpm/s	
09-06118-14	TRG	2-1155-10	06/15/09 10:57	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.15E+00	8.21E+00	8.21E+00	1.42E+01	dpm/s	
09-06118-15	TRG	2-1155-11	06/15/09 10:59	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	2.15E+00	8.21E+00	8.21E+00	1.42E+01	dpm/s	
09-06118-16	TRG	2-1155-12	06/15/09 11:01	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	4.44E+00	8.59E+00	8.59E+00	1.47E+01	dpm/s	
09-06118-17	TRG	2-1155-13	06/15/09 11:01	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	1.29E+01	8.77E+00	8.77E+00	1.43E+01	dpm/s	
09-06118-18	TRG	2-1160-01	06/15/09 11:05	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	4.31E+00	8.34E+00	8.34E+00	1.43E+01	dpm/s	
09-06118-19	TRG	2-1160-02	06/15/09 11:06	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.13E+00	8.13E+00	1.43E+01	dpm/s	
09-06118-20	TRG	2-1160-03	06/15/09 11:06	6/25/2009	6/25/2009	09-06118	Total Activity	WSRC-RP-89-387 Mod.	5.41E+00	8.44E+00	8.44E+00	1.43E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<b>Eberline Analytical</b> <b>Final Report of Analysis</b>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06119				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06119-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	2.43E+03	5.35E+01			dpm/s
09-06119-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	2.48E+03	4.64E+01	5.39E+01	1.40E+01	dpm/s
09-06119-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	7.84E+00	8.51E+00	8.51E+00	1.43E+01	dpm/s
09-06119-03	DUP	2-1160-04	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	4.80E+00	1.76E+01	1.76E+01	3.06E+01	dpm/s
09-06119-04	DO	2-1160-04	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	1.10E+01	1.65E+01	1.65E+01	2.80E+01	dpm/s
09-06119-05	TRG	2-1160-05	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	5.28E+00	7.91E+00	7.91E+00	1.34E+01	dpm/s
09-06119-06	TRG	2-1160-06	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.68E+00	7.68E+00	1.35E+01	dpm/s
09-06119-07	TRG	2-1160-07	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	2.14E+00	7.84E+00	7.84E+00	1.36E+01	dpm/s
09-06119-08	TRG	2-1160-08	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.07E+00	8.07E+00	1.42E+01	dpm/s
09-06119-09	TRG	2-1160-09	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	7.66E+00	7.66E+00	1.37E+01	dpm/s
09-06119-10	TRG	2-1160-10	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	2.21E+00	8.12E+00	8.12E+00	1.41E+01	dpm/s
09-06119-11	TRG	2-1160-11	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	-1.07E+00	7.67E+00	7.67E+00	1.36E+01	dpm/s
09-06119-12	TRG	2-1160-12	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	3.20E+00	7.89E+00	7.89E+00	1.36E+01	dpm/s
09-06119-13	TRG	2-1160-13	06/15/09 00:00	6/25/2009	6/25/2009	09-06119	Total Activity	WSRC-RP-89-387 Mod.	8.51E+00	8.13E+00	8.13E+00	1.35E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06120				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06120-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	2.16E+03	4.76E+01			dpm/s
09-06120-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	2.20E+03	4.39E+01	5.02E+01	1.51E+01	dpm/s
09-06120-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-3.30E+00	8.47E+00	8.47E+00	1.51E+01	dpm/s
09-06120-03	DUP	2-1162-01	06/16/09 08:01	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-2.16E+00	1.68E+01	1.68E+01	2.97E+01	dpm/s
09-06120-04	DO	2-1162-01	06/16/09 08:01	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-4.32E+00	1.67E+01	1.67E+01	2.97E+01	dpm/s
09-06120-05	TRG	2-1162-02	06/16/09 08:02	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.51E+00	8.51E+00	1.48E+01	dpm/s
09-06120-06	TRG	2-1162-03	06/16/09 08:02	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.60E+00	8.60E+00	1.51E+01	dpm/s
09-06120-07	TRG	2-1162-04	06/16/09 08:03	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	2.26E+01	9.48E+00	9.48E+00	1.48E+01	dpm/s
09-06120-08	TRG	2-1162-05	06/16/09 08:04	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-2.17E+00	8.42E+00	8.42E+00	1.50E+01	dpm/s
09-06120-09	TRG	2-1162-06	06/16/09 08:05	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-2.17E+00	8.39E+00	8.39E+00	1.49E+01	dpm/s
09-06120-10	TRG	2-1162-07	06/16/09 08:05	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-2.16E+00	8.37E+00	8.37E+00	1.49E+01	dpm/s
09-06120-11	TRG	2-1162-08	06/16/09 08:06	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.40E+00	8.40E+00	1.48E+01	dpm/s
09-06120-12	TRG	2-1162-09	06/16/09 08:06	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-4.35E+00	8.30E+00	8.30E+00	1.49E+01	dpm/s
09-06120-13	TRG	2-1162-10	06/16/09 08:07	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	2.17E+00	8.63E+00	8.63E+00	1.49E+01	dpm/s
09-06120-14	TRG	2-1162-11	06/16/09 08:07	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.49E+00	8.49E+00	1.48E+01	dpm/s
09-06120-15	TRG	2-1162-12	06/16/09 08:07	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.42E+00	8.42E+00	1.49E+01	dpm/s
09-06120-16	TRG	2-1162-13	06/16/09 08:08	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-6.46E+00	8.11E+00	8.11E+00	1.48E+01	dpm/s
09-06120-17	TRG	2-1165-01	06/16/09 08:11	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-1.07E+00	8.37E+00	8.37E+00	1.48E+01	dpm/s
09-06120-18	TRG	2-1165-02	06/16/09 08:12	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-8.75E+00	8.13E+00	8.14E+00	1.50E+01	dpm/s
09-06120-19	TRG	2-1165-03	06/16/09 08:12	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	-3.26E+00	8.35E+00	8.35E+00	1.49E+01	dpm/s
09-06120-20	TRG	2-1165-04	06/16/09 08:13	6/25/2009	6/26/2009	09-06120	Total Activity	WSRC-RP-89-387 Mod.	7.83E+00	9.14E+00	9.15E+00	1.54E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06121				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06121-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	2.23E+03	4.90E+01			dpm/s
09-06121-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	2.28E+03	4.47E+01	5.14E+01	1.44E+01	dpm/s
09-06121-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	2.21E+00	8.34E+00	8.34E+00	1.45E+01	dpm/s
09-06121-03	DUP	2-1165-05	06/16/09 08:13	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	4.42E+00	1.67E+01	1.67E+01	2.89E+01	dpm/s
09-06121-04	DO	2-1165-05	06/16/09 08:13	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	2.20E+00	1.65E+01	1.65E+01	2.88E+01	dpm/s
09-06121-05	TRG	2-1165-06	06/16/09 08:14	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.01E+00	8.01E+00	1.42E+01	dpm/s
09-06121-06	TRG	2-1165-07	06/16/09 08:14	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.07E+00	8.02E+00	8.02E+00	1.40E+01	dpm/s
09-06121-07	TRG	2-1165-08	06/16/09 08:15	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	4.29E+00	8.19E+00	8.19E+00	1.40E+01	dpm/s
09-06121-08	TRG	2-1165-09	06/16/09 08:15	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.11E+00	8.31E+00	8.31E+00	1.45E+01	dpm/s
09-06121-09	TRG	2-1165-10	06/16/09 08:16	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	4.32E+00	8.26E+00	8.26E+00	1.41E+01	dpm/s
09-06121-10	TRG	2-1165-11	06/16/09 08:16	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	5.51E+00	8.47E+00	8.47E+00	1.44E+01	dpm/s
09-06121-11	TRG	2-1165-12	06/16/09 08:17	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	-1.10E+00	8.12E+00	8.12E+00	1.44E+01	dpm/s
09-06121-12	TRG	2-1165-13	06/16/09 08:17	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.14E+00	8.14E+00	1.42E+01	dpm/s
09-06121-13	TRG	2-1175-01	06/16/09 09:11	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.07E+00	8.00E+00	8.00E+00	1.40E+01	dpm/s
09-06121-14	TRG	2-1175-02	06/16/09 09:12	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.14E+00	8.54E+00	8.54E+00	1.49E+01	dpm/s
09-06121-15	TRG	2-1175-03	06/16/09 09:12	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	1.16E+00	8.69E+00	8.69E+00	1.52E+01	dpm/s
09-06121-16	TRG	2-1175-04	06/16/09 09:13	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	-1.11E+00	8.17E+00	8.17E+00	1.45E+01	dpm/s
09-06121-17	TRG	2-1175-05	06/16/09 09:14	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	-2.18E+00	7.98E+00	7.98E+00	1.42E+01	dpm/s
09-06121-18	TRG	2-1175-06	06/16/09 09:15	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	-2.12E+00	7.78E+00	7.78E+00	1.39E+01	dpm/s
09-06121-19	TRG	2-1175-07	06/16/09 09:15	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.08E+00	8.08E+00	1.42E+01	dpm/s
09-06121-20	TRG	2-1175-08	06/16/09 09:15	6/25/2009	6/25/2009	09-06121	Total Activity	WSRC-RP-89-387 Mod.	7.74E+00	8.61E+00	8.61E+00	1.45E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06122				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06122-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.17E+03	4.77E+01			dpm/s
09-06122-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.21E+03	4.43E+01	5.06E+01	1.51E+01	dpm/s
09-06122-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	1.11E+00	8.68E+00	8.68E+00	1.51E+01	dpm/s
09-06122-03	DUP	2-1175-09	06/16/09 09:16	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.16E+00	1.69E+01	1.69E+01	2.94E+01	dpm/s
09-06122-04	DO	2-1175-09	06/16/09 09:16	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-4.26E+00	1.63E+01	1.63E+01	2.90E+01	dpm/s
09-06122-05	TRG	2-1175-10	06/16/09 09:16	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	4.54E+01	1.02E+01	1.02E+01	1.43E+01	dpm/s
09-06122-06	TRG	2-1175-11	06/16/09 09:17	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.38E+00	8.38E+00	1.47E+01	dpm/s
09-06122-07	TRG	2-1175-12	06/16/09 09:18	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	1.12E+00	8.72E+00	8.72E+00	1.52E+01	dpm/s
09-06122-08	TRG	2-1175-13	06/16/09 09:21	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-1.07E+00	8.19E+00	8.19E+00	1.45E+01	dpm/s
09-06122-09	TRG	2-1210-01	06/16/09 09:41	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-1.09E+00	8.37E+00	8.37E+00	1.48E+01	dpm/s
09-06122-10	TRG	2-1210-02	06/16/09 09:42	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-2.34E+00	8.94E+00	8.94E+00	1.59E+01	dpm/s
09-06122-11	TRG	2-1210-03	06/16/09 09:43	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.50E+00	8.50E+00	1.48E+01	dpm/s
09-06122-12	TRG	2-1210-04	06/16/09 09:44	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-3.28E+00	8.31E+00	8.31E+00	1.49E+01	dpm/s
09-06122-13	TRG	2-1210-05	06/16/09 09:44	6/25/2009	6/25/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.20E+00	8.64E+00	8.64E+00	1.50E+01	dpm/s
09-06122-14	TRG	2-1210-06	06/16/09 09:45	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	6.69E+00	8.95E+00	8.95E+00	1.51E+01	dpm/s
09-06122-15	TRG	2-1210-07	06/16/09 09:46	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-7.81E+00	8.24E+00	8.24E+00	1.52E+01	dpm/s
09-06122-16	TRG	2-1210-08	06/16/09 09:46	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	4.42E+00	8.77E+00	8.77E+00	1.50E+01	dpm/s
09-06122-17	TRG	2-1210-09	06/16/09 09:47	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.14E+00	8.39E+00	8.39E+00	1.45E+01	dpm/s
09-06122-18	TRG	2-1210-10	06/16/09 09:48	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	2.19E+00	8.58E+00	8.58E+00	1.49E+01	dpm/s
09-06122-19	TRG	2-1210-11	06/16/09 10:01	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-2.23E+00	8.53E+00	8.53E+00	1.52E+01	dpm/s
09-06122-20	TRG	2-1210-12	06/16/09 10:02	6/25/2009	6/26/2009	09-06122	Total Activity	WSRC-RP-89-387 Mod.	-4.36E+00	8.22E+00	8.22E+00	1.48E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06123					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06123-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	2.47E+03	5.43E+01			dpm/s	
09-06123-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	2.50E+03	4.67E+01	5.43E+01	1.47E+01	dpm/s	
09-06123-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-4.54E+00	8.45E+00	8.45E+00	1.52E+01	dpm/s	
09-06123-03	DUP	2-1210-13	06/16/09 10:02	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-6.60E+00	1.65E+01	1.65E+01	2.95E+01	dpm/s	
09-06123-04	DO	2-1210-13	06/16/09 10:02	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-2.30E+00	1.75E+01	1.75E+01	3.09E+01	dpm/s	
09-06123-05	TRG	2-1205-01	06/16/09 10:11	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-4.30E+00	7.99E+00	7.99E+00	1.44E+01	dpm/s	
09-06123-06	TRG	2-1205-02	06/16/09 10:12	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-4.91E+00	9.12E+00	9.12E+00	1.65E+01	dpm/s	
09-06123-07	TRG	2-1205-03	06/16/09 10:14	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.16E+00	8.16E+00	1.43E+01	dpm/s	
09-06123-08	TRG	2-1205-04	06/16/09 10:14	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-7.28E+00	8.89E+00	8.89E+00	1.63E+01	dpm/s	
09-06123-09	TRG	2-1205-05	06/16/09 10:17	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-2.24E+00	8.46E+00	8.46E+00	1.51E+01	dpm/s	
09-06123-10	TRG	2-1205-06	06/16/09 10:17	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-4.49E+00	8.35E+00	8.35E+00	1.51E+01	dpm/s	
09-06123-11	TRG	2-1205-07	06/16/09 10:18	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-6.75E+00	8.25E+00	8.25E+00	1.51E+01	dpm/s	
09-06123-12	TRG	2-1205-08	06/16/09 10:19	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	2.25E+00	8.71E+00	8.71E+00	1.51E+01	dpm/s	
09-06123-13	TRG	2-1205-09	06/16/09 10:19	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-1.13E+00	8.58E+00	8.58E+00	1.52E+01	dpm/s	
09-06123-14	TRG	2-1205-10	06/16/09 10:20	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	5.38E+00	8.49E+00	8.49E+00	1.44E+01	dpm/s	
09-06123-15	TRG	2-1205-11	06/16/09 10:20	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-6.41E+00	7.83E+00	7.83E+00	1.43E+01	dpm/s	
09-06123-16	TRG	2-1205-12	06/16/09 10:21	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-6.40E+00	7.83E+00	7.83E+00	1.43E+01	dpm/s	
09-06123-17	TRG	2-1205-13	06/16/09 10:22	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.31E+00	8.31E+00	1.45E+01	dpm/s	
09-06123-18	TRG	2-1230-01	06/16/09 10:51	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.27E+00	8.27E+00	1.45E+01	dpm/s	
09-06123-19	TRG	2-1230-02	06/16/09 10:52	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	8.11E+00	8.11E+00	1.44E+01	dpm/s	
09-06123-20	TRG	2-1230-03	06/16/09 10:53	6/25/2009	6/26/2009	09-06123	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	8.12E+00	8.12E+00	1.45E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06124				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06124-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	2.15E+03	4.73E+01			dpm/s
09-06124-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	2.24E+03	4.44E+01	5.09E+01	1.43E+01	dpm/s
09-06124-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	-4.40E+00	7.83E+00	7.83E+00	1.42E+01	dpm/s
09-06124-03	DUP	2-1230-04	06/16/09 10:54	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	4.49E+00	1.67E+01	1.67E+01	2.90E+01	dpm/s
09-06124-04	DO	2-1230-04	06/16/09 10:54	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	4.34E+00	1.61E+01	1.61E+01	2.80E+01	dpm/s
09-06124-05	TRG	2-1230-05	06/16/09 10:54	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.10E+00	8.11E+00	8.11E+00	1.42E+01	dpm/s
09-06124-06	TRG	2-1230-06	06/16/09 10:55	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	4.38E+00	8.25E+00	8.25E+00	1.41E+01	dpm/s
09-06124-07	TRG	2-1230-07	06/16/09 10:55	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.02E+00	8.02E+00	1.40E+01	dpm/s
09-06124-08	TRG	2-1230-08	06/16/09 10:56	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	7.97E+00	7.97E+00	1.39E+01	dpm/s
09-06124-09	TRG	2-1230-09	06/16/09 10:57	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	4.32E+00	8.14E+00	8.14E+00	1.39E+01	dpm/s
09-06124-10	TRG	2-1230-10	06/16/09 10:58	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.07E+00	7.94E+00	7.94E+00	1.39E+01	dpm/s
09-06124-11	TRG	2-1230-11	06/16/09 10:58	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.06E+00	7.86E+00	7.86E+00	1.37E+01	dpm/s
09-06124-12	TRG	2-1230-12	06/16/09 11:00	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	9.69E+00	8.38E+00	8.39E+00	1.39E+01	dpm/s
09-06124-13	TRG	2-1230-13	06/16/09 11:00	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	-2.17E+00	7.84E+00	7.84E+00	1.40E+01	dpm/s
09-06124-14	TRG	2-1245-01	06/16/09 11:10	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.88E+00	7.88E+00	1.39E+01	dpm/s
09-06124-15	TRG	2-1245-02	06/16/09 11:11	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	3.33E+00	8.32E+00	8.32E+00	1.43E+01	dpm/s
09-06124-16	TRG	2-1245-03	06/16/09 11:11	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.18E+00	8.70E+00	8.70E+00	1.52E+01	dpm/s
09-06124-17	TRG	2-1245-04	06/16/09 11:12	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	2.28E+00	8.49E+00	8.49E+00	1.47E+01	dpm/s
09-06124-18	TRG	2-1245-05	06/16/09 11:13	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	1.16E+00	8.58E+00	8.58E+00	1.50E+01	dpm/s
09-06124-19	TRG	2-1245-06	06/16/09 11:14	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	5.51E+00	8.36E+00	8.36E+00	1.42E+01	dpm/s
09-06124-20	TRG	2-1245-07	06/16/09 11:15	6/25/2009	6/26/2009	09-06124	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	7.85E+00	7.85E+00	1.39E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<b>Eberline Analytical</b> <b>Final Report of Analysis</b>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06125					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06125-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	2.14E+03	4.71E+01			dpm/s	
09-06125-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	2.20E+03	4.40E+01	5.03E+01	1.43E+01	dpm/s	
09-06125-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.12E+00	8.25E+00	8.25E+00	1.44E+01	dpm/s	
09-06125-03	DUP	2-1245-08	06/16/09 11:15	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	-2.21E+00	1.61E+01	1.61E+01	2.85E+01	dpm/s	
09-06125-04	DO	2-1245-08	06/16/09 11:15	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.54E+01	1.69E+01	1.69E+01	2.83E+01	dpm/s	
09-06125-05	TRG	2-1245-09	06/16/09 11:16	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.28E+00	8.19E+00	8.19E+00	1.41E+01	dpm/s	
09-06125-06	TRG	2-1245-10	06/16/09 11:16	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.11E+00	8.16E+00	8.16E+00	1.43E+01	dpm/s	
09-06125-07	TRG	2-1245-11	06/16/09 11:17	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.15E+00	8.49E+00	8.49E+00	1.48E+01	dpm/s	
09-06125-08	TRG	2-1245-12	06/16/09 11:18	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.10E+00	8.10E+00	1.41E+01	dpm/s	
09-06125-09	TRG	2-1245-13	06/16/09 11:19	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	-2.18E+00	7.86E+00	7.86E+00	1.40E+01	dpm/s	
09-06125-10	TRG	2-1250-01	06/16/09 11:28	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.25E+00	8.12E+00	8.12E+00	1.40E+01	dpm/s	
09-06125-11	TRG	2-1250-02	06/16/09 11:28	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.25E+00	8.11E+00	8.11E+00	1.40E+01	dpm/s	
09-06125-12	TRG	2-1250-03	06/16/09 11:30	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.12E+00	8.12E+00	1.41E+01	dpm/s	
09-06125-13	TRG	2-1250-04	06/16/09 11:31	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.31E+00	8.26E+00	8.26E+00	1.42E+01	dpm/s	
09-06125-14	TRG	2-1250-05	06/16/09 11:32	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.28E+00	8.20E+00	8.20E+00	1.41E+01	dpm/s	
09-06125-15	TRG	2-1250-06	06/16/09 11:40	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	4.34E+00	8.17E+00	8.17E+00	1.40E+01	dpm/s	
09-06125-16	TRG	2-1250-07	06/16/09 11:41	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	7.98E+00	7.98E+00	1.39E+01	dpm/s	
09-06125-17	TRG	2-1250-08	06/16/09 11:41	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	1.09E+01	8.53E+00	8.53E+00	1.40E+01	dpm/s	
09-06125-18	TRG	2-1250-09	06/16/09 11:42	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.31E+00	8.27E+00	8.27E+00	1.43E+01	dpm/s	
09-06125-19	TRG	2-1250-10	06/16/09 11:43	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	3.51E+00	8.77E+00	8.77E+00	1.51E+01	dpm/s	
09-06125-20	TRG	2-1250-11	06/16/09 11:45	6/25/2009	6/26/2009	09-06125	Total Activity	WSRC-RP-89-387 Mod.	4.36E+00	8.21E+00	8.21E+00	1.41E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06126				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06126-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	2.23E+03	4.91E+01			dpm/s
09-06126-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	2.32E+03	4.54E+01	5.22E+01	1.55E+01	dpm/s
09-06126-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-8.88E+00	8.37E+00	8.37E+00	1.54E+01	dpm/s
09-06126-03	DUP	2-1250-12	06/16/09 11:46	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-2.20E+00	1.74E+01	1.74E+01	3.07E+01	dpm/s
09-06126-04	DO	2-1250-12	06/16/09 11:46	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	4.39E+00	1.76E+01	1.76E+01	3.06E+01	dpm/s
09-06126-05	TRG	2-1250-13	06/16/09 11:47	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-5.44E+00	8.37E+00	8.37E+00	1.51E+01	dpm/s
09-06126-06	TRG	2-1255-01	06/16/09 13:41	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-3.27E+00	8.50E+00	8.50E+00	1.52E+01	dpm/s
09-06126-07	TRG	2-1255-02	06/16/09 13:41	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	2.20E+00	8.82E+00	8.82E+00	1.53E+01	dpm/s
09-06126-08	TRG	2-1255-03	06/16/09 13:42	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-6.46E+00	8.23E+00	8.23E+00	1.50E+01	dpm/s
09-06126-09	TRG	2-1255-04	06/16/09 13:44	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-5.39E+00	8.29E+00	8.29E+00	1.50E+01	dpm/s
09-06126-10	TRG	2-1255-05	06/16/09 13:44	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-3.25E+00	8.43E+00	8.43E+00	1.51E+01	dpm/s
09-06126-11	TRG	2-1255-06	06/16/09 13:45	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-6.54E+00	8.33E+00	8.33E+00	1.52E+01	dpm/s
09-06126-12	TRG	2-1255-07	06/16/09 14:01	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.54E+00	8.54E+00	1.51E+01	dpm/s
09-06126-13	TRG	2-1255-08	06/16/09 14:01	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.50E+00	8.50E+00	1.50E+01	dpm/s
09-06126-14	TRG	2-1255-09	06/16/09 14:02	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.50E+00	8.50E+00	1.50E+01	dpm/s
09-06126-15	TRG	2-1255-10	06/16/09 14:03	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.51E+00	8.51E+00	1.50E+01	dpm/s
09-06126-16	TRG	2-1255-11	06/16/09 14:04	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-3.23E+00	8.38E+00	8.38E+00	1.50E+01	dpm/s
09-06126-17	TRG	2-1255-12	06/16/09 14:04	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-4.42E+00	8.55E+00	8.55E+00	1.54E+01	dpm/s
09-06126-18	TRG	2-1255-13	06/16/09 14:05	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-4.35E+00	8.42E+00	8.42E+00	1.51E+01	dpm/s
09-06126-19	TRG	2-1474-01	06/16/09 16:17	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	3.23E+00	8.70E+00	8.70E+00	1.50E+01	dpm/s
09-06126-20	TRG	2-1474-02	06/16/09 16:18	6/25/2009	6/26/2009	09-06126	Total Activity	WSRC-RP-89-387 Mod.	-4.34E+00	8.40E+00	8.40E+00	1.51E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06127				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06127-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	2.16E+03	4.74E+01			dpm/s
09-06127-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	2.20E+03	4.43E+01	5.06E+01	1.55E+01	dpm/s
09-06127-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-9.03E+00	8.51E+00	8.51E+00	1.57E+01	dpm/s
09-06127-03	DUP	2-1474-03	06/16/09 16:18	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-1.48E+01	1.61E+01	1.61E+01	2.95E+01	dpm/s
09-06127-04	DO	2-1474-03	06/16/09 16:18	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-8.54E+00	1.65E+01	1.65E+01	2.97E+01	dpm/s
09-06127-05	TRG	2-1474-04	06/16/09 16:22	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-3.32E+00	8.62E+00	8.62E+00	1.54E+01	dpm/s
09-06127-06	TRG	2-1474-05	06/16/09 16:23	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-4.30E+00	8.31E+00	8.31E+00	1.49E+01	dpm/s
09-06127-07	TRG	2-1474-06	06/16/09 16:24	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-4.62E+00	8.95E+00	8.95E+00	1.61E+01	dpm/s
09-06127-08	TRG	2-1474-07	06/16/09 16:24	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-5.66E+00	8.71E+00	8.71E+00	1.57E+01	dpm/s
09-06127-09	TRG	2-1474-08	06/16/09 16:27	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-9.65E+00	8.03E+00	8.03E+00	1.49E+01	dpm/s
09-06127-10	TRG	2-1474-09	06/16/09 16:27	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-8.50E+00	8.01E+00	8.01E+00	1.48E+01	dpm/s
09-06127-11	TRG	2-1474-10	06/16/09 16:28	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-4.37E+00	8.46E+00	8.46E+00	1.52E+01	dpm/s
09-06127-12	TRG	2-1474-11	06/16/09 16:28	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-3.20E+00	8.31E+00	8.31E+00	1.48E+01	dpm/s
09-06127-13	TRG	2-1474-12	06/16/09 16:30	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-3.27E+00	8.48E+00	8.48E+00	1.51E+01	dpm/s
09-06127-14	TRG	2-1474-13	06/16/09 16:30	6/25/2009	6/26/2009	09-06127	Total Activity	WSRC-RP-89-387 Mod.	-1.06E+00	8.36E+00	8.36E+00	1.48E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:						Work Order Details:					
			David Romaine						SDG:	09-06128				
			Radiological Assessment Services						Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905 Alexandria, VA 22314						Analysis Category:	ENVIRONMENTAL				
			Sample Matrix:						SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06128-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	2.40E+03	5.27E+01			dpm/s	
09-06128-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	2.53E+03	4.76E+01	5.53E+01	1.49E+01	dpm/s	
09-06128-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	3.36E+00	8.61E+00	8.61E+00	1.48E+01	dpm/s	
09-06128-03	DUP	2-2135-01	06/17/09 07:01	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	3.25E+01	1.79E+01	1.79E+01	2.87E+01	dpm/s	
09-06128-04	DO	2-2135-01	06/17/09 07:01	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	1.74E+01	1.73E+01	1.73E+01	2.88E+01	dpm/s	
09-06128-05	TRG	2-2135-02	06/17/09 07:02	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	1.28E+01	8.66E+00	8.66E+00	1.41E+01	dpm/s	
09-06128-06	TRG	2-2135-03	06/17/09 07:02	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.25E+00	8.25E+00	1.45E+01	dpm/s	
09-06128-07	TRG	2-2135-04	06/17/09 07:03	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.34E+00	8.34E+00	1.47E+01	dpm/s	
09-06128-08	TRG	2-2135-05	06/17/09 07:03	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.32E+00	8.32E+00	1.44E+01	dpm/s	
09-06128-09	TRG	2-2135-06	06/17/09 07:04	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	4.35E+00	8.42E+00	8.42E+00	1.44E+01	dpm/s	
09-06128-10	TRG	2-2135-07	06/17/09 07:05	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	3.47E+00	8.89E+00	8.89E+00	1.53E+01	dpm/s	
09-06128-11	TRG	2-2135-08	06/17/09 07:05	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	4.54E+00	8.80E+00	8.80E+00	1.51E+01	dpm/s	
09-06128-12	TRG	2-2135-09	06/17/09 07:06	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	-2.28E+00	8.49E+00	8.49E+00	1.51E+01	dpm/s	
09-06128-13	TRG	2-2135-10	06/17/09 07:09	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	-1.11E+00	8.29E+00	8.29E+00	1.47E+01	dpm/s	
09-06128-14	TRG	2-2135-11	06/17/09 07:10	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.26E+00	8.26E+00	1.44E+01	dpm/s	
09-06128-15	TRG	2-2135-12	06/17/09 07:11	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	7.53E+00	8.48E+00	8.49E+00	1.42E+01	dpm/s	
09-06128-16	TRG	2-2135-13	06/17/09 07:11	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	3.35E+00	8.59E+00	8.59E+00	1.48E+01	dpm/s	
09-06128-17	TRG	2-2240-01	06/17/09 07:29	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	1.28E+01	8.69E+00	8.69E+00	1.42E+01	dpm/s	
09-06128-18	TRG	2-2240-02	06/17/09 07:29	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.32E+00	8.33E+00	1.44E+01	dpm/s	
09-06128-19	TRG	2-2240-03	06/17/09 07:30	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	2.78E+01	9.37E+00	9.38E+00	1.42E+01	dpm/s	
09-06128-20	TRG	2-2240-04	06/17/09 07:31	6/25/2009	6/26/2009	09-06128	Total Activity	WSRC-RP-89-387 Mod.	4.40E+00	8.52E+00	8.52E+00	1.46E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06129					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06129-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	2.33E+03	5.14E+01			dpm/s	
09-06129-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	2.39E+03	4.61E+01	5.31E+01	1.53E+01	dpm/s	
09-06129-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-5.56E+00	8.44E+00	8.44E+00	1.53E+01	dpm/s	
09-06129-03	DUP	2-2240-05	06/17/09 07:31	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	2.21E+00	1.74E+01	1.74E+01	3.04E+01	dpm/s	
09-06129-04	DO	2-2240-05	06/17/09 07:31	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-2.21E+01	1.62E+01	1.62E+01	3.03E+01	dpm/s	
09-06129-05	TRG	2-2240-06	06/17/09 07:32	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-5.59E+00	8.49E+00	8.49E+00	1.54E+01	dpm/s	
09-06129-06	TRG	2-2240-07	06/17/09 07:33	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-1.12E+00	8.72E+00	8.72E+00	1.54E+01	dpm/s	
09-06129-07	TRG	2-2240-08	06/17/09 07:34	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	1.10E+00	8.66E+00	8.66E+00	1.51E+01	dpm/s	
09-06129-08	TRG	2-2240-09	06/17/09 07:35	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-7.85E+00	8.40E+00	8.40E+00	1.54E+01	dpm/s	
09-06129-09	TRG	2-2240-10	06/17/09 07:36	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.90E+00	8.90E+00	1.56E+01	dpm/s	
09-06129-10	TRG	2-2240-11	06/17/09 07:36	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-2.29E+00	8.86E+00	8.86E+00	1.57E+01	dpm/s	
09-06129-11	TRG	2-2240-12	06/17/09 07:37	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-7.62E+00	8.15E+00	8.15E+00	1.50E+01	dpm/s	
09-06129-12	TRG	2-2240-13	06/17/09 07:37	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.56E+00	8.56E+00	1.49E+01	dpm/s	
09-06129-13	TRG	2-2260-01	06/17/09 07:41	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.43E+00	8.43E+00	1.48E+01	dpm/s	
09-06129-14	TRG	2-2260-02	06/17/09 07:41	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-6.68E+00	8.40E+00	8.40E+00	1.53E+01	dpm/s	
09-06129-15	TRG	2-2260-03	06/17/09 07:42	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-1.09E+00	8.51E+00	8.51E+00	1.50E+01	dpm/s	
09-06129-16	TRG	2-2260-04	06/17/09 07:43	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-4.52E+00	8.64E+00	8.64E+00	1.55E+01	dpm/s	
09-06129-17	TRG	2-2260-05	06/17/09 07:44	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-6.37E+00	8.00E+00	8.00E+00	1.46E+01	dpm/s	
09-06129-18	TRG	2-2260-06	06/17/09 07:44	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-3.48E+00	8.93E+00	8.93E+00	1.60E+01	dpm/s	
09-06129-19	TRG	2-2260-07	06/17/09 07:45	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-3.52E+00	9.04E+00	9.04E+00	1.62E+01	dpm/s	
09-06129-20	TRG	2-2260-08	06/17/09 07:45	6/25/2009	6/26/2009	09-06129	Total Activity	WSRC-RP-89-387 Mod.	-5.63E+00	8.55E+00	8.55E+00	1.55E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:						Work Order Details:					
			David Romaine						SDG:	09-06130				
			Radiological Assessment Services						Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905						Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314						Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06130-01	LCS	KNOWN	06/25/09 00:00	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	2.17E+03	4.77E+01			dpm/s	
09-06130-01	LCS	SPIKE	06/25/09 00:00	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	2.20E+03	4.39E+01	5.02E+01	1.48E+01	dpm/s	
09-06130-02	MBL	BLANK	06/25/09 00:00	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-1.12E+00	8.51E+00	8.51E+00	1.50E+01	dpm/s	
09-06130-03	DUP	2-2260-09	06/17/09 07:46	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-2.20E+00	1.67E+01	1.67E+01	2.95E+01	dpm/s	
09-06130-04	DO	2-2260-09	06/17/09 07:46	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-6.71E+00	1.67E+01	1.67E+01	3.00E+01	dpm/s	
09-06130-05	TRG	2-2260-10	06/17/09 07:47	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-2.22E+00	8.37E+00	8.37E+00	1.49E+01	dpm/s	
09-06130-06	TRG	2-2260-11	06/17/09 07:47	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.44E+00	8.44E+00	1.46E+01	dpm/s	
09-06130-07	TRG	2-2260-12	06/17/09 07:48	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	4.33E+00	8.48E+00	8.48E+00	1.45E+01	dpm/s	
09-06130-08	TRG	2-2260-13	06/17/09 07:48	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-6.58E+00	8.05E+00	8.05E+00	1.47E+01	dpm/s	
09-06130-09	TRG	2-2265-01	06/17/09 07:53	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.27E+00	8.27E+00	1.44E+01	dpm/s	
09-06130-10	TRG	2-2265-02	06/17/09 07:53	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	5.39E+00	8.50E+00	8.50E+00	1.45E+01	dpm/s	
09-06130-11	TRG	2-2265-03	06/17/09 07:54	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-1.07E+00	8.10E+00	8.10E+00	1.43E+01	dpm/s	
09-06130-12	TRG	2-2265-04	06/17/09 07:55	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-3.19E+00	7.95E+00	7.95E+00	1.42E+01	dpm/s	
09-06130-13	TRG	2-2265-05	06/17/09 07:55	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-4.24E+00	7.89E+00	7.89E+00	1.42E+01	dpm/s	
09-06130-14	TRG	2-2265-06	06/17/09 07:56	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	1.06E+00	8.12E+00	8.12E+00	1.42E+01	dpm/s	
09-06130-15	TRG	2-2265-07	06/17/09 07:57	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-4.36E+00	8.11E+00	8.11E+00	1.46E+01	dpm/s	
09-06130-16	TRG	2-2265-08	06/17/09 07:58	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-5.31E+00	7.84E+00	7.84E+00	1.42E+01	dpm/s	
09-06130-17	TRG	2-2265-09	06/17/09 07:59	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-4.40E+00	8.18E+00	8.18E+00	1.48E+01	dpm/s	
09-06130-18	TRG	2-2265-10	06/17/09 08:00	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	3.24E+00	8.40E+00	8.40E+00	1.45E+01	dpm/s	
09-06130-19	TRG	2-2265-11	06/17/09 08:00	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	2.19E+00	8.49E+00	8.49E+00	1.47E+01	dpm/s	
09-06130-20	TRG	2-2265-12	06/17/09 08:01	6/25/2009	6/26/2009	09-06130	Total Activity	WSRC-RP-89-387 Mod.	-1.10E+00	8.35E+00	8.35E+00	1.48E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06134				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06134-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	2.33E+03	5.13E+01			dpm/s
09-06134-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	2.43E+03	4.63E+01	5.36E+01	1.40E+01	dpm/s
09-06134-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	6.68E+00	8.29E+00	8.29E+00	1.40E+01	dpm/s
09-06134-03	DUP	2-2265-13	06/17/09 08:02	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	4.33E+00	1.57E+01	1.57E+01	2.72E+01	dpm/s
09-06134-04	DO	2-2265-13	06/17/09 08:02	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	1.31E+01	1.62E+01	1.62E+01	2.74E+01	dpm/s
09-06134-05	TRG	GC-8-1	06/17/09 08:28	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	6.56E+00	8.13E+00	8.13E+00	1.37E+01	dpm/s
09-06134-06	TRG	GC-8-2	06/17/09 08:28	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	5.42E+00	8.00E+00	8.00E+00	1.36E+01	dpm/s
09-06134-07	TRG	GC-8-3	06/17/09 08:29	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	5.43E+00	8.02E+00	8.02E+00	1.36E+01	dpm/s
09-06134-08	TRG	GC-8-4	06/17/09 08:30	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	5.88E+00	8.68E+00	8.68E+00	1.48E+01	dpm/s
09-06134-09	TRG	GC-8-5	06/17/09 08:30	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	1.99E+01	9.35E+00	9.35E+00	1.47E+01	dpm/s
09-06134-10	TRG	GC-8-6	06/17/09 08:31	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.70E+00	7.70E+00	1.36E+01	dpm/s
09-06134-11	TRG	GC-8-7	06/17/09 08:32	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	6.49E+00	8.05E+00	8.05E+00	1.36E+01	dpm/s
09-06134-12	TRG	GC-8-8	06/17/09 08:33	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	7.48E+00	8.00E+00	8.01E+00	1.34E+01	dpm/s
09-06134-13	TRG	GC-8-9	06/17/09 08:34	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	8.78E+00	8.27E+00	8.28E+00	1.38E+01	dpm/s
09-06134-14	TRG	GC-8-10	06/17/09 08:35	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	-1.06E+00	7.52E+00	7.52E+00	1.33E+01	dpm/s
09-06134-15	TRG	GC-8-11	06/17/09 08:35	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	4.25E+00	7.80E+00	7.80E+00	1.33E+01	dpm/s
09-06134-16	TRG	GC-8-12	06/17/09 08:36	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	5.42E+00	8.00E+00	8.00E+00	1.36E+01	dpm/s
09-06134-17	TRG	GC-8-13	06/17/09 08:37	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	4.29E+00	7.87E+00	7.87E+00	1.35E+01	dpm/s
09-06134-18	TRG	GC-10-1	06/17/09 09:01	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	6.44E+00	7.98E+00	7.98E+00	1.35E+01	dpm/s
09-06134-19	TRG	GC-10-2	06/17/09 10:41	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	7.76E+00	7.76E+00	1.36E+01	dpm/s
09-06134-20	TRG	GC-10-3	06/17/09 10:41	6/25/2009	6/27/2009	09-06134	Total Activity	WSRC-RP-89-387 Mod.	1.69E+01	8.41E+00	8.41E+00	1.33E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:						Work Order Details:					
			David Romaine						SDG:	09-06135				
			Radiological Assessment Services						Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905						Analysis Category:	ENVIRONMENTAL				
Alexandria, VA 22314						Sample Matrix:		SM						
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06135-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/26/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	2.16E+03	4.76E+01			dpm/s	
09-06135-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/26/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	2.23E+03	4.44E+01	5.08E+01	1.52E+01	dpm/s	
09-06135-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/26/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.73E+00	8.73E+00	1.53E+01	dpm/s	
09-06135-03	DUP	GC-10-4	06/17/09 10:42	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-6.47E+00	1.66E+01	1.66E+01	2.96E+01	dpm/s	
09-06135-04	DO	GC-10-4	06/17/09 10:42	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-4.37E+00	1.69E+01	1.69E+01	3.00E+01	dpm/s	
09-06135-05	TRG	GC-10-5	06/17/09 10:43	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	4.31E+00	8.66E+00	8.66E+00	1.48E+01	dpm/s	
09-06135-06	TRG	GC-10-6	06/17/09 10:43	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	2.18E+00	8.65E+00	8.65E+00	1.50E+01	dpm/s	
09-06135-07	TRG	GC-10-7	06/17/09 10:44	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-1.09E+00	8.53E+00	8.53E+00	1.51E+01	dpm/s	
09-06135-08	TRG	GC-10-8	06/17/09 10:44	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	3.31E+00	8.80E+00	8.80E+00	1.52E+01	dpm/s	
09-06135-09	TRG	GC-10-9	06/17/09 10:45	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	3.31E+00	8.81E+00	8.81E+00	1.52E+01	dpm/s	
09-06135-10	TRG	GC-10-10	06/17/09 10:45	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	2.20E+00	8.75E+00	8.75E+00	1.52E+01	dpm/s	
09-06135-11	TRG	GC-10-11	06/17/09 10:46	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.42E+00	8.42E+00	1.49E+01	dpm/s	
09-06135-12	TRG	GC-10-12	06/17/09 10:46	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	3.22E+00	8.58E+00	8.58E+00	1.48E+01	dpm/s	
09-06135-13	TRG	GC-10-13	06/17/09 10:47	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-7.62E+00	8.15E+00	8.15E+00	1.50E+01	dpm/s	
09-06135-14	TRG	GC-15-01	06/17/09 08:40	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-3.31E+00	8.48E+00	8.48E+00	1.52E+01	dpm/s	
09-06135-15	TRG	GC-15-02	06/17/09 08:40	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.50E+00	8.50E+00	1.48E+01	dpm/s	
09-06135-16	TRG	GC-15-03	06/17/09 08:41	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-6.90E+00	8.68E+00	8.68E+00	1.58E+01	dpm/s	
09-06135-17	TRG	GC-15-04	06/17/09 08:42	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.47E+00	8.47E+00	1.49E+01	dpm/s	
09-06135-18	TRG	GC-15-05	06/17/09 08:43	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-2.27E+00	8.78E+00	8.78E+00	1.56E+01	dpm/s	
09-06135-19	TRG	GC-15-06	06/17/09 08:44	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	-1.09E+00	8.49E+00	8.49E+00	1.50E+01	dpm/s	
09-06135-20	TRG	GC-15-07	06/17/09 08:45	6/25/2009	6/27/2009	09-06135	Total Activity	WSRC-RP-89-387 Mod.	5.44E+00	8.80E+00	8.80E+00	1.50E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



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<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06136					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06136-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.41E+03	5.31E+01			dpm/s	
09-06136-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.48E+03	4.68E+01	5.43E+01	1.46E+01	dpm/s	
09-06136-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.23E+00	8.42E+00	8.42E+00	1.46E+01	dpm/s	
09-06136-03	DUP	GC-15-08	06/17/09 08:46	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	1.59E+01	1.59E+01	2.79E+01	dpm/s	
09-06136-04	DO	GC-15-08	06/17/09 08:46	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	6.49E+00	1.64E+01	1.64E+01	2.83E+01	dpm/s	
09-06136-05	TRG	GC-15-09	06/17/09 08:46	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.12E+00	8.00E+00	8.00E+00	1.39E+01	dpm/s	
09-06136-06	TRG	GC-15-10	06/17/09 08:47	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.12E+00	7.99E+00	7.99E+00	1.39E+01	dpm/s	
09-06136-07	TRG	GC-15-11	06/17/09 08:48	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	5.28E+00	8.12E+00	8.12E+00	1.38E+01	dpm/s	
09-06136-08	TRG	GC-15-12	06/17/09 08:49	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	7.93E+00	7.93E+00	1.39E+01	dpm/s	
09-06136-09	TRG	GC-15-13	06/17/09 08:50	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	5.48E+00	8.44E+00	8.44E+00	1.43E+01	dpm/s	
09-06136-10	TRG	GH-5-1	06/17/09 09:10	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	4.42E+00	8.45E+00	8.45E+00	1.45E+01	dpm/s	
09-06136-11	TRG	GH-5-2	06/17/09 09:10	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	6.56E+00	8.46E+00	8.46E+00	1.43E+01	dpm/s	
09-06136-12	TRG	GH-5-3	06/17/09 09:11	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	1.18E+01	8.56E+00	8.56E+00	1.40E+01	dpm/s	
09-06136-13	TRG	GH-5-4	06/17/09 09:12	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	7.55E+00	8.40E+00	8.40E+00	1.41E+01	dpm/s	
09-06136-14	TRG	GH-5-5	06/17/09 09:12	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	8.77E+00	8.60E+00	8.60E+00	1.43E+01	dpm/s	
09-06136-15	TRG	GH-5-6	06/17/09 09:13	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	1.82E+01	8.87E+00	8.88E+00	1.40E+01	dpm/s	
09-06136-16	TRG	GH-5-7	06/17/09 09:13	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	1.96E+01	9.05E+00	9.06E+00	1.42E+01	dpm/s	
09-06136-17	TRG	GH-5-8	06/17/09 09:15	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	1.72E+01	8.82E+00	8.83E+00	1.40E+01	dpm/s	
09-06136-18	TRG	GH-5-9	06/17/09 09:15	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	4.33E+00	8.27E+00	8.27E+00	1.41E+01	dpm/s	
09-06136-19	TRG	GH-5-10	06/17/09 09:17	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	1.72E+01	8.82E+00	8.83E+00	1.40E+01	dpm/s	
09-06136-20	TRG	GH-5-11	06/17/09 09:17	6/25/2009	6/27/2009	09-06136	Total Activity	WSRC-RP-89-387 Mod.	2.53E+01	9.39E+00	9.39E+00	1.44E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:					
			David Romaine					SDG:	09-06138				
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314					Sample Matrix:	SO				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
09-06138-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.17E+03	4.77E+01			dpm/s
09-06138-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.25E+03	4.47E+01	5.13E+01	1.53E+01	dpm/s
09-06138-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	1.12E+00	8.80E+00	8.80E+00	1.53E+01	dpm/s
09-06138-03	DUP	GH-5-12	06/17/09 09:17	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-6.58E+00	1.69E+01	1.69E+01	3.02E+01	dpm/s
09-06138-04	DO	GH-5-12	06/17/09 09:17	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.17E+00	1.71E+01	1.71E+01	2.98E+01	dpm/s
09-06138-05	TRG	GH-5-13	06/17/09 09:18	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	1.09E+00	8.60E+00	8.60E+00	1.50E+01	dpm/s
09-06138-06	TRG	GC-19-01	06/17/09 09:18	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.16E+00	8.56E+00	8.56E+00	1.48E+01	dpm/s
09-06138-07	TRG	GC-19-02	06/17/09 09:19	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.15E+00	8.53E+00	8.53E+00	1.48E+01	dpm/s
09-06138-08	TRG	GC-19-03	06/17/09 09:19	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-2.16E+00	8.37E+00	8.37E+00	1.49E+01	dpm/s
09-06138-09	TRG	GC-19-04	06/17/09 09:20	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	8.34E+00	8.34E+00	1.48E+01	dpm/s
09-06138-10	TRG	GC-19-05	06/17/09 09:20	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-4.38E+00	8.36E+00	8.36E+00	1.51E+01	dpm/s
09-06138-11	TRG	GC-19-06	06/17/09 09:21	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-2.15E+00	8.32E+00	8.32E+00	1.48E+01	dpm/s
09-06138-12	TRG	GC-19-07	06/17/09 09:22	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-2.20E+00	8.53E+00	8.53E+00	1.52E+01	dpm/s
09-06138-13	TRG	GC-19-08	06/17/09 09:22	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	4.42E+00	8.87E+00	8.87E+00	1.52E+01	dpm/s
09-06138-14	TRG	GC-19-09	06/17/09 09:23	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-1.10E+00	8.57E+00	8.57E+00	1.51E+01	dpm/s
09-06138-15	TRG	GC-19-10	06/17/09 09:23	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.51E+00	8.51E+00	1.48E+01	dpm/s
09-06138-16	TRG	GC-19-11	06/17/09 09:24	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.63E+00	8.63E+00	1.51E+01	dpm/s
09-06138-17	TRG	GC-19-12	06/17/09 09:25	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.63E+00	8.63E+00	1.51E+01	dpm/s
09-06138-18	TRG	GC-19-13	06/17/09 09:25	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	2.15E+00	8.53E+00	8.53E+00	1.48E+01	dpm/s
09-06138-19	TRG	WW-1	06/17/09 10:01	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-4.41E+00	8.43E+00	8.43E+00	1.52E+01	dpm/s
09-06138-20	TRG	WW-2	06/17/09 10:01	6/25/2009	6/27/2009	09-06138	Total Activity	WSRC-RP-89-387 Mod.	-2.22E+00	8.58E+00	8.58E+00	1.52E+01	dpm/s

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1>Eberline Analytical</h1> <h2>Final Report of Analysis</h2>			Report To:						Work Order Details:					
			David Romaine						SDG:	09-06139				
			Radiological Assessment Services						Purchase Order:	FMC-RASI-001				
			2121 Jamieson Avenue #1905						Analysis Category:	ENVIRONMENTAL				
			Alexandria, VA 22314						Sample Matrix:	SM				
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06139-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	2.32E+03	5.10E+01			dpm/s	
09-06139-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	2.43E+03	4.64E+01	5.36E+01	1.48E+01	dpm/s	
09-06139-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	2.25E+00	8.61E+00	8.61E+00	1.49E+01	dpm/s	
09-06139-03	DUP	WW-3	06/17/09 10:02	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	1.32E+01	1.72E+01	1.72E+01	2.91E+01	dpm/s	
09-06139-04	DO	WW-3	06/17/09 10:02	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	6.58E+00	1.69E+01	1.69E+01	2.90E+01	dpm/s	
09-06139-05	TRG	WW-4	06/17/09 10:03	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	-1.08E+00	8.12E+00	8.12E+00	1.44E+01	dpm/s	
09-06139-06	TRG	WW-5	06/17/09 10:03	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	8.23E+00	8.23E+00	1.45E+01	dpm/s	
09-06139-07	TRG	WW-6	06/17/09 10:04	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	5.47E+00	8.53E+00	8.53E+00	1.45E+01	dpm/s	
09-06139-08	TRG	WW-7	06/17/09 10:06	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	-2.17E+00	8.06E+00	8.06E+00	1.44E+01	dpm/s	
09-06139-09	TRG	WW-8	06/17/09 10:06	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	1.10E+00	8.36E+00	8.36E+00	1.46E+01	dpm/s	
09-06139-10	TRG	WW-9	06/17/09 10:07	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	6.45E+00	8.43E+00	8.43E+00	1.42E+01	dpm/s	
09-06139-11	TRG	WW-10	06/17/09 10:07	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	4.41E+00	8.54E+00	8.54E+00	1.46E+01	dpm/s	
09-06139-12	TRG	WW-11	06/17/09 10:08	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	-2.20E+00	8.17E+00	8.17E+00	1.46E+01	dpm/s	
09-06139-13	TRG	WW-12	06/17/09 10:08	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	4.37E+00	8.46E+00	8.46E+00	1.45E+01	dpm/s	
09-06139-14	TRG	WW-13	06/17/09 10:09	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	6.66E+00	8.71E+00	8.71E+00	1.47E+01	dpm/s	
09-06139-15	TRG	2-1465-1	06/17/09 10:22	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	1.10E+00	8.33E+00	8.33E+00	1.45E+01	dpm/s	
09-06139-16	TRG	2-1465-2	06/17/09 10:23	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	4.39E+00	8.50E+00	8.50E+00	1.45E+01	dpm/s	
09-06139-17	TRG	2-1465-3	06/17/09 10:23	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	-4.35E+00	7.97E+00	7.97E+00	1.44E+01	dpm/s	
09-06139-18	TRG	2-1465-4	06/17/09 10:23	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	2.05E+01	9.12E+00	9.12E+00	1.43E+01	dpm/s	
09-06139-19	TRG	2-1465-5	06/17/09 10:24	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	4.38E+00	8.47E+00	8.47E+00	1.45E+01	dpm/s	
09-06139-20	TRG	2-1465-6	06/17/09 10:25	6/25/2009	6/27/2009	09-06139	Total Activity	WSRC-RP-89-387 Mod.	1.08E+00	8.17E+00	8.17E+00	1.43E+01	dpm/s	

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



**EBERLINE ANALYTICAL CORPORATION**

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

<h1 style="margin: 0;">Eberline Analytical</h1> <h2 style="margin: 0;">Final Report of Analysis</h2>			Report To:					Work Order Details:						
			David Romaine					SDG:	09-06140					
			Radiological Assessment Services					Purchase Order:	FMC-RASI-001					
			2121 Jamieson Avenue #1905					Analysis Category:	ENVIRONMENTAL					
			Alexandria, VA 22314					Sample Matrix:	SM					
Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units	
09-06140-01	LCS	KNOWN	06/26/09 00:00	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	2.44E+03	5.36E+01			dpm/s	
09-06140-01	LCS	SPIKE	06/26/09 00:00	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	2.56E+03	4.77E+01	5.55E+01	1.50E+01	dpm/s	
09-06140-02	MBL	BLANK	06/26/09 00:00	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	-3.36E+00	8.40E+00	8.40E+00	1.50E+01	dpm/s	
09-06140-03	DUP	2-1465-7	06/17/09 10:26	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	0.00E+00	1.67E+01	1.67E+01	2.94E+01	dpm/s	
09-06140-04	DO	2-1465-7	06/17/09 10:26	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	-6.53E+00	1.63E+01	1.63E+01	2.92E+01	dpm/s	
09-06140-05	TRG	2-1465-8	06/17/09 10:26	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	-2.19E+00	8.24E+00	8.24E+00	1.47E+01	dpm/s	
09-06140-06	TRG	2-1465-9	06/17/09 10:27	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	-5.44E+00	8.04E+00	8.04E+00	1.46E+01	dpm/s	
09-06140-07	TRG	2-1465-10	06/17/09 10:28	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	2.20E+00	8.51E+00	8.51E+00	1.48E+01	dpm/s	
09-06140-08	TRG	2-1465-11	06/17/09 10:29	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	-1.09E+00	8.25E+00	8.25E+00	1.46E+01	dpm/s	
09-06140-09	TRG	2-1465-12	06/17/09 10:30	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	4.38E+00	8.58E+00	8.58E+00	1.47E+01	dpm/s	
09-06140-10	TRG	2-1465-13	06/17/09 10:31	6/25/2009	6/27/2009	09-06140	Total Activity	WSRC-RP-89-387 Mod.	1.10E+00	8.43E+00	8.43E+00	1.47E+01	dpm/s	

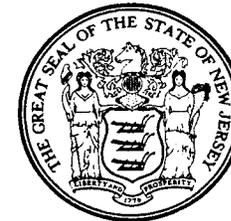
CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



**EBERLINE ANALYTICAL CORPORATION**

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

State of New Jersey  
Department of Environmental Protection



*Certifies That*

*Eberline Services - Oak Ridge*

Laboratory Certification ID # TN004

*having duly met the requirements of the*

Regulations Governing The Certification Of  
Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

*and*

*having been found compliant with the standard approved by the*

National Environmental Laboratory Accreditation Conference

*is hereby approved as a*

Nationally Accredited Environmental Laboratory

*to perform the analyses as indicated on the Annual Certified Parameter List*

*which must accompany this certificate to be valid*

Expiration Date June 30, 2009



NJDEP is a NELAP Recognized Accrediting Authority

A handwritten signature in black ink, appearing to read "Joseph F. Aiello".

Joseph F. Aiello, Chief  
Office of Quality Assurance

New Jersey Department of Environmental Protection  
National Environmental Laboratory Accreditation Program  
**ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS**  
Effective as of 07/01/2008 until 06/30/2009



Laboratory Name: **EBERLINE SERVICES - OAK RIDGE** Laboratory Number: **TN004** Activity ID: **NLC080001**  
**1000 CARBORO RD**  
**OAK RIDGE, TN 37830**

**Priority: SDW07 -- Radiochem.: Radioactivity / Radionuclide**

	Eligible to Report	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
ed	Yes	UT	SDW07.01000	DW	Proportional or Scintillation	[EPA 900.0]	Gross - alpha-beta	
ed	Yes	UT	SDW07.03100	DW	Gamma Spectrometry	[EPA 901.1]	Gamma emitters	
ed	Yes	UT	SDW07.03900	DW	Radiochemical	[EPA 903.0]	Radium - 226	
ed	Yes	UT	SDW07.04100	DW	Precipitation	[EPA 904.0]	Radium - 228	
ed	Yes	UT	SDW07.05000	DW	Precipitation	[EPA 903.0]	Radium - total	
ed	Yes	UT	SDW07.06000	DW	Total Sr & Strontium 90	[EPA 905.0]	Strontium - 89, 90	
ed	Yes	UT	SDW07.06010	DW	Strontium 90	[EPA 905.0]	Strontium - 90	
ed	Yes	UT	SDW07.07000	DW	Distillation/Liquid Scintillation	[EPA 906.0]	Tritium	
ed	Yes	UT	SDW07.08100	DW	Co-Precipitation	[EPA 908.0]	Uranium	
ed	Yes	UT	SDW07.09000	DW	Radiochemical / Alpha Counting	[EPA 907.0]	Plutonium	

**Priority: WPP09 -- Radiochem.: Radioactivity / Radionuclide**

	Eligible to Report	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
ed	Yes	UT	WPP09.01000	NPW	Proportional or Scintillation	[EPA 900]	Gross - alpha	
ed	Yes	UT	WPP09.03000	NPW	Proportional Counter	[EPA 900]	Gross - beta	
ed	Yes	UT	WPP09.05000	NPW	Precipitation	[EPA 903.0]	Radium - total	
ed	Yes	UT	WPP09.05010	NPW	Proportional	[EPA 903.0]	Radium - 226	
ed	Yes	UT	WPP09.06020	NPW	Co-Precipitation / Beta Counting	[EPA 904.0]	Radium - 228	
ed	Yes	UT	WPP09.07000	NPW	Gamma Spectrometry	[EPA 901.1]	Photon Emitters	
ed	Yes	UT	WPP09.08000	NPW	Precipitation / Beta Counting	[EPA 905.0]	Strontium - 89, 90	
ed	Yes	UT	WPP09.08100	NPW	Precipitation / Beta Counting	[EPA 905.0]	Strontium - 90	

**Priority: SHW09 -- Miscellaneous Parameters**

	Eligible to Report	NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
ed	Yes	UT	SHW09.60000	NPW, SCM	Proportional Counter	[SW-846 9310, Rev. 0, 9/86]	Gross - alpha-beta	
ed	Yes	UT	SHW09.60100	NPW, SCM	Precipitation	[SW-846 9315, Rev. 0, 9/86]	Alpha Emitting Radium Isotopes	

AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

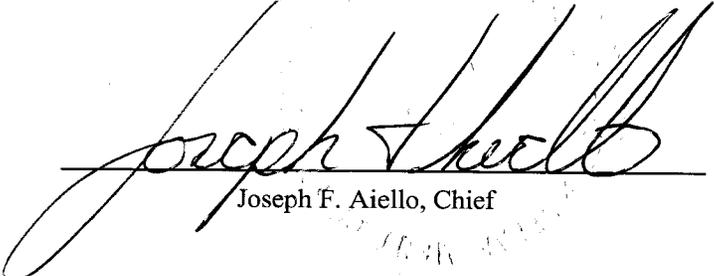
New Jersey Department of Environmental Protection  
 National Environmental Laboratory Accreditation Program  
**ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS**  
 Effective as of 07/01/2008 until 06/30/2009



Laboratory Name: EBERLINE SERVICES - OAK RIDGE Laboratory Number: TN004 Activity ID: NLC080001  
 CARBORO RD  
 OAK RIDGE, TN 37830

Activity: SHW09 -- Miscellaneous Parameters

Eligible to Report	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Yes	UT	SHW09.60110	NPW, SCM	Precipitation	[SW-846 9320, Rev. 0, 9/86]	Radium - 228

  
 \_\_\_\_\_  
 Joseph F. Aiello, Chief

E = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

# Chain of Custody Record

No 34919-A

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Page 1 of 5

09 061 15

Purchase Order #: \_\_\_\_\_

Project Name: FMC Chemical Corp. Project Number: FMC-RAS1-001  
 Send Report To: DAVID ROMAINE Sampler (Print Name): D. ROMAINE  
 Address: 2121 Jamieson Ave Sampler (Print Name):  
#1905 Shipment Method: Federal Express  
Alexandria, VA - 22314 Airbill Number:  
 Phone: 703.548.1314 <sup>201 Cell</sup> 615-6743 Laboratory Receiving: Ork Lunge  
 Fax: 888-496-5165

Analysis Requested  
Liquor Sec. Alcohol (LS)  
Gross Activity

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1130-01	6/15/09	09:22	LS-SURFACE	1 Vial	Floor	
2-1130-02	6/15/09	09:23	↓	1 Vial	Floor	
2-1130-03	6/15/09	09:24		1 Vial	Floor	
2-1130-04	6/15/09	09:26		1 Vial	Floor	
2-1130-05	6/15/09	09:29		1 Vial	Hand / Fume	
2-1130-06	6/15/09	09:30		1 Vial	Counter Top	
2-1130-07	6/15/09	09:31		1 Vial	Counter Top	
2-1130-08	6/15/09	09:33		1 Vial	Floor	
2-1130-09	6/15/09	09:34		1 Vial	Hand	
2-1130-10	6/15/09	09:35		1 Vial	Wall	
2-1130-11	6/15/09	09:36		1 Vial	Wall	
2-1130-12	6/15/09	09:37	1 Vial	SINK		
2-1130-13	6/15/09	09:40	1 Vial	Floor		
2-1135-01	6/15/09	10:01	1 Vial	RECEIVED JUN 25 2009 BY: KF	Floor	
2-1135-02	6/15/09	10:02	1 Vial		Floor	
2-1135-03	6/15/09	10:03	1 Vial		Counter Top	
2-1135-04	6/15/09	10:04	1 Vial		Counter Top	

Relinquished by: (Signature) 	Received by: (Signature) <u>For EYR SS.</u>	Date: <u>6/24/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) 	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No 3492 <sup>9-21</sup>

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Page 2 of 5

09 061 16

Purchase Order #: \_\_\_\_\_

Project Name: FMC-Chemical Corp. Project Number: FMC-2451-001  
 Send Report To: D. Lorraine Sampler (Print Name): D. Lorraine  
 Address: 2121 Jamieson Ave Sampler (Print Name):  
1905 Shipment Method: Federal Express  
Alexandria, VA. 22314 Airbill Number:  
 Phone: 201-218-0743 Laboratory Receiving: OAK Ridge  
 Fax: 888-496-3165

Analysis Requested  
LS Sme M - Coils Act

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
4 2-1135-05	6/15/09	10:09	LS-mem	1	Stainless Steel Top	
5 2-1135-06	↓	10:05	↓	1	Counter top	
6 2-1135-07		10:05		1	Wall	
7 2-1135-08		10:06		1	Floor	
8 2-1135-09		10:07		1	Floor	
9 2-1135-10		10:09		1	Bench top	
10 2-1135-11		10:10		1	Hand	
11 2-1135-12		10:11		1	Sink	
12 2-1135-13		10:11		1	Floor	
13 2-1140-01		10:23		1	Counter top	
14 2-1140-02		10:24		1	Cabinet	
15 2-1140-03	10:24	1	Floor			
16 2-1140-04	10:24	1	Sink			
17 2-1140-05	10:27	1	Hand			
18 2-1140-06	10:27	1	Hand			
19 2-1140-07	10:29	1	Floor			
20 2-1140-08	10:29	1				

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Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/22/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory):		
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround	Sample Receipt
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>	Total # Containers Received?
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>	COC Seals Present?
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>	COC Seals Intact?
				Other <input type="checkbox"/>	Other _____	Received Containers Intact?
						Temperature?



# Chain of Custody Record

No 3494

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: <i>Final Chemical Corp.</i>	Project Number: <i>Final-RASE-001</i>
Send Report To: <i>D. Romaine</i>	Sampler (Print Name): <i>D. Romaine</i>
Address: <i>2121 Samicson Ave. #1905 Alexandria, VA 22314</i>	Sampler (Print Name):
	Shipment Method: <i>Fed. Expt.</i>
Phone: <i>703.718.0743</i>	Airbill Number:
Fax: <i>555-496-3165</i>	Laboratory Receiving: <i>OMC Index</i>

Analysis Requested  
LS Specimen - Total AF.

Page 4 of 5

09 061 18

Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1150-13	6/15/09	10:43	LS Specimen	1	Floor	
2-1155-01	6/15/09	10:51	LS Specimen	1	Floor	
2-1155-02		10:51		1	Floor	
2-1155-03		10:52		1	Floor	
2-1155-04		10:57		1	Hood	
2-1155-05		10:54		1	Hood	
2-1155-06		10:55		1	Sink	
2-1155-07		10:55		1	Counter Top	
2-1155-08		10:56		1	Counter top	
2-1155-09		10:56		1	Wall	
2-1155-10		10:57		1	Floor	
2-1155-11	10:59	1	Countertop			
2-1155-12	11:07	1	Floor			
2-1155-13	11:01	1			Desk Panel	
2-1160-01		11:05		1	Floor	
2-1160-02		11:06		1	Floor	
2-1160-03		11:06		1	Sink	

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 JUN 25 2009  
 BY: *KF*

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/23/09</i>	Time: <i>0900</i>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

# Chain of Custody Record

No 3495 ✓

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: <i>FMC-CARP</i>	Project Number: <i>FMC-2001-001</i>
Send Report To: <i>D. ROMANE</i>	Sampler (Print Name): <i>DAVID ROMANE</i>
Address: <i>2121 SAMMERS WALK</i>	Sampler (Print Name):
<i>#1905</i>	Shipment Method: <i>FED EXP.</i>
<i>ALEXANDRIA, VA. 22314</i>	Airbill Number:
Phone: <i>701.218.0743</i>	Laboratory Receiving: <i>Oak Ridge</i>
Fax: <i>888-496-3165</i>	

Analysis Requested  
LS-SM-MC-TOH-MT

09 061 19

Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)			
4 2-1160-04	6/15/09		Snow	1	Hand				
5 2-1160-05	}	}	}	1	Hand				
6 2-1160-06				1	Countertop				
7 2-1160-07				1	Floor				
8 2-1160-08				1	Floor				
9 2-1160-09				1	Floor				
0 2-1160-10				1	Countertop				
1 2-1160-11				1	Floor				
2 2-1160-12				1	Wall				
3 2-1160-13				1	Wall				
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>RECEIVED</b>                  JUN 25 2009                  BY: <b>KF</b> </div>									

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/23/09</i>	Time: <i>09:00</i>	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level      Turnaround Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>09:30</i>	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	



# Chain of Custody Record

No 3487

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: *FMC-Chemical Corp.* Project Number: *FMC-12452-001*  
 Send Report To: *D. Romantze* Sampler (Print Name): *D. Romantze*  
 Address: *2121 SAMUELSON AVE* Sampler (Print Name):  
*#1905* Shipment Method: *Fed Exp.*  
*ALEXANDRIA, VA 22314* Airbill Number:  
 Phone: Laboratory Receiving:  
 Fax:

Analysis Requested  
*CS - Storage Containers - Asst.*

Page 2 of 8  
 09 061 21  
 Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
4 2-1165-05	4/16/09	08:13	Soil	1	Counted	
5 2-1165-06		08:14		1	Floor	
6 2-1165-07		08:14		1	Floor	
7 2-1165-08		08:15		1	Floor	
8 2-1165-09		08:15		1	Wall	
9 2-1165-10		08:16		1	Floor	
10 2-1165-11		08:16		1	Sink	
11 2-1165-12		08:17		1	Counted	
12 2-1165-13		08:17		1	Floor	
13 2-1175-01		09:11		1	Floor	
14 2-1175-02		09:12		1	Floor	
15 2-1175-03		09:12		1	Floor	
16 2-1175-04		09:13		1	Floor	
17 2-1175-05		09:14		1	Floor	
18 2-1175-06		09:15		1	Wall	
19 2-1175-07		09:15		1	Counted	
20 2-1175-08		09:15		1	Sink	

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Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Fed Express</i>	Date: <i>6/23/09</i>	Time: <i>09:17</i>	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level Level I <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> Other <input type="checkbox"/> Turnaround Routine <input type="checkbox"/> 24 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> Other _____
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>09:30</i>	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

# Chain of Custody Record

No 3488 *gjh*

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: <i>FMC-Chemical Corp.</i>	Project Number: <i>FMC-Phase-001</i>
Send Report To: <i>D. Romane</i>	Sampler (Print Name): <i>D. Romane</i>
Address: <i>2121 Sampson Ave</i>	Sampler (Print Name):
<i>1905</i>	Shipment Method: <i>Fed. Exp.</i>
<i>Alexandria, VA 22314</i>	Airbill Number:
Phone: <i>201.218.0743</i>	Laboratory Receiving: <i>Oak Ridge</i>
Fax: <i>888-496-3165</i>	

Analysis Requested  
*LS Sample Cust AT*

Page 3 of 8

09 061 22

Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1175-09	<i>4/14/09</i>	<i>09:16</i>	<i>Swarm</i>	1	<i>Floor</i>	
2-1175-10	<i>[Large bracket]</i>	<i>09:14</i>	<i>[Large bracket]</i>	1	<i>Floor</i>	
2-1175-11		<i>09:17</i>		1	<i>Floor</i>	
2-1175-12		<i>09:18</i>		1	<i>Floor</i>	
2-1175-13		<i>09:21</i>		1	<i>Wall</i>	
2-1210-01		<i>09:41</i>		1	<i>Floor</i>	
2-1210-02		<i>09:42</i>		1	<i>Floor</i>	
2-1210-03		<i>09:43</i>		1	<i>Floor</i>	
2-1210-04		<i>09:44</i>		1	<i>Sink</i>	
2-1210-05		<i>09:44</i>		1	<i>Floor</i>	
2-1210-06		<i>09:45</i>		1	<i>Floor</i>	
2-1210-07		<i>09:46</i>		1	<i>Floor</i>	
2-1210-08		<i>09:44</i>		1	<i>Floor</i>	
2-1210-09	<i>09:47</i>	1	<i>Floor</i>			
2-1210-10	<i>09:48</i>	1	<i>Counter</i>			
2-1210-11	<i>10:01</i>	1	<i>Counter</i>			
2-1210-12	<i>10:02</i>	1	<i>Counter</i>			

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Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>4/23/09</i>	Time: <i>0910</i>	Sample Custodian Remarks (Completed By Laboratory):		
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround	Sample Receipt
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>	Total # Containers Received?
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>	COC Seals Present?
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>	COC Seals Intact?
				Other <input type="checkbox"/>	Other _____	Received Containers Intact?
						Temperature?

# Chain of Custody Record

No

3489  
CA

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



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09 061 23

Purchase Order #: \_\_\_\_\_

Project Name: ENC-CHEMICAL CORP Project Number: FMC-BASE-001  
 Send Report To: D. ROMANIE Sampler (Print Name): D. ROMANIE  
 Address: 2121 SAMICSON AVE Sampler (Print Name):  
#1905 Shipment Method: FED-EXP.  
ALEXANDRIA, VA. 22314 Airbill Number:  
 Phone: 701.215.0743 Laboratory Receiving: Oak Ridge.  
 Fax: 888-494-3165

Analysis Requested

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1210-13	6/16/09	10:02	LS GROUT	1	Wall.	
2-1205-01	[Large bracket]	10:11	[Large bracket]	1	Floor	
2-1205-02		10:12		1	Floor	
2-1205-03		10:14		1	Floor	
2-1205-04		10:14		1	Sink	
2-1205-05		10:17		1	Floor	
2-1205-06		10:17		1	Floor	
2-1205-07		10:18		1	Floor	
2-1205-08		10:19		1	Floor	
2-1205-09		10:19		1	Counted	
2-1205-10		10:20		1	Counted	
2-1205-11		10:20		1	Floor	
2-1205-12		10:21		1	Floor	
2-1205-13		10:22		1	Floor	
2-1205-14 <small>dup 2-1230-01 with 09.</small>	10:51	1	Floor			
2-1230-02	10:52	1	Floor			
2-1230-03	10:53	1	Floor			

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Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>FUN. EXPRESS.</u>	Date: <u>6/17/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory):		
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround	Sample Receipt
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>	Total # Containers Received?
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>	COC Seals Present?
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>	COC Seals Intact?
				Other <input type="checkbox"/>	Other _____	Received Containers Intact?
						Temperature?

# Chain of Custody Record

No 3490 *✓ [Signature]*

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



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09 061 24

Purchase Order #: \_\_\_\_\_

Project Name: <i>FML - Chemical Corp.</i>	Project Number: <i>FML - RASD-011</i>
Send Report To: <i>D. Romaniuk</i>	Sampler (Print Name): <i>D. Romaniuk</i>
Address: <i>2121 SAMICORN AVE</i>	Sampler (Print Name):
<i>#1905</i>	Shipment Method: <i>FEA - EXP.</i>
<i>Alexandria, VA 22314</i>	Airbill Number:
Phone: <i>201-218-0743</i>	Laboratory Receiving: <i>ONE KILGAL</i>
Fax: <i>888 496 3165</i>	

Analysis Requested  
*LS Small Green Mt.*

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
<i>2-1230-04</i>	<i>6/16/09</i>	<i>10:54</i>	<i>SS/soil</i>	<i>1</i>	<i>Floor</i>	
<i>2-1230-05</i>		<i>10:54</i>		<i>1</i>	<i>counter</i>	
<i>2-1230-04</i>		<i>10:55</i>		<i>1</i>	<i>counter</i>	
<i>2-1230-07</i>		<i>10:55</i>		<i>1</i>	<i>Sink</i>	
<i>2-1230-08</i>		<i>10:56</i>		<i>1</i>	<i>Floor</i>	
<i>2-1230-09</i>		<i>10:57</i>		<i>1</i>	<i>Wall</i>	
<i>2-1230-10</i>		<i>10:58</i>		<i>1</i>	<i>Floor</i>	
<i>2-1230-11</i>		<i>10:58</i>		<i>1</i>	<i>Floor</i>	
<i>2-1270-12</i>		<i>11:00</i>		<i>1</i>	<i>Floor</i>	
<i>2-1230-13</i>		<i>11:00</i>		<i>1</i>	<i>Floor</i>	
<i>2-1245-01</i>		<i>11:10</i>		<i>1</i>	<i>Floor</i>	
<i>2-1245-02</i>		<i>11:11</i>		<i>1</i>	<i>door</i>	
<i>2-1245-03</i>		<i>11:11</i>		<i>1</i>	<i>door</i>	
<i>2-1245-04</i>		<i>11:12</i>		<i>1</i>	<i>Sink</i>	
<i>2-1245-05</i>		<i>11:13</i>		<i>1</i>	<i>Floor</i>	
<i>2-1245-06</i>		<i>11:14</i>		<i>1</i>	<i>Floor</i>	
<i>2-1245-07</i>		<i>11:15</i>		<i>1</i>	<i>counter</i>	

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BY: *KF*

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>FEA - EXP.</i>	Date: <i>6/23/09</i>	Time: <i>0900</i>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No 3481

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



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Purchase Order #: \_\_\_\_\_

Project Name: *FMC - chemical Cent* Project Number: *FMC-RASZ-001*  
 Send Report To: *D. Romanik* Sampler (Print Name): *D. Romanik*  
 Address: *2171 Samieson Ave* Sampler (Print Name):  
*#1905* Shipment Method: *Gen. Exp.*  
*Alexandria, VA. 22314* Airbill Number:  
 Phone: *701. 218. 6743* Laboratory Receiving: *OMC Dept.*  
 Fax: *558-496-3165*

Analysis Requested  
US Screen Over Mesh

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1245-08	6/16/09	11:15	Smell	1	Floor	
2-1245-09		11:14		1	Floor	
2-1245-10		11:16		1	Floor	
2-1245-11		11:17		1	Wall	
2-1245-12		11:18		1	Counter	
2-1245-13		11:19		1	Counter	
2-1250-01		11:28		1	Counter	
2-1250-02		11:28		1	Hand	
2-1250-03		11:30		1	Sink	
2-1250-04		11:31		1	Floor	
2-1250-05		11:32		1	Floor	
2-1250-06		11:40		1	Floor	
2-1250-07		11:41		1	Counter	
2-1250-08		11:41		1	Counter	
2-1250-09		11:42		1	Floor	
2-1250-10		11:43		1	Counter	
2-1250-11		11:45		1	Floor	

RECEIVED  
JUN 25 2009  
BY: PF

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 6/23/09	Time: 09:00	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level      Turnaround Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: 6/25/09	Time: 09:30	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

# Chain of Custody Record

No

3482 ✓

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: D. Roman NE FMC Project Number: FMC-R081-001  
 Send Report To: D. Roman Sampler (Print Name): D. Roman  
 Address: 2121 SAMUELSON AVE Sampler (Print Name):  
1905 Shipment Method: Fed Exp.  
ALEXANDRIA VA. 22314 Airbill Number:  
 Phone: Laboratory Receiving: OTM Rudge  
 Fax:

Analysis Requested  
US Smears Glass Mat

Page 7 of 5  
**09 061 26**  
 Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1250-12	6/12/09	11:46	Smear	1	Floor	
2-1250-13		11:47		1	Floor	
2-1255-01		13:41		1	Counter	
2-1255-02		13:41		1	Counter	
2-1255-03		13:42		1	Floor	
2-1255-04		13:44		1	Hoop	
2-1255-05		13:44		1	Hoop	
2-1255-06		13:45		1	Sink	
2-1255-07		14:01		1	Floor	
2-1255-08		14:01		1	Counter	
2-1255-09		14:02		1	Floor	
2-1255-10		14:03		1	Counter	
2-1255-11		14:04		1	Hoop	
2-1255-12		14:04		1	Hoop	
2-1255-13		14:05		1	Floor	
2-1474-01		16:17		1	Floor	
2-1474-02		14:18		1	Hoop	

RECEIVED  
 JUN 25 2009  
 BY: KF

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/23/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No 3483

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: FMC Chemical Corp Project Number: FMC-RAS2-001  
 Send Report To: D. Remane Sampler (Print Name): D. Remane  
 Address: 2131 Samieson Ave Sampler (Print Name):  
1905 Shipment Method: Fed Exp.  
Alexandria, VA. 22314 Airbill Number:  
 Phone: Laboratory Receiving: OAK Page  
 Fax:

Analysis Requested  
 by S. Myers - Cross Ref.

Page 8 of 8  
**09 061 27**  
 Purchase Order #:

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1474-03	6/16/09	16:18	Smears	1	door	
2-1474-04	}	16:22	}	1	door	
2-1474-05		16:23		1	Sink	
2-1474-06		16:24		1	door	
2-1474-07		16:24		1	counter	
2-1474-08		16:27		1	counter	
2-1474-09		16:27		1	Floor	
2-1474-10		16:28		1	Floor	
2-1474-11		16:28		1	door	
2-1474-12		16:30		1	Floor	
2-1474-13		16:30		1	Wall	
2-						

**RECEIVED**  
 JUN 25 2009  
 BY:

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

# Chain of Custody Record

No

3485

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Page 1 of 9

09 061 28

Purchase Order #: \_\_\_\_\_

Project Name: FMC-Chem. Corp Project Number: FMC-NASR-001  
 Send Report To: D. Romaine Sampler (Print Name): D. Romaine  
 Address: 2121 SAMMISON AVE Sampler (Print Name):  
19195 Shipment Method:  
Alexandria VA 22314 Airbill Number:  
 Phone: 201 218 0743 Laboratory Receiving: OALC Logo  
 Fax: 888-496-3165

Analysis Requested  
US Service Center 1/27

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
4 2-2135-01	6/27/09	07:01	Smear	1	Floor	
5 2-2135-02		07:02		1	Floor	
6 2-2135-03		07:02		1	Counter	
7 2-2135-04		07:03		1	Counters	
8 2-2135-05		07:03		1	Floor	
9 2-2135-04		07:04		1	Sink	
10 2-2135-07		07:05		1	Hood	
11 2-2135-08		07:05		1	Hood	
12 2-2135-09		07:06		1	Floor	
13 2-2135-10		07:09		1	Floor	
14 2-2135-11		07:10		1	Hood	
15 2-2135-12		07:11		1	Floor	
16 2-2135-13		07:11		1	Wall	
17 2-2240-01		07:29		1	Floor	
18 2-2240-02		07:29		1	Floor	
19 2-2240-03		07:30		1	Floor	
20 2-2240-04		07:31		1	Floor	

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JUN 25 2009  
BY: KE

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: 6/27/09	Time: 0900	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level      Turnaround Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____	Sample Receipt	
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: 6/25/09	Time: 0930		Total # Containers Received?	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:		COC Seals Present?	
				Received Containers Intact?		
				Temperature?		

# Chain of Custody Record

No 3476

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: <u>FMC</u>	Project Number: <u>FMC-LASD-061</u>
Send Report To: <u>D. LOMANE</u>	Sampler (Print Name): <u>D. LOMANE</u>
Address: <u>2121 JAMESON AVE</u>	Sampler (Print Name):
<u>#1905</u>	Shipment Method:
<u>Alexandria, VA 22314</u>	Airbill Number:
Phone:	Laboratory Receiving: <u>DATE</u>
Fax:	

Analysis Requested  
5 Swab Cass Kit

Page 2 of 9

09 06129

Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-2248-05	6/17/09	07:31	SWAB	1	Floor	
2-2240-06		07:32		1	Floor	
2-2240-07		07:33		1	Hand	
2-2240-08		07:34		1	Hand	
2-2240-09		07:35		1	Floor	
2-2240-10		07:36		1	Side	
2-2240-11		07:36		1	Floor	
2-2240-12		07:37		1	Floor	
2-2240-13		07:37		1	Counter-top	
2-2260-01		07:41		1	Floor	
2-2260-02		07:41		1	Floor	
2-2260-03		07:42		1	Floor	
2-2260-04		07:43		1	Wall	
2-2260-05		07:44		1	Counter top	
2-2260-06		07:44		1	Counter top	
2-2260-07		07:45		1	Hand	
2-2260-08		07:45		1	Hand	

RECEIVED  
JUN 25 2009  
BY: KF

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/27/09</u>	Time: <u>0910</u>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No 3477 *ent*

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: <i>FMC</i>	Project Number: <i>FMC-LASE-001</i>
Send Report To: <i>D. Romane</i>	Sampler (Print Name): <i>D. Romane</i>
Address: <i>2121 Sam Houston Ave</i>	Sampler (Print Name):
<i>#1905</i>	Shipment Method:
<i>Alexandria, VA 22314</i>	Airbill Number:
Phone: <i>701-218-0443</i>	Laboratory Receiving:
Fax: <i>888-496-3165</i>	

Analysis Requested  
*US SINGAR (over RT)*

Page 3 of 9

**09 061 30**

Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-2260-09	<i>6/17/09</i>	<i>07:46</i>	<i>Green</i>	1	<i>Counter top</i>	
2-2260-10		<i>07:47</i>		1	<i>Floor</i>	
2-2260-11		<i>07:47</i>		1	<i>Floor</i>	
2-2260-12		<i>07:48</i>		1	<i>Floor</i>	
2-2260-13		<i>07:48</i>		1	<i>Wall</i>	
2-2265-01		<i>07:53</i>		1	<i>Floor</i>	
2-2265-02		<i>07:53</i>		1	<i>Floor</i>	
2-2265-03		<i>07:54</i>		1	<i>Wall</i>	
2-2265-04		<i>07:55</i>		1	<i>Counter top</i>	
2-2265-05		<i>07:55</i>		1	<i>Counter top</i>	
2-2265-06		<i>07:56</i>		1	<i>Floor</i>	
2-2265-07		<i>07:57</i>		1	<i>Floor</i>	
2-2265-08		<i>07:58</i>		1	<i>Sink</i>	
2-2265-09		<i>07:59</i>		1	<i>Floor</i>	
2-2265-10		<i>08:00</i>		1	<i>Counter top</i>	
2-2265-11		<i>08:00</i>		1	<i>Floor</i>	
2-2265-12		<i>08:01</i>		1	<i>Floor</i>	

**RECEIVED**  
JUN 25 2009  
BY: *KF*

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/23/09</i>	Time: <i>0900</i>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____

Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	



# Chain of Custody Record

No 3479 *Q.H.*

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: *FMC* Project Number: *FMC-021-021*  
 Send Report To: *D. P. ...* Sampler (Print Name): *D. P. ...*  
 Address: *2121 ...* Sampler (Print Name):  
*1905* Shipment Method:  
*...* Airbill Number:  
 Phone: Laboratory Receiving:  
 Fax:

Analysis Requested  
*US Small Coars Net.*

Page 5 of 9  
**09 061 35**  
 Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
<i>GC-10-4</i>	<i>6/17/09</i>	<i>10:12</i>	<i>Soil</i>	<i>1</i>	<i>Wall</i>	
<i>GC-10-5</i>		<i>10:43</i>		<i>1</i>	<i>Its Door</i>	
<i>GC-10-6</i>		<i>10:43</i>		<i>1</i>	<i>Table</i>	
<i>GC-10-7</i>		<i>10:44</i>		<i>1</i>	<i>Table</i>	
<i>GC-10-8</i>		<i>10:44</i>		<i>1</i>	<i>Floor Drain</i>	
<i>GC-10-9</i>		<i>10:45</i>		<i>1</i>	<i>Floor</i>	
<i>GC-10-10</i>		<i>10:45</i>		<i>1</i>	<i>Table</i>	
<i>GC-10-11</i>		<i>10:46</i>		<i>1</i>	<i>Floor</i>	
<i>GC-10-12</i>		<i>10:46</i>		<i>1</i>	<i>Wall</i>	
<i>GC-10-13</i>		<i>10:47</i>		<i>1</i>	<i>Wall</i>	
<i>GC-15-01</i>		<i>0840</i>		<i>1</i>	<i>Floor</i>	
<i>GC-15-02</i>		<i>0840</i>		<i>1</i>	<i>Floor</i>	
<i>GC-15-03</i>		<i>0841</i>		<i>1</i>	<i>Floor</i>	
<i>GC-15-04</i>		<i>0842</i>		<i>1</i>	<i>Drain</i>	
<i>GC-15-05</i>		<i>0843</i>		<i>1</i>	<i>Wall</i>	
<i>GC-15-06</i>		<i>0844</i>		<i>1</i>	<i>Wall</i>	
<i>GC-15-07</i>		<i>0845</i>		<i>1</i>	<i>Wall</i>	

RECEIVED  
JUN 25 2009  
BY: *KF*

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0900</i>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No 3480  
*Q.H.*

Eberline Services  
 601 Scarboro Road  
 Oak Ridge, TN 37830  
 (865) 481-0683 Phone • (865) 483-4621 Fax



Project Name: *FMC* Project Number: *FMC-10K-001*  
 Send Report To: *D. Romanick* Sampler (Print Name): *D. Romanick*  
 Address: *2121 Samieson Ave* Sampler (Print Name):  
*1905* Shipment Method:  
*Hexammina, VA. 22314* Airbill Number:  
 Phone: Laboratory Receiving:  
 Fax:

Analysis Requested  
*15' SPAN (WATER NET)*

Page *6* of *9*  
**09 061 36**  
 Purchase Order #: \_\_\_\_\_

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
<i>GC-15-08</i>	<i>6/17/09</i>	<i>0846</i>	<i>SPAN</i>	<i>1</i>	<i>Table</i>	
<i>GC-15-09</i>		<i>0846</i>		<i>1</i>	<i>Table</i>	
<i>GC-15-10</i>		<i>0847</i>		<i>1</i>	<i>Trk Door</i>	
<i>GC-15-11</i>		<i>0848</i>		<i>1</i>	<i>Table</i>	
<i>GC-15-12</i>		<i>0849</i>		<i>1</i>	<i>Floor</i>	
<i>GC-15-13</i>		<i>0850</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-1</i>		<i>0910</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-2</i>		<i>0910</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-7</i>		<i>0911</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-4</i>		<i>0912</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-5</i>		<i>0912</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-6</i>		<i>0913</i>		<i>1</i>	<i>Dish</i>	
<i>GH-5-7</i>		<i>0913</i>		<i>1</i>	<i>Dish</i>	
<i>GH-5-8</i>		<i>0915</i>		<i>1</i>	<i>Dish</i>	
<i>GH-5-9</i>		<i>0915</i>		<i>1</i>	<i>Floor</i>	
<i>GH-5-10</i>		<i>0917</i>		<i>1</i>	<i>Trk Door</i>	
<i>GH-5-11</i>		<i>0917</i>		<i>1</i>	<i>Floor</i>	

RECEIVED  
 JUN 25 2009  
 BY: *K F*

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0910</i>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature)	Received by: (Signature) <i>[Signature]</i>	Date: <i>6/25/09</i>	Time: <i>0930</i>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	



# Chain of Custody Record

No

3472  
a ff

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



**EBERLINE**  
SERVICES

Page 5 of 9

09 061 39

Purchase Order #: \_\_\_\_\_

Project Name: <u>Fmc</u>	Project Number: <u>FMC - PASD-001</u>
Send Report To: <u>D. Romane</u>	Sampler (Print Name): <u>D. Romane</u>
Address: <u>2121 Samicson Ave</u>	Sampler (Print Name):
<u>1905</u>	Shipment Method: <u>FEV Exp.</u>
<u>Mecannon, Va. 22314</u>	Airbill Number:
Phone: <u>201.218.0743</u>	Laboratory Receiving: <u>DMelroy</u>
Fax:	

Analysis Requested  
US. Smears (wall, etc)

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)	
<u>NW-3</u>	<u>6/17/09</u>	<u>10:02</u>	<u>Smear</u>	<u>1</u>	<u>Sink</u>		
<u>NW-4</u>	}	<u>1003</u>	}	<u>1</u>	<u>Sink</u>		
<u>NW-5</u>		<u>1003</u>		<u>1</u>	<u>Its sink</u>		
<u>NW-6</u>		<u>1004</u>		<u>1</u>	<u>Dissol</u>		
<u>NW-7</u>		<u>1004</u>		<u>1</u>	<u>Diss Sol</u>		
<u>NW-8</u>		<u>1006</u>		<u>1</u>	<u>Diss Sol</u>		
<u>NW-9</u>		<u>1007</u>		<u>1</u>	<u>Diss Sol</u>		
<u>NW-10</u>		<u>1007</u>		<u>1</u>	<u>Floor</u>		
<u>NW-11</u>		<u>1008</u>		<u>1</u>	<u>Floor</u>		
<u>NW-12</u>		<u>1008</u>		<u>1</u>	<u>Floor</u>		
<u>NW-13</u>		<u>1009</u>		<u>1</u>	<u>Floor</u>		
<u><del>2-1465-1</del> 2-1465-1</u>		<u>10:22</u>		<u>1</u>		<u>Its Door</u>	
<u>2-1465-2</u>		<u>10:23</u>		<u>1</u>		<u>Floor</u>	
<u>2-1465-3</u>		<u>10:23</u>		<u>1</u>		<u>Sink f.</u>	
<u>2-1465-4</u>	<u>10:23</u>	<u>1</u>		<u>Shelf</u>			
<u>2-1465-5</u>	<u>10:24</u>	<u>1</u>		<u>Wall</u>			
<u>2-1465-6</u>	<u>10:25</u>	<u>1</u>		<u>Wall</u>			

RECEIVED  
 JUN 19 2009  
 BY KF

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/17/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory):	
Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>6/25/09</u>	Time: <u>0930</u>	QA/QC Level	Turnaround
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	Level I <input type="checkbox"/>	Routine <input type="checkbox"/>
				Level II <input type="checkbox"/>	24 Hour <input type="checkbox"/>
				Level III <input type="checkbox"/>	1 Week <input type="checkbox"/>
				Other <input type="checkbox"/>	Other _____
				Sample Receipt	
				Total # Containers Received?	
				COC Seals Present?	
				COC Seals Intact?	
				Received Containers Intact?	
				Temperature?	

# Chain of Custody Record

No

3473

Eberline Services  
601 Scarboro Road  
Oak Ridge, TN 37830  
(865) 481-0683 Phone • (865) 483-4621 Fax



Page 9 of 9

09 061 40

Purchase Order #: \_\_\_\_\_

Project Name: FMC Project Number: FMC-RASP-051  
 Send Report To: D. Romane Sampler (Print Name): D. Romane  
 Address: 2121 SAMICUS WJ Sampler (Print Name):  
1905 Shipment Method: ref exp.  
Alexandria, VA. 22314 Airbill Number:  
 Phone: 701.218.0743 Laboratory Receiving: OAK Ridge  
 Fax:

Analysis Requested  
US Surface Cores AA

Field Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Comments, Special Instructions, etc.	Lab Sample ID (to be completed by lab)
2-1465-7	6/16/09	10:26	Smear	1	Floor	
2-1465-8		10:26		1	Floor	
2-1465-9		10:27		1	Floor	
2-1465-10		10:29		1	Floor	
2-1465-11		10:29		1	Wall	
2-1465-12		10:30		1	Wall	
2-1465-13		10:31		1	Wall	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>RECEIVED</b>                  JUN 25 2009                  BY: KF             </div>						

Relinquished by: (Signature) 	Received by: (Signature) <u>KA Evers</u>	Date: <u>6/23/09</u>	Time: <u>0900</u>	Sample Custodian Remarks (Completed By Laboratory): QA/QC Level Level I <input type="checkbox"/> Routine <input type="checkbox"/> Level II <input type="checkbox"/> 24 Hour <input type="checkbox"/> Level III <input type="checkbox"/> 1 Week <input type="checkbox"/> Other <input type="checkbox"/> Other _____
Relinquished by: (Signature)	Received by: (Signature) 	Date: <u>6/25/09</u>	Time: <u>0930</u>	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:	

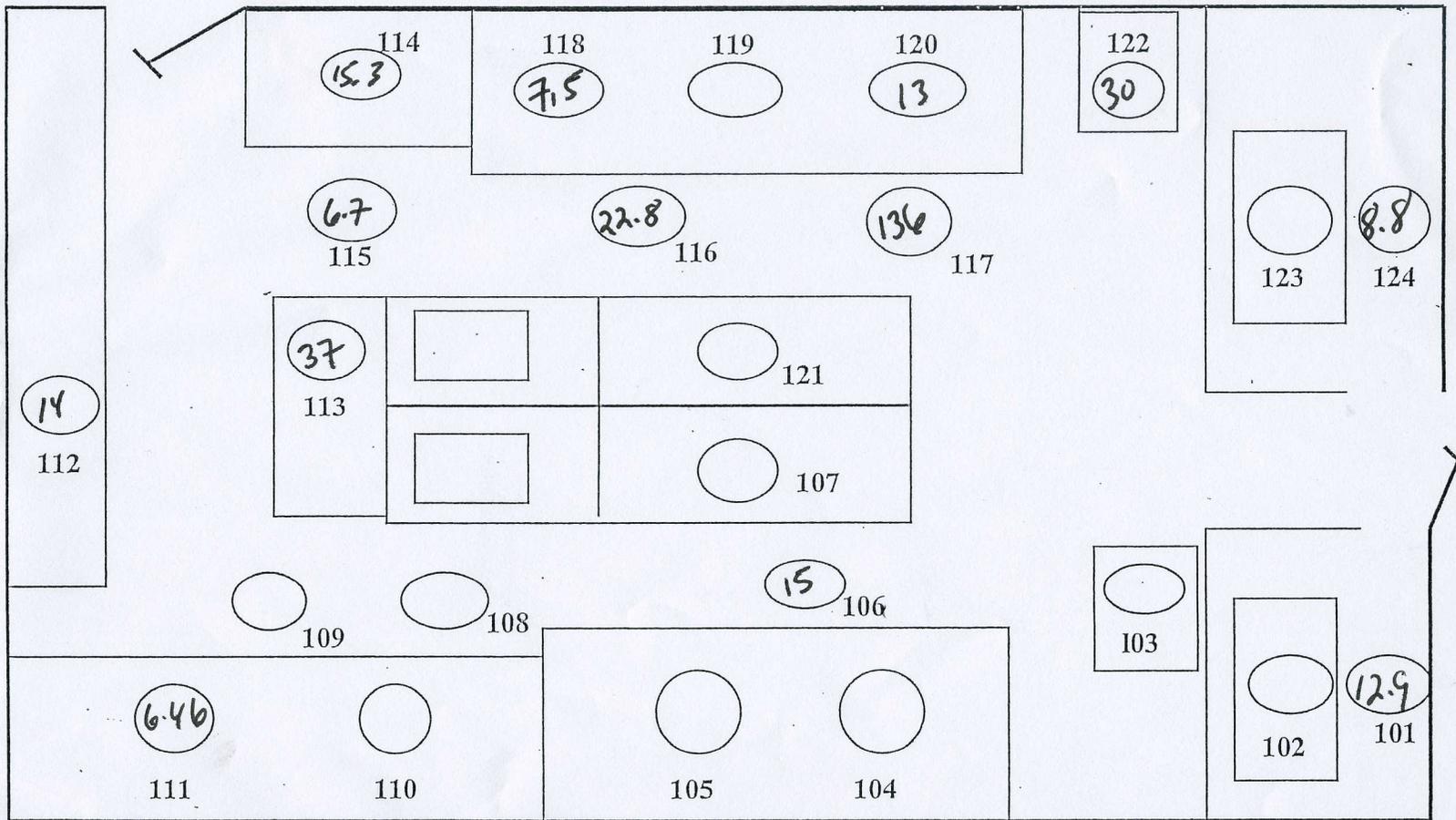
Sample Receipt	
Total # Containers Received?	
COC Seals Present?	
COC Seals Intact?	
Received Containers Intact?	
Temperature?	

## **ATTACHMENT 2**

Lab 2-1130

Date 06 / 15 / 2009

WIPE TEST SCHEMATIC Initials dlc \* GEIGER MONTH  YES  NO



All scans were  $\leq$  Background.  
Background = 28 cpm

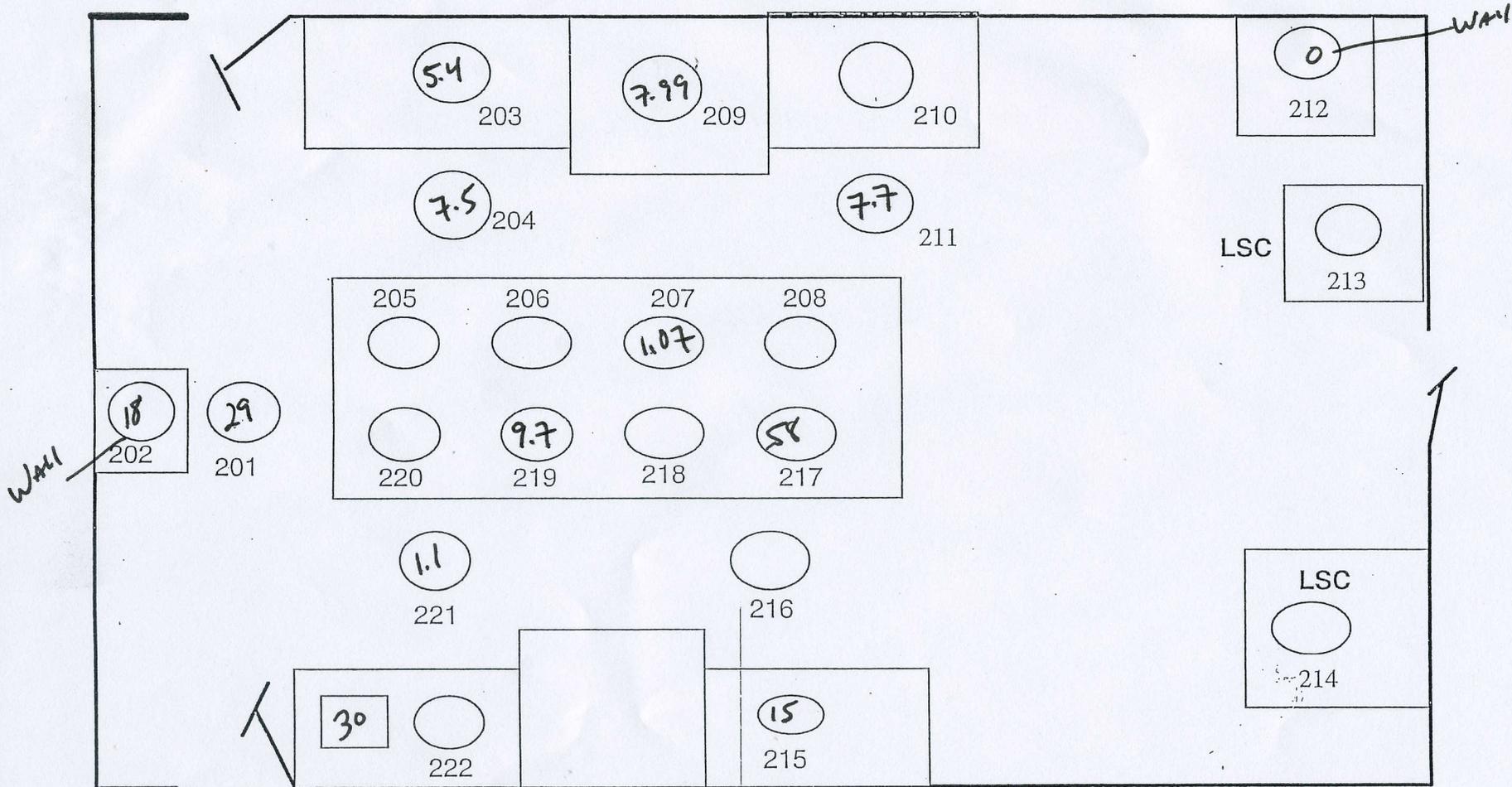
Numbers indicate FMC Survey points.  
(N/A)

(#) = Smear Location AND smear @ Result.

Lab 2-1135

Date 06 / 15 / 2009

WIPE TEST SCHEMATIC Initials dh GEIGER MONTH  YES  NO



All scans were  $\leq$  Background.  
Background = 30cpm

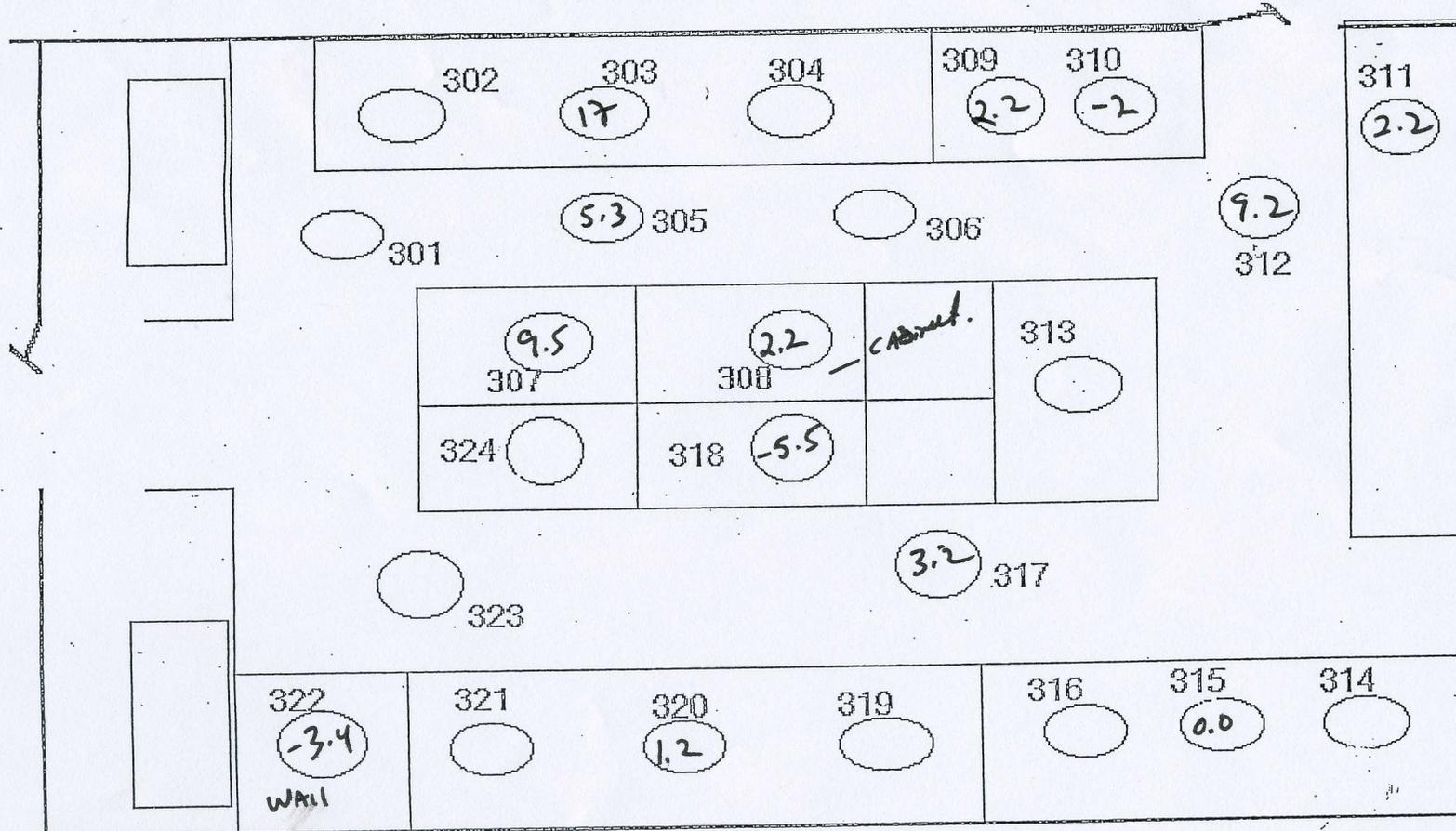
Number represent Fmc's survey points (N/A)

(#) = smear location

Lab 2-1140

Date 06 / 15 / 2009

WIPE TEST SCHEMATIC Initials dlr GEIGER MONTH  YES  NO



All scans were  $\leq$  Background.

Background  $> 22$  cpm

(#) = Smear Location with Activity result.

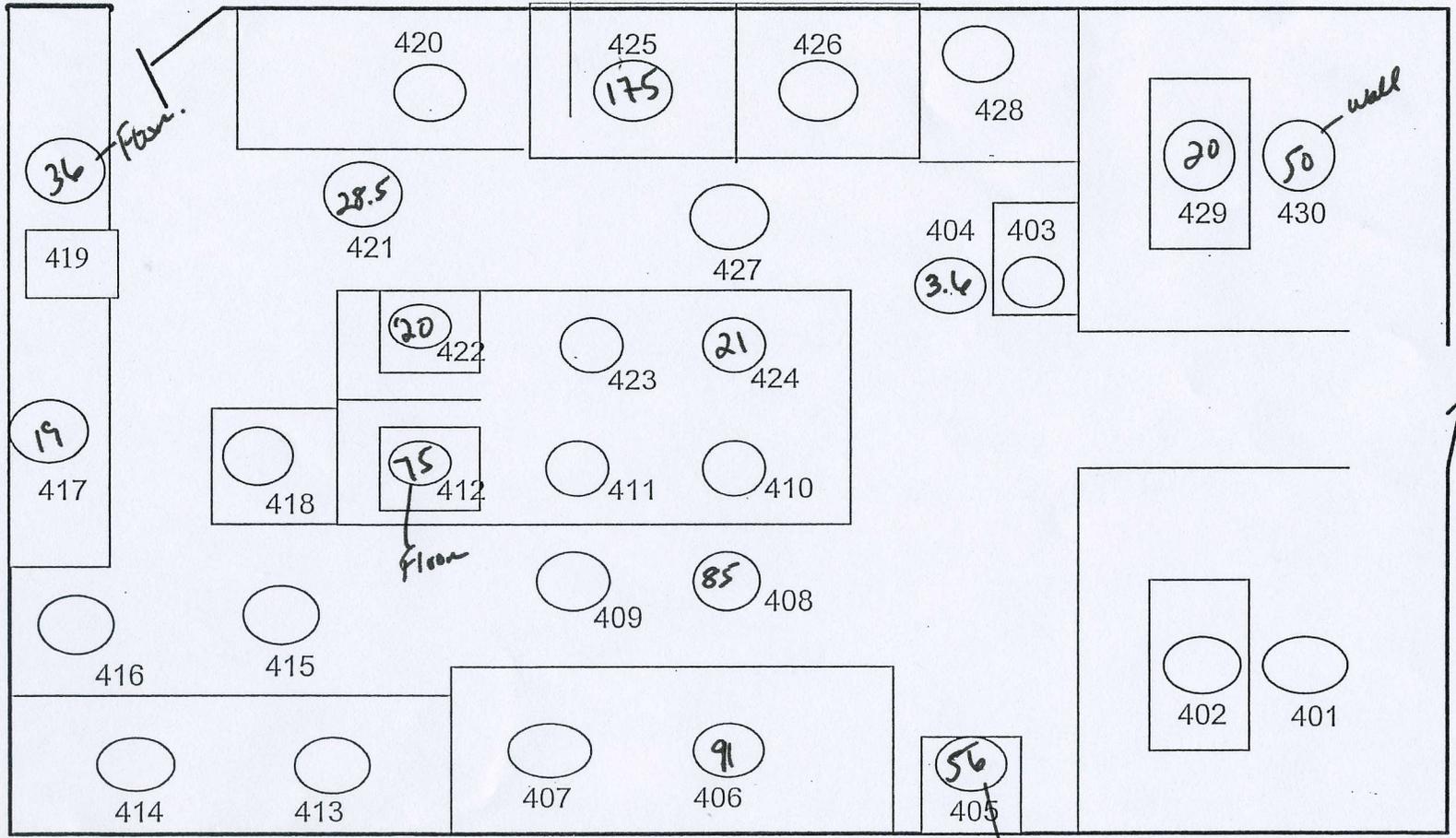
Numbers indicated FMC Survey points (N/A)

Lab 2-1150

Date 06 / 15 / 2009

WIPE TEST SCHEMATIC Initials dlr

GEIGER MONTH  YES  NO



All scans  $\leq$  Background.  
Background = 33 cpm.

⊕ = Smear location with smear result.  
Numbers are Pmc survey points (N/A)

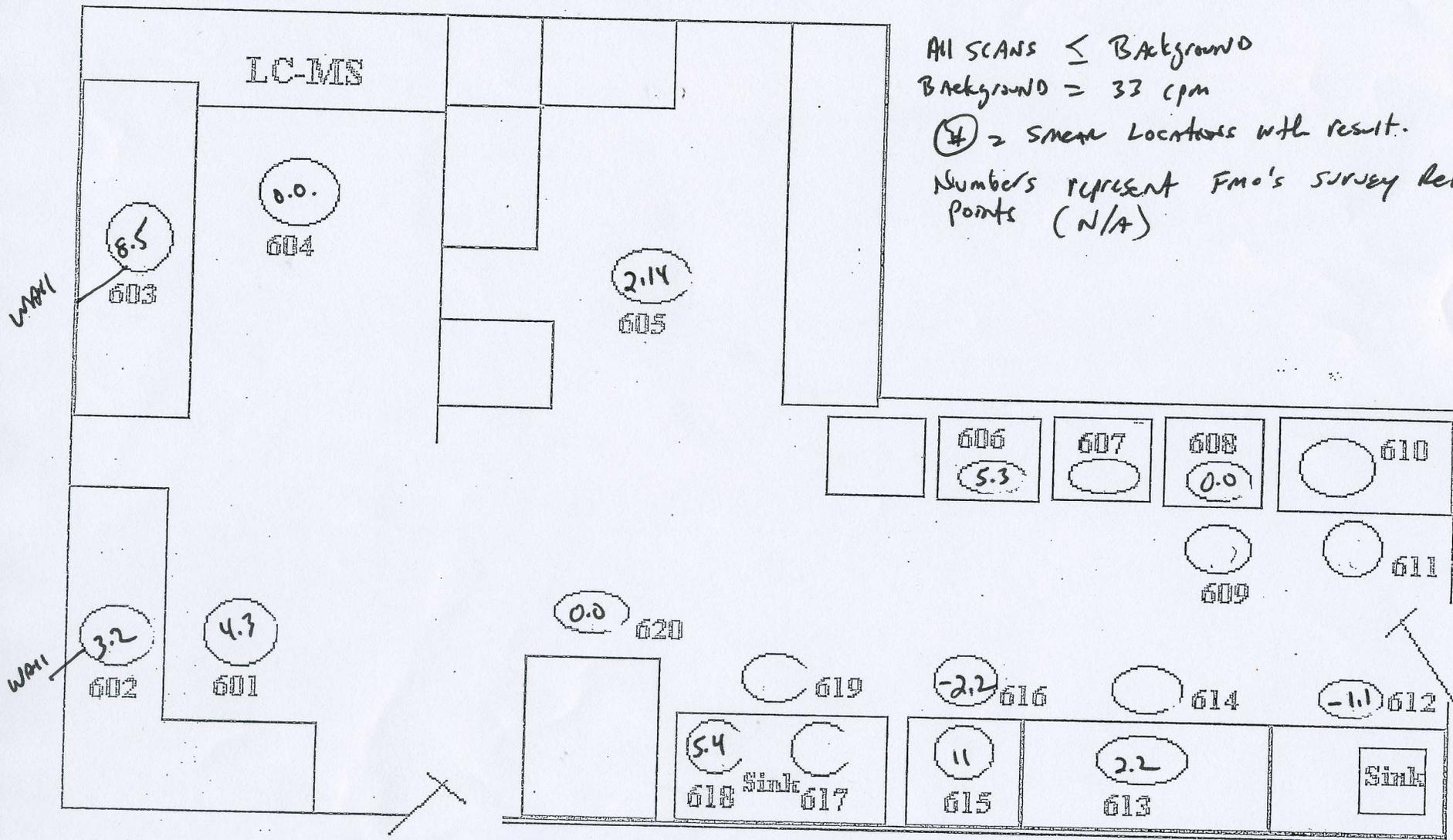


Lab 2-1160

Date 06 / 15 / 2009

WIPE TEST SCHEMATIC Initials dm

GEIGER MONTH  YES  NO



Lab 2-1162

Date 06 / 16 / 2009

WIPE TEST SCHEMATIC Initials dlr

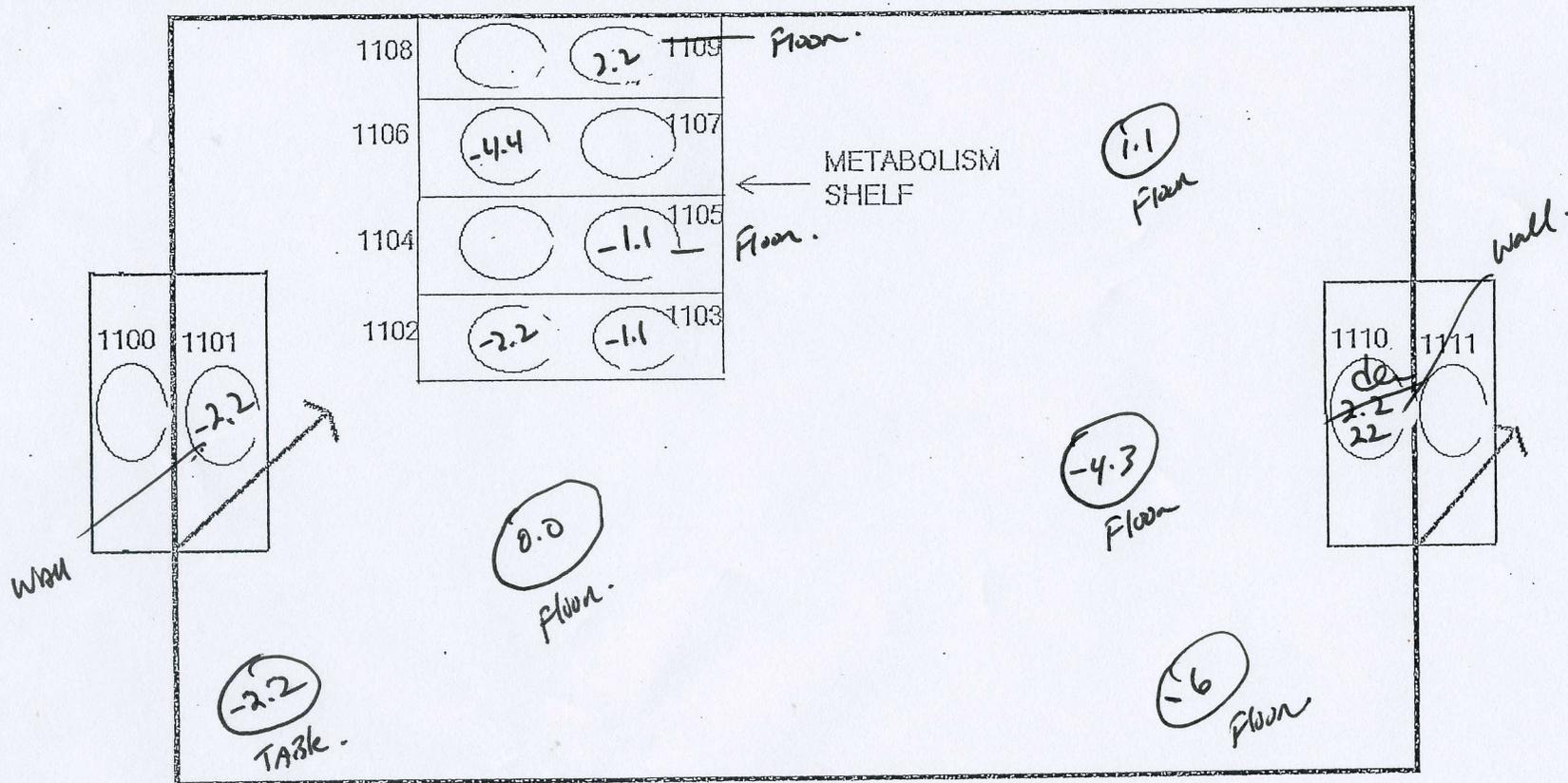
GEIGER MONTH  YES  NO

Frozen.

All scans  $\leq$  Background.  
Backgrounds 18-22 cpm.

⊕ = Smear Location with smear result.

Numbers outside smears are Finc's survey reference points  
N/A.



Lab 2-1165

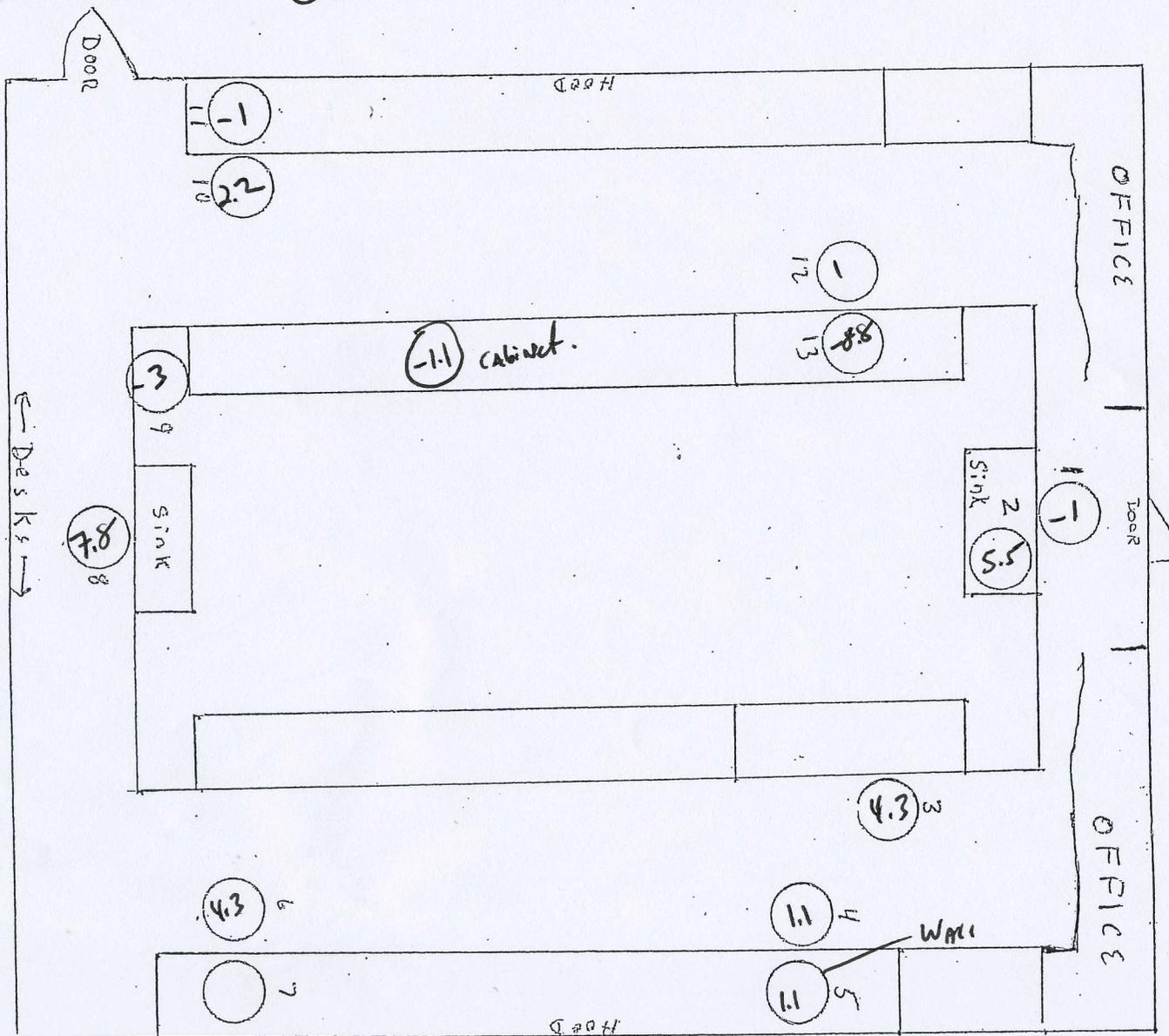
Date 06 / 16 / 2009

WIPE TEST SCHEMATIC Initials dlr GEIGER MONTH  YES  NO

All scans  $\leq$  Background.  
Background. 28 cpm.

⊕ = smear location with result.

Other #'s are Pmc survey reference points N/A.





Lab 2-1210 and 2-1205

Date 06 / 16 / 2009

WIPE TEST SCHEMATIC Initials [Signature] GEIGER MONTH  YES  NO

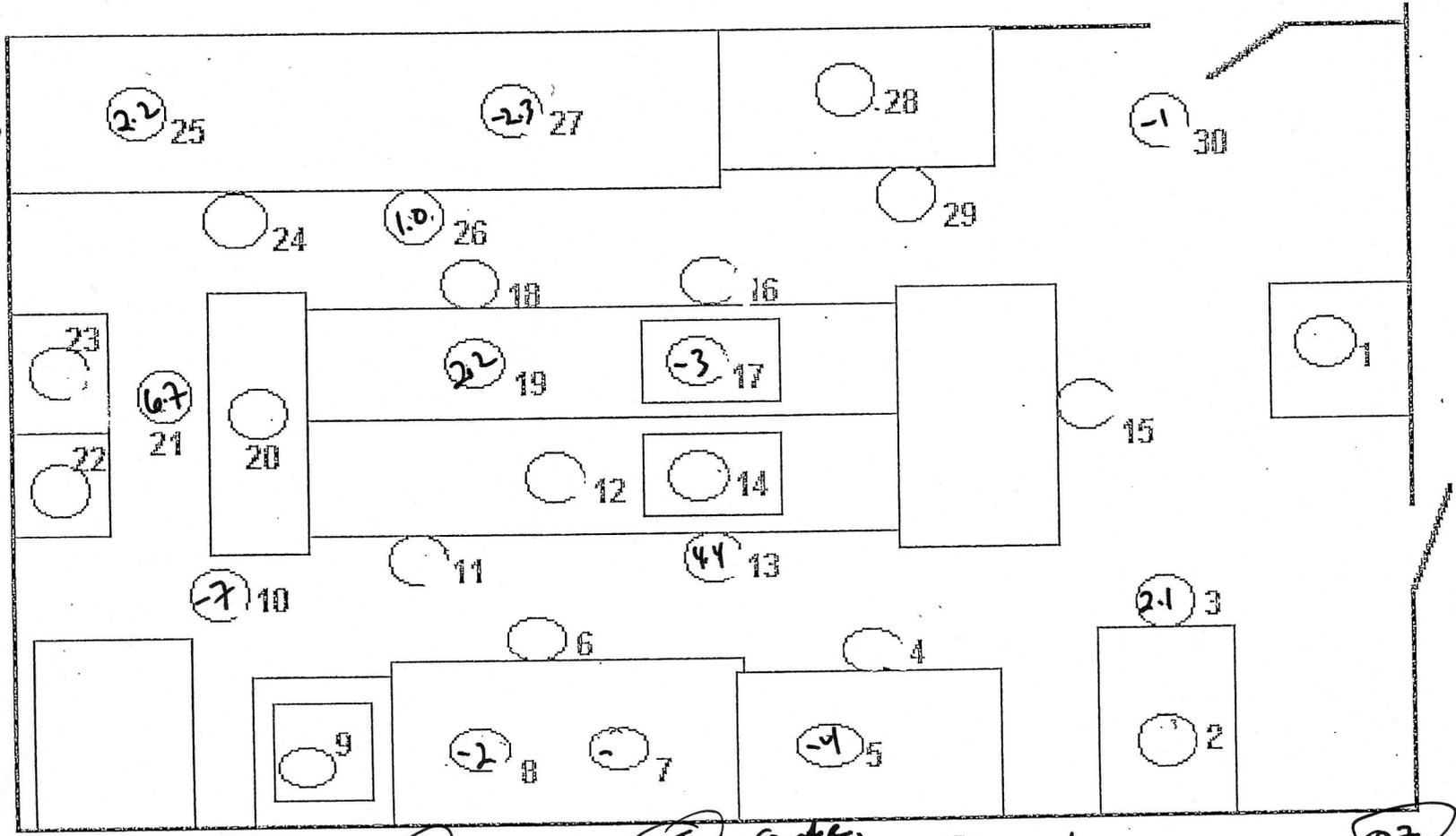
2-1210 →

All scans ≤ Background  
Background = 18 cpm

# = smear location with activity

Numbers are FMO's Survey Reference Points.

N/A.



8.3 floor  
2-1205 →  
-4 floor.

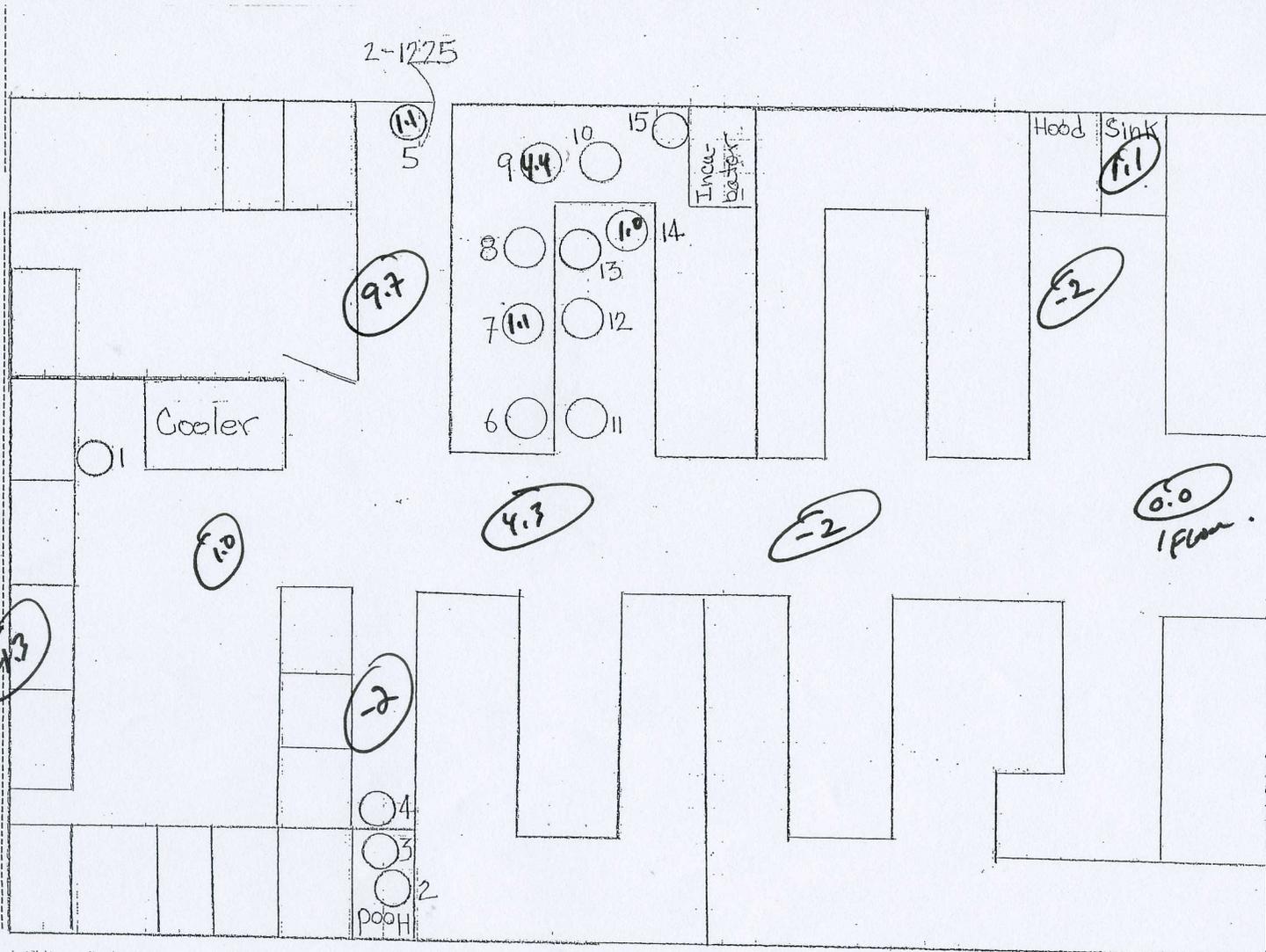
7.8 Refrigerator  
0.0 Floor  
8.5 Counter  
-7 Sink  
4.4  
8.7  
2.2  
8.25

LAB 2-1230

WIPE TEST SCHEMATIC Initials *[Signature]*

Date 6 / 16 / 2009

GEIGER MONTH  YES  NO



All SCANS  $\leq$  Background  
Background = 22 cpm.

(#) = smear location w/ activity.

Numbers are Finc's Survey Points - N/A.

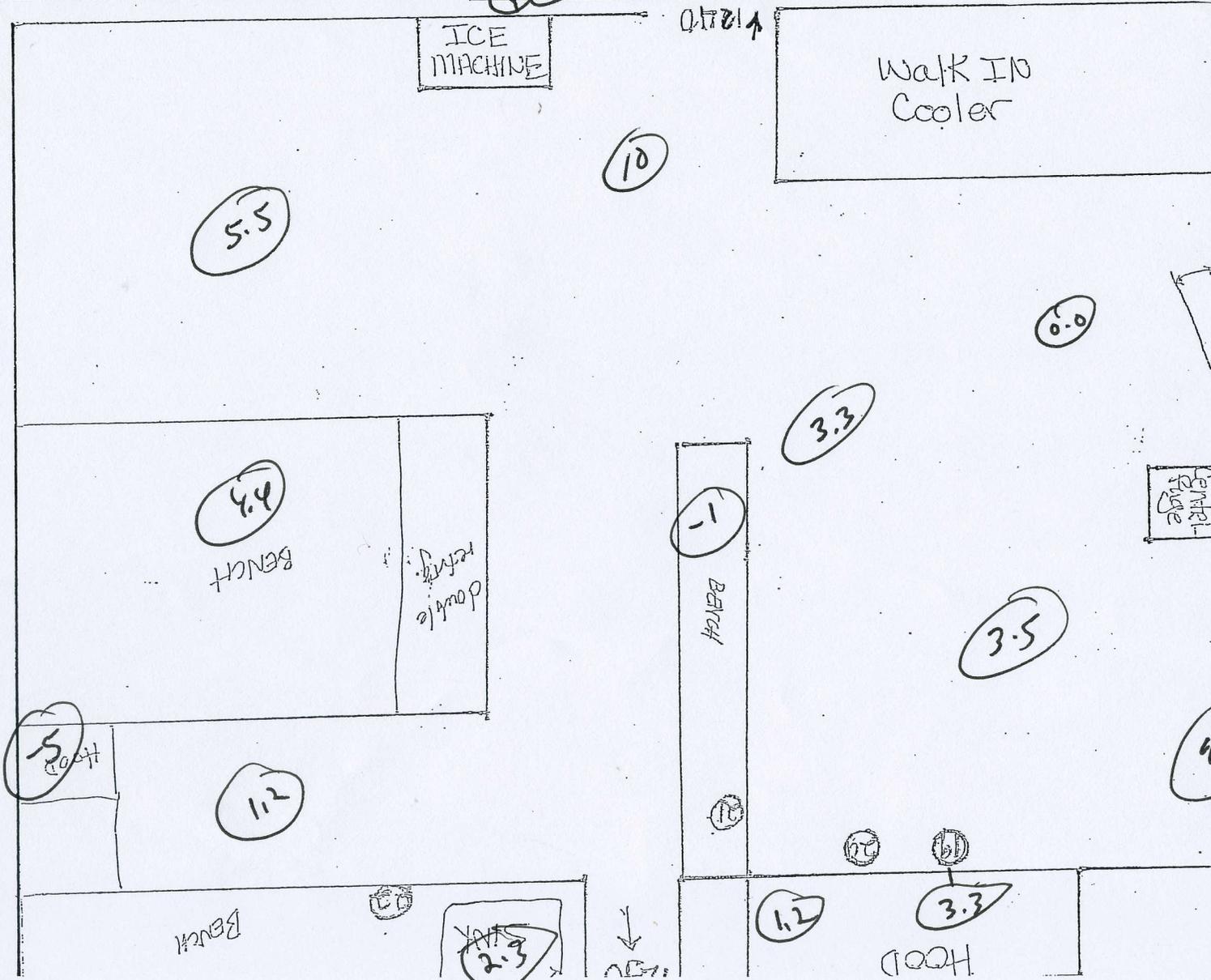
0.0  
1 Floor

Lab 2-1245

Date 06 / 16 / 2009

WIPE TEST SCHEMATIC Initials dl

GEIGER MONTH  YES  NO



All scans  $\leq$  Background  
Background = 29 cpm.

(#) = smear location with activity

Numbers are FMC's survey reference numbers N/A.



Lab 2-1255

Date 6 / 16 / 2009

WIPE TEST SCHEMATIC Initials JL

GEIGER MONTH

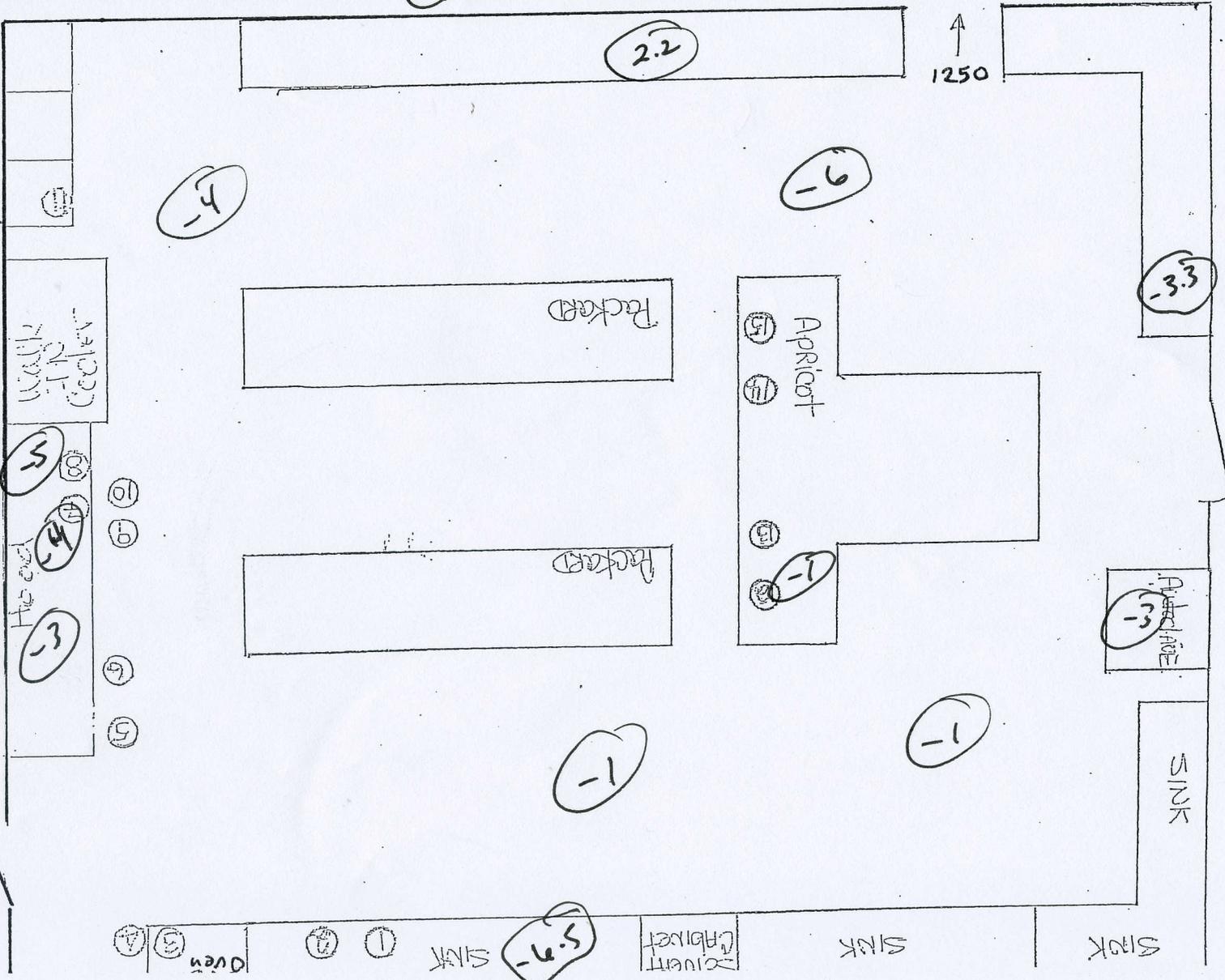
YES

NO

AA SCANS  $\leq$  Background  
Background = 310 cpm

(\*) = smear location with result.

Numbers ARE Fmc's Survey reference points N/A.



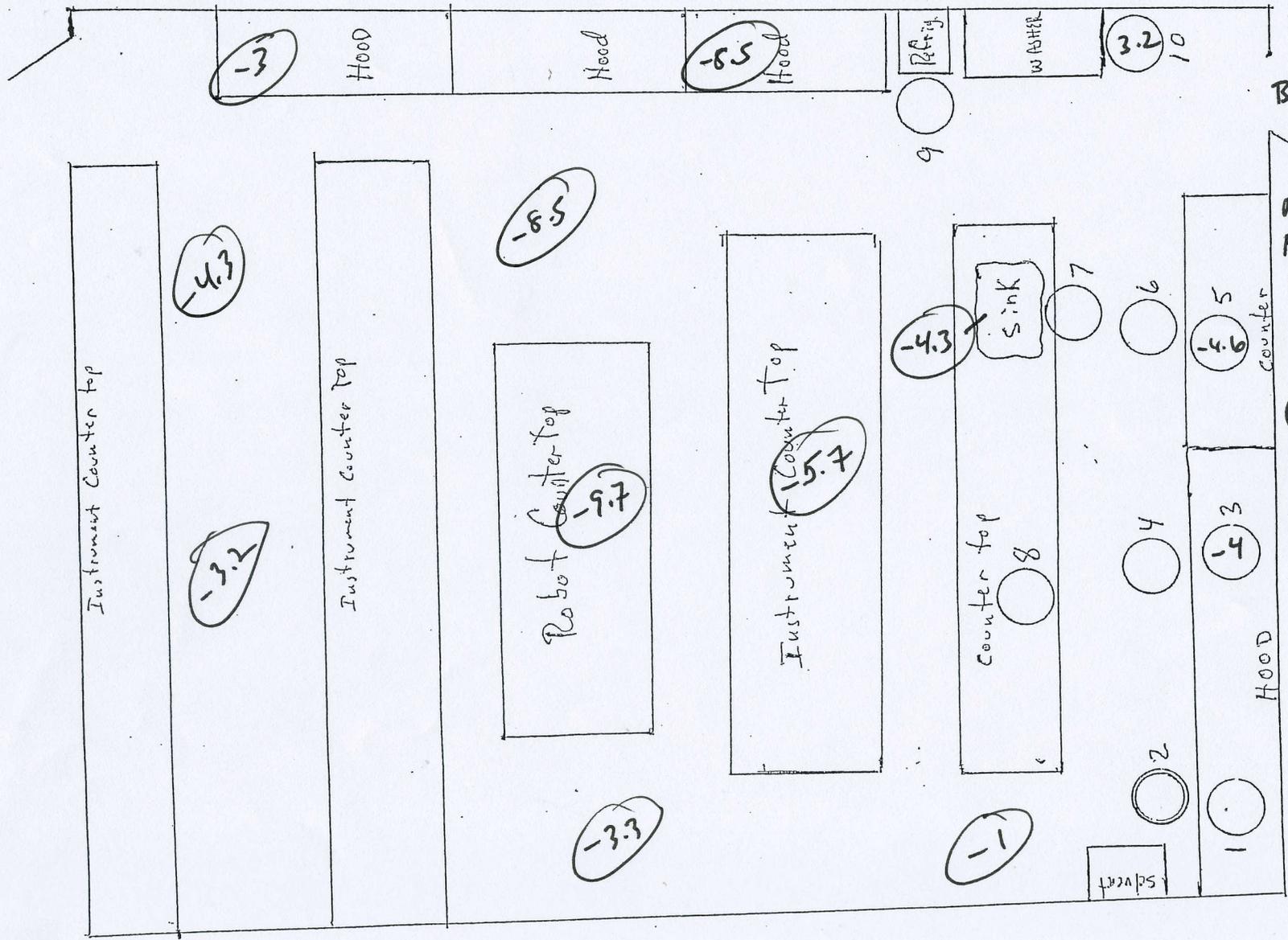
Lab 2-1474

Date 06 / 16 / 2009

WIPE TEST SCHEMATIC Initials der

GEIGER MONTH  YES  NO

ALL SCANS ARE  $\leq$  BACKGROUND  
Background 22 cpm



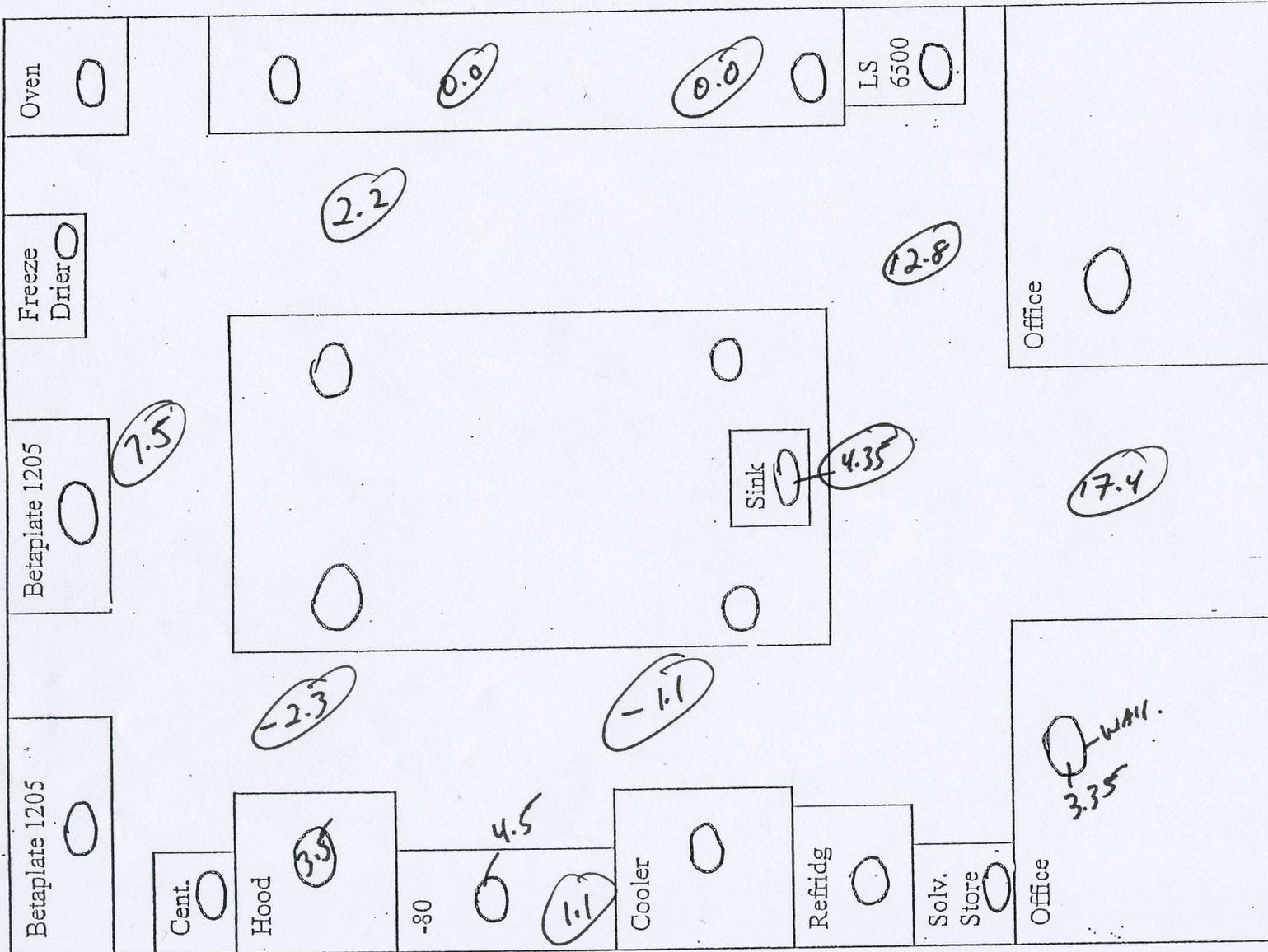
Numbers are Fmc's Survey Reference Points N/A.

# = Smear Location with Result.

Lab 2-2135

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials dlr GEIGER MONTH  YES  NO



All scans  $\leq$  Background  
Background = 28 cpm

(\*) = smear location with result.

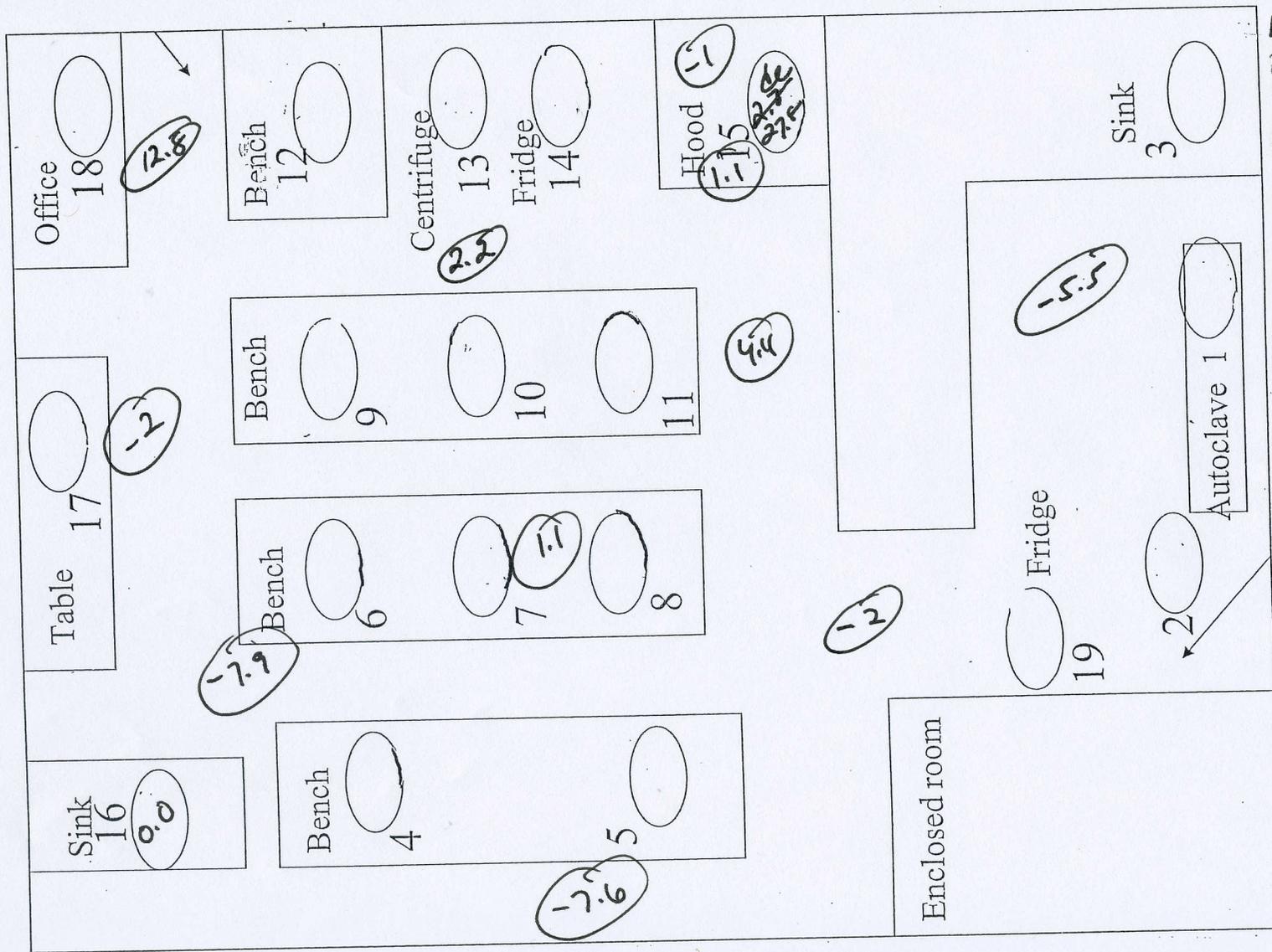
Numbers are Pmo's survey reference points - N/A.

Lab 2-2240

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials dr

GEIGER MONTH  YES  NO



All SCANS  $\leq$  Background  
Background = 40cpm

$\text{(\#)}$  = smear location  
with result.

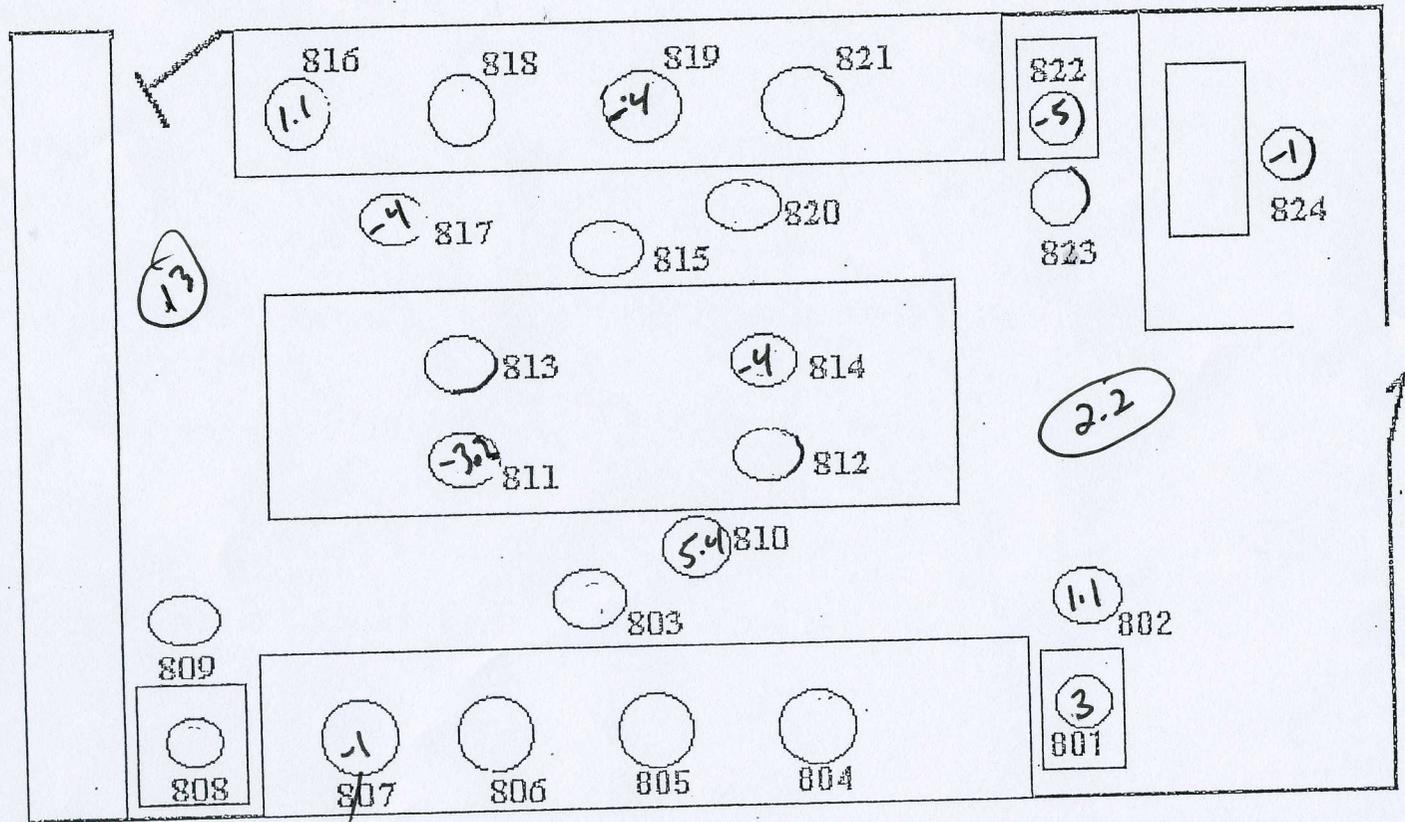
Numbers are  
Fmc's survey  
reference points.  
N/A.



Lab 2-2265

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials de GEIGER MONTH  YES  NO



All scans are  $\leq$  Background  
Background  $>$  32 cpm

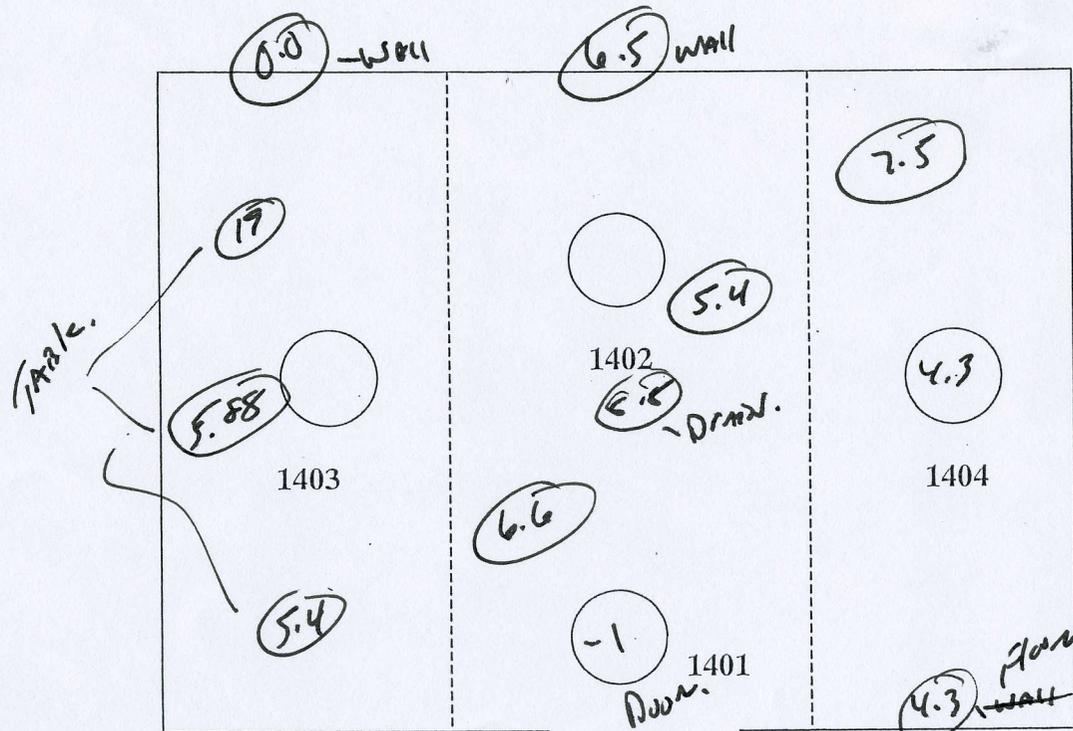
(#) = smear location with results.

Numbers are Fnc's survey reference points - N/A.

Growth Chamber #8

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials de GEIGER MONTH  YES  NO



All scans  $\leq$  Background

Background = 22 cpm

⊕ = smear location with activity / result.

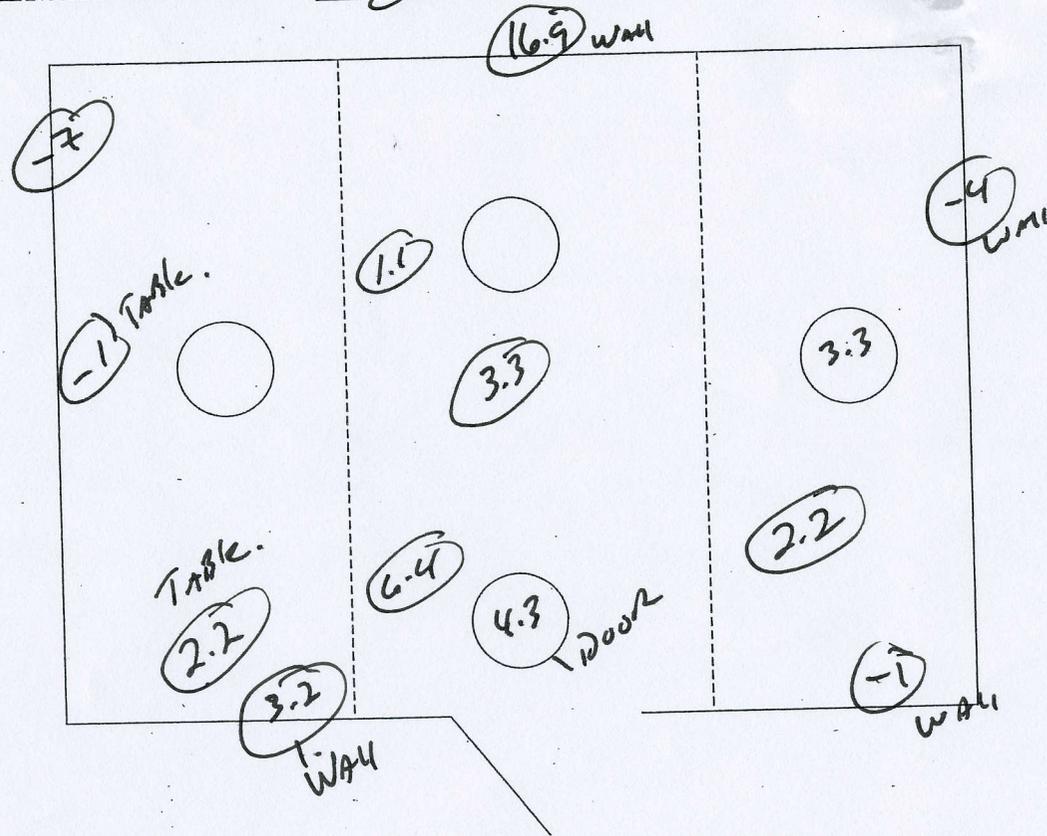
Numbers are FMC's survey reference numbers used for their surveys - N/A.

Growth Chamber #10

Date 6 / 12 / 2009

WIPE TEST SCHEMATIC Initials JK

GEIGER MONTH  YES  NO



All scans  $\leq$  Background.

Background = 18 cpm

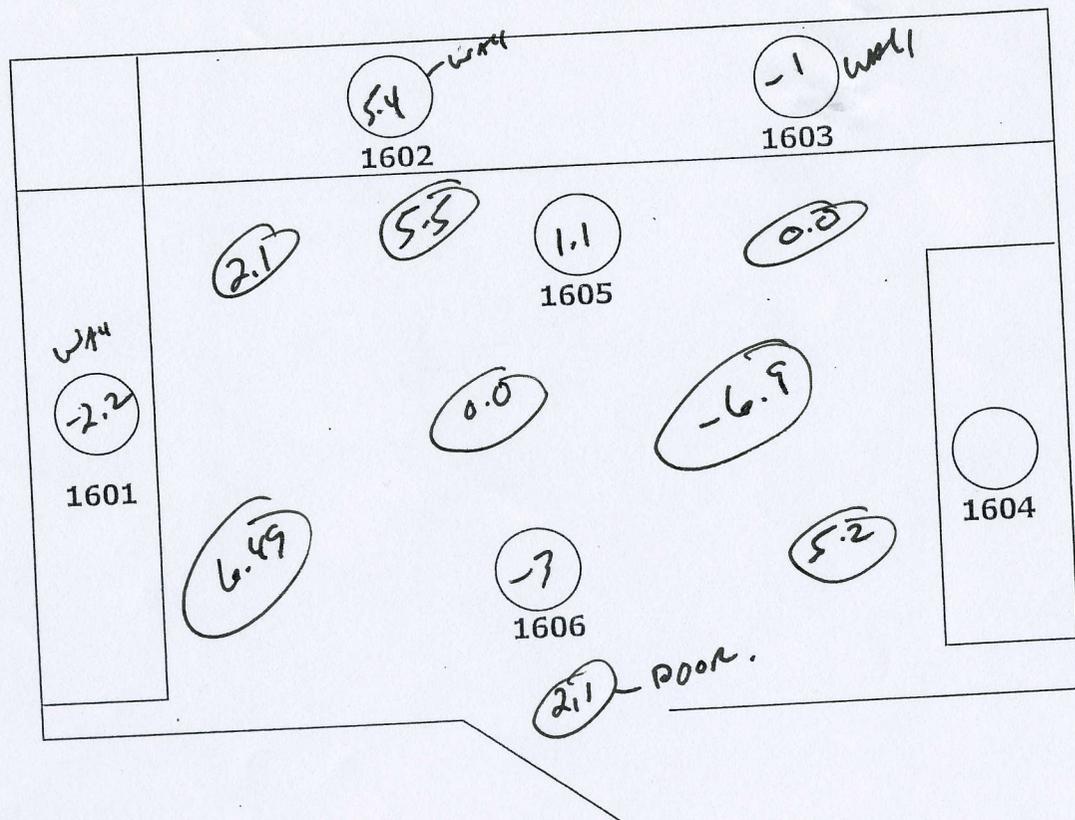
(X) - smear location with result.

Growth Chamber #15

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials [Signature]

GEIGER MONTH  YES  NO



All SCANS  $\leq$  Background  
Background 22 cpm

(circle) = smear location with result

\* Numbers outside of circles ARE  
Fmc's survey reference points  
N/A.

Growth Chamber #19

Date 6 / 17 / 2009

WIPE TEST SCHEMATIC Initials dh

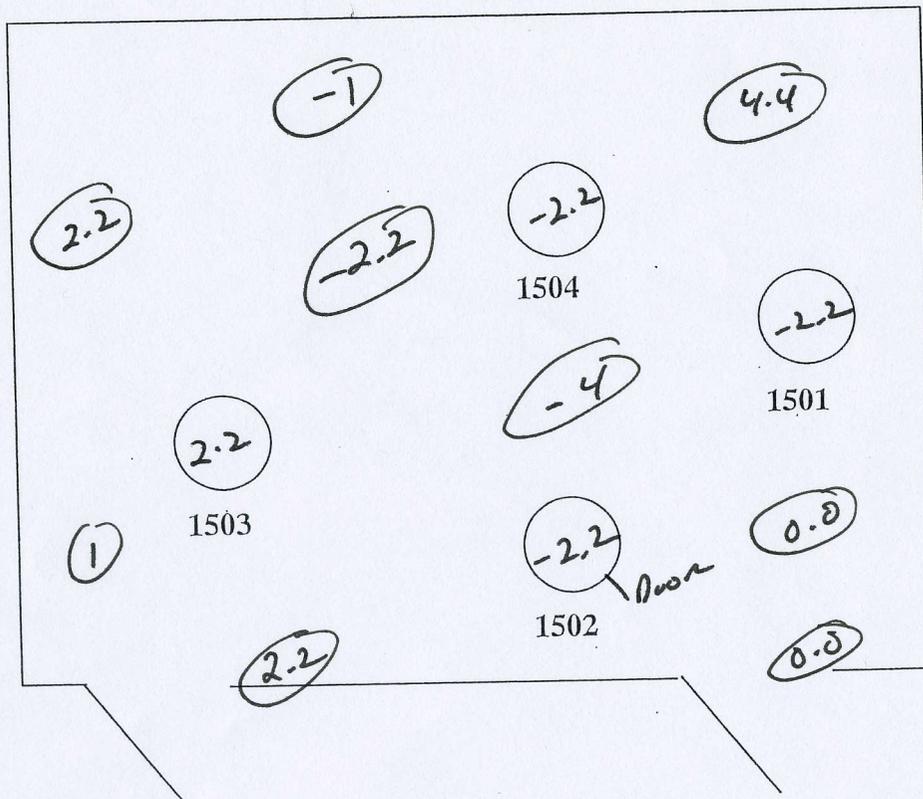
GEIGER MONTH  YES  NO

All scans  $\leq$  Backgrounds

Backgrounds = 28 cpm.

(1) = smear location with smear result

Numbers outside smears are FMC's survey reference points - N/A.

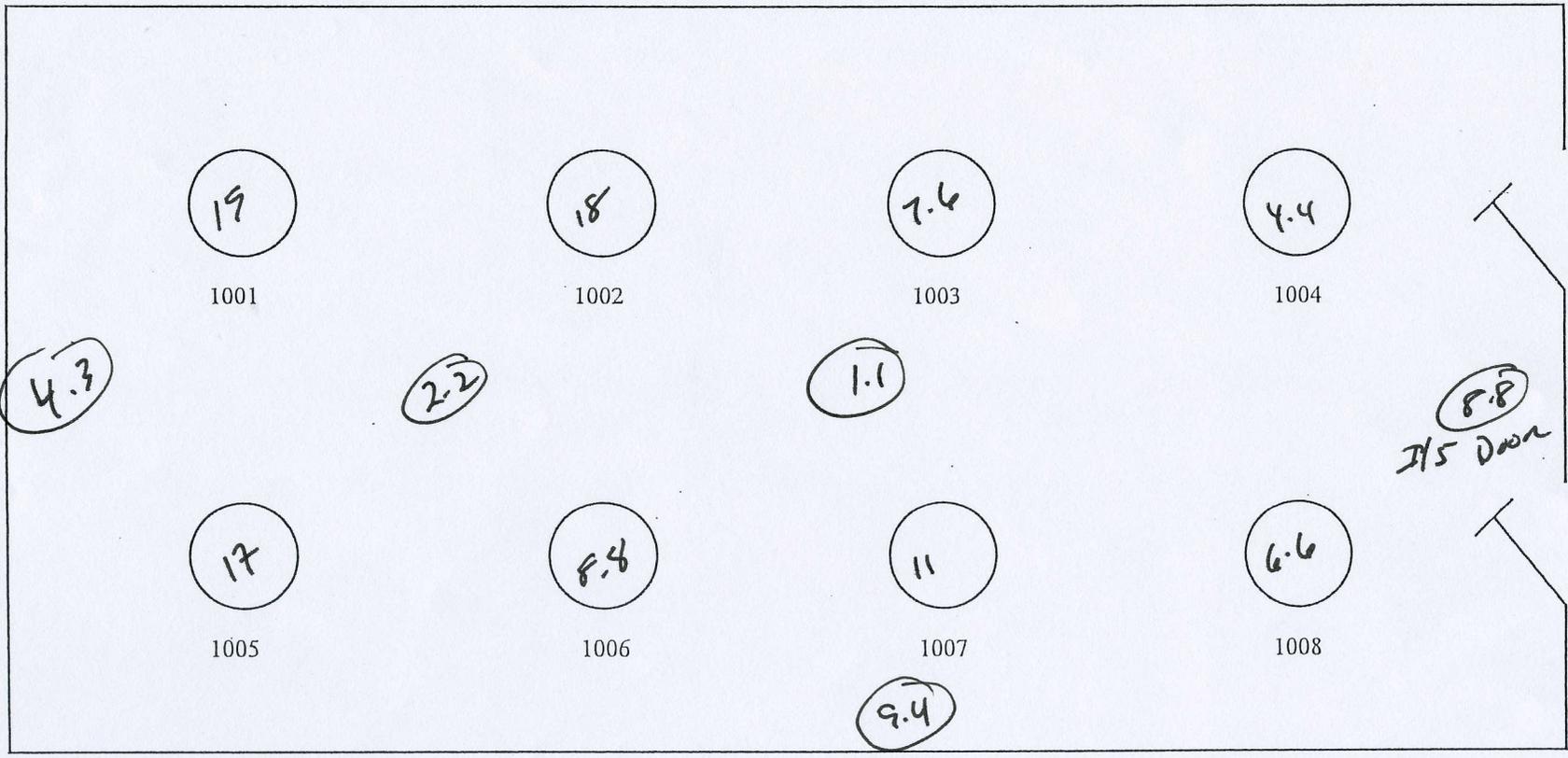


Greenhouse #5

Date 6 / 17 / 2005

WIPE TEST SCHEMATIC Initials [Signature]

GEIGER MONTH  YES  NO



All scans are  $\leq$  Background.

Background = 24 CPM

# = Smear location with results.

Numbers outside of smear circles are FMC's survey reference points - N/A

Lab 2-1465

Date 06 / 16 / 2005

WIPE TEST SCHEMATIC Initials de

GEIGER MONTH  YES  NO

