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FINAL RADIOLOGICAL INSPECTION REPORT

for

**Veterans Administration
Greater Los Angeles
&
Brentwood Dog Park**

Inspection Dates: November 28-December 8, 2006

**MECA Project:
22006.2047**

Prepared For:

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March 2, 2007

EXECUTIVE SUMMARY

Background:

The Veterans Administration Greater Los Angeles Healthcare System (GLAHS) property known as the "Arroyo" or Eastern Canyon was a former medical waste burial site from the 1950's to approximately 1968. During this period, the GLAHS was known to have buried waste from animal experiments, including animal carcasses, medical isotope waste in radiological scintillation vials and other miscellaneous medical debris including syringes in distinct burial pits within the Arroyo (see Figure 2). In addition, incinerator ash, presumably from medical sources, as well as miscellaneous medical debris, reportedly from the University of California, Los Angeles (UCLA) was buried in and North of the Arroyo, in areas which now are part of the VA leased land to the Brentwood School.

Concern about potential radiological and chemical contamination dangers within the Arroyo, Brentwood Dog Park and Barrington Recreational Fields (Brentwood Recreational Fields) and adjacent areas have occupied the minds of the surrounding communities for many years. As a result, there have been several previous site inspections and limited testing of the sites since approximately 1980. These previous inspections have acknowledged the presence of former medical radiological waste burial within the Arroyo, but have concluded that there was no evidence of risk to the population using the Brentwood Park facilities. Such conclusions have included the Federal Nuclear Regulatory Commission. Despite assurances from several Federal, State and private agencies and companies, community activists have not accepted the findings and conclusions of these entities.

Mr. Michael Collins, an environmental reporter for the Los Angeles Times Beat has continued to keep this site in the news and has raised questions regarding the ongoing safety of community residents to bring their dogs to the Brentwood Dog Park or allow their children to use the Brentwood Recreational Fields. Continued questions by the community, regarding these health issues, prompted the GLAHS to initiate what will hopefully become a final investigation of these sites. It is anticipated that these final evaluations will settle the concern regarding the potential health risks to the community residents (and their pets), who use these sites.

The sites under this project lie within the City of Los Angeles, California. The Veterans Administration site (GLAHS) is located West of the San Diego (405) Freeway, North of Wilshire Boulevard, East of Barrington Avenue and South of Sunset Blvd (portions of the Brentwood School). See Figure 1 for a project vicinity map.

Scope Objective:

The objective of this project was to conduct a comprehensive technical evaluation and risk assessment of radiological exposure to previously buried contaminants associated with historical medical waste disposal practices at select locations within the GLAHS and adjoining properties as described in Section 1.1.1.

Scope Technical Approach:

Millennium Consulting Associates ("Millennium") will lead a multi-disciplined group of Certified Industrial Hygienists (CIH), Certified Health Physicists (CHP), Toxicologists, Hydrologists and Engineers to conduct a comprehensive Technical Evaluation (Evaluation) of the existing GLAHS and Brentwood Dog Park site conditions relative to the effect of past waste disposal operations at the GLAHS site adjacent to the Brentwood Dog Park. The primary contaminant(s) to be evaluated will be low-level Alpha & Beta-emitter plus potential Gamma-emitter radioactive materials which were potentially present in medical research waste or other medical-related wastes, buried on GLAHS property. Examination of other documented waste constituents, including organic solvents, will be included in a separate phase of this study.

Two background areas were selected and surveyed in this investigation. Both areas were deemed "Control" areas as there was no evidence of these areas being impacted by past medical waste disposal operations by the GLAHS. The locations of the background reference areas were: 1) Westwood Park, immediately west of Veterans avenue, between Rochester Avenue and Wilkins Avenue, and 2) the south and middle ball field located north of Ohio Avenue, west of S. Sepulveda Boulevard, and east of Interstate Highway 405. See Figure 3 for a site map.

Investigation Areas

Investigation areas included the former radioactive material disposal area, the Brentwood dog park and adjacent ball fields, Brentwood School athletic fields, and the Veterans Administration Golf Course driving range. To facilitate the completion of the survey, the areas of interest were broken into 10 functional areas (based on location) with each functional area documented on a common grid coordinate system. These designations are listed in Table 1, below.

Table 1, Functional Grids, Investigation Areas

Grid 1	Barrington Park South of ball fields and Brentwood dog park
Grid 2	Barrington ball field – South end of fields to North end of beachers
Grid 3	Barrington small fenced dog area
Grid 4	Barrington ball field behind Post Office
Grid 5	East canyon between VA and dog park
Grid 6	Brentwood School lower soccer field
Grid 7	Brentwood School ball Fields
Grid 8	West canyon between dog park and Barrington Ave.
Grid 9	VA Golf Course - driving range
Grid 10	Brentwood School - football field

See Figure 4 for a site map.

Results of the "Walkover" Surface Scanning Survey

The surface scanning survey did not reveal any localized areas with individual significantly elevated levels of gamma radiation. However, as indicated in Figure 5, the average readings for the East Arroyo, West Arroyo and the Brentwood School lower soccer fields were notably above the Control areas. Although these areas were statistically different from the control areas, the levels of gamma radiation measured were not unsafe and should not cause any public concern.

The East Canyon, where medical waste was known to be buried showed average surface gamma levels above the 95% Confidence Interval for both Control Sites. The Brentwood Dog Park, the subject of significant concern by the community, showed average levels consistent with or lower than the Control Sites. The measured surface gamma levels at the other sites were consistent with levels measured at the two Control Sites.

The typical variance in radiation levels was present, as well as expected variations in radiation levels consistent with variations in site materials and terrain. Subsequent GM confirmatory measurements at red-flagged locations (highest reading in each grid), provided no additional information but were also consistent with expected variations in background radiation levels.

The reason for these variations may be due to differences in naturally occurring radioactive material content in the subsurface materials in these areas, but further surface and subsurface sampling is necessary to explain the Phase I "Walkover" Survey findings and determine what radioactive materials may be present.

Conclusions

There was no evidence of elevated single readings in any of the surveyed areas. It was determined that the average readings in the two canyons (Arroyos) and the Brentwood School lower soccer fields bordering the GLAHS, were somewhat higher than other surveyed areas or the control areas, but there was no obvious explanation for the differences. Nothing was revealed by the surface "Walkover" scanning that would warrant additional focused surface scanning. Further attention will be given to these anomalies during the surface and subsurface investigative sampling efforts planned in Phase 2.

Although there are still significant questions to be answered regarding these sites, it was concluded that overall, there was nothing detected by surface scanning that appeared to be distinguishable from natural background radiation. One conclusion that can be drawn from this phase of the investigation is that any external gamma radiation exposure, received by current visitors to the parks or the surrounding areas, that may be due to potential contamination on or near the ground surface, is minimal (i.e., indistinguishable from natural background radiation).


Recommendations

Based upon the historical documentation, physical evidence, anomalies in the "Walkover" scan data for the Arroyo(s) and strong concern by members of the community, Millennium is recommending that additional surface and subsurface investigation and sampling be performed in these areas.

The purpose of this Phase II investigation and testing will be to characterize existing radiological and chemical contamination in the Arroyos and limited areas outside of the Barrington Dog Park to answer the questions and concerns which have been raised. See Appendix C for a map of proposed Phase II investigation areas.

Signatures:

Project Manager



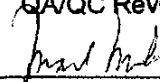
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- Appendix C Map of Proposed Phase II Investigation Areas

SECTION 1.0 GENERAL

Section 1.1 Background

1.1.1 Project Location

The project site occupies several separate areas that reside or are adjacent to the Veterans Administration Greater Los Angeles Healthcare System (GLAHS) located at 11301 Wilshire Boulevard in the City of Los Angeles, California. The specific areas under this project include the following:

1. Westwood Park – Control Site located on Sepulveda Blvd. between Veteran Avenue and the 405 Freeway, North of Ohio Avenue
2. Brentwood Dog Park Area- located on Barrington Ave. next to Post Office
3. Brentwood Recreational Fields next to the Brentwood Dog Park
4. Brentwood School lower soccer fields, upper baseball fields and stadium arena field
5. VA Golf Course Driving Range area adjoining Brentwood School
6. VA Eastern Canyon between the VA property and Brentwood Recreational fields
7. VA Western Canyon between the Brentwood Dog Park and Brentwood Avenue

See Figure 1 for a Site Vicinity Map

1.1.2 Project Background

The GLAHS property known as the "Arroyo" or Eastern Canyon was a former medical waste burial site from the 1950's to approximately 1968. During this period, the GLAHS was known to have buried waste from animal experiments, including animal carcasses, medical isotope waste in radiological scintillation vials and other miscellaneous medical debris including syringes in distinct burial pits within the Arroyo (see Figure 2). In addition, incinerator ash, presumably from medical sources, as well as miscellaneous medical debris, reportedly from the University of California, Los Angeles (UCLA) was buried in and North of the Arroyo, in areas which now are part of the VA leased land to the Brentwood School.

During this period, the Wadsworth Veterans Hospital stood just North of the Arroyo. The 1971 San Fernando earthquake irreparably damaged the former VA Hospital, and the entire structure was demolished in place, spread out and covered with soil. This site, leased to the City of Brentwood, serves now as the Brentwood Dog Park and Brentwood Recreational Fields which are adjacent to the Brentwood Dog Park.

Concern about potential radiological and chemical contamination dangers within the Arroyo, Brentwood Dog Park and Barrington Recreational Fields (Brentwood Recreational Fields) and adjacent areas have occupied the minds of the surrounding communities for many years. As a result, there have been several previous site inspections and limited testing of the sites since approximately 1980. These previous inspections have acknowledged the presence of former medical radiological waste burial within the Arroyo, but have concluded that there was no evidence of risk to the population using the Brentwood Park facilities. Such conclusions have included the Federal Nuclear Regulatory Commission. Despite assurances from several Federal, State and private agencies and companies, community activists have not accepted the findings and conclusions of these entities.

In 2000, the Brentwood School conducted construction on approximately 20 acres of land, leased to the Brentwood school by the GLAHS. On July 7, 2000, three 30-gallon polyethylene bags of medical debris and an apparent former incinerator ash pit were discovered during grading operations on the uppermost bench area at the Northern end of the project, adjacent to the GLAHS golf course. These materials and a reported 800 cubic yards of soil, contaminated with these materials were excavated and placed in surface stockpiles located near the neck at the Southern end of the Arroyo for later disposal in accordance with regulatory requirements.

Mr. Michael Collins, an environmental reporter for the Los Angeles Times Beat has continued to keep this site in the news and has raised questions regarding the ongoing safety of community residents to bring their dogs to the Brentwood Dog Park or allow their children to use the Brentwood Recreational Fields. Continued questions by the community, regarding these health issues, prompted the GLAHS to initiate what will hopefully become a final investigation of these sites. It is anticipated that these final evaluations will settle the concern regarding the potential health risks to the community residents (and their pets), who use these sites.

Section 1.2 Site Description

The sites under this project lie within the City of Los Angeles, California. The Veterans Administration site (GLAHS) is located West of the San Diego (405) Freeway, North of Wilshire Boulevard, East of Barrington Avenue and South of Sunset Blvd (portions of the Brentwood School). See Figure 1 for a project vicinity map.

As mentioned above, the site(s) involved in the project include portions of the 450 acre GLAHS primary site and areas of GLAHS-leased land that include the Brentwood Dog Park, Brentwood Recreation Fields, the two canyons bordering the GLAHS site between the Brentwood Recreation sites and Barrington Avenue (the Arroyos), and portions of land now used by the Brentwood School.

The Brentwood Dog Park and Brentwood Recreation Fields are fully developed recreational sites, improved for community use and fenced along the entire perimeter to prevent access into the two canyons. The Brentwood Recreation sites sit directly over the rubble of the former Wadsworth Hospital. Remnants of the rubble including concrete and rebar are visible along the South and West edges of the bench the recreational sites now occupy. The area included in the recreational sites is approximately 12 acres.

The Brentwood School sites leased by the GLAHS for development in 2000 occupy approximately 20 acres adjacent to the VA golf course and driving range. The sites were overexcavated in 2000 and developed as a stadium in one area and as baseball/soccer fields on an upper bench area. Medical waste contaminated soil, medical debris and sharps were removed during site grading and placed on the GLAHS property as indicated above. Clean soil was imported and used as the base for the new Brentwood School sites. There also is a lower soccer field that is located immediately adjacent to the Northern end of the Arroyo and next to the GLAHS baseball fields.

The properties now owned and used exclusively by the GLAHS include the VA golf course driving range (next to areas of the Brentwood school) and the two canyons as described above. The VA golf course driving range is adjacent to and North of the GLAHS baseball fields. It is currently covered with mature grass and is fenced in entirety between the GLAHS and the Brentwood School. The site of interest covers approximately 1 acre.

The Eastern Arroyo (between the GLAHS and the Brentwood Recreational fields) has been identified as the primary area where low-level radioactive medical waste and other miscellaneous medical waste have previously been buried. The Arroyo was partially excavated to install a storm sewer extension in 1996. During this project, which was designed to eliminate erosion and other damage to property, approximately 2500 linear feet of storm drain were installed from the northern end of the Arroyo to an existing inlet structure at the neck of the Arroyo at the southern end. Approximately 100,000 cubic yards of soil, imported from an area beneath a helicopter landing pad at the Southern end of the GLAHS property, was used to completely cover the storm drain extension, reduce the slope of the Arroyo banks to minimize erosion and provide substantial barrier between the medical debris and the exposed land surface. This barrier reportedly provides between 30 and 70 feet of cover in the Eastern Arroyo basin. The Eastern Arroyo today is covered with low vegetation up to the drainage outlet. Some bamboo and brush exists on the Southern side and Western end of the Arroyo. Additional brush covers the rubble from the Wadsworth hospital along the border with the Barrington Recreation fields. The remainder of low level brush was cut in November 2006 to accommodate the impending Phase I "Walkover" radiation survey.

The Western Arroyo (between the Brentwood Dog Park and Barrington Avenue) is in its natural state with numerous Eucalyptus trees and heavy brush in some areas. There are a number of sections of concrete storm sewer stacked in the middle of the Arroyo. It is unknown what is to become of these materials. While there were no available reports of previous waste disposal on this portion of the property, this area was included to ensure complete investigation of the GLAHS properties. The two canyons total approximately 22-25 acres.

The final site is the Westwood Park. This park is located approximately 1 to 1.5 miles southeast of the GLAHS, East of the 405 Freeway, West of Veteran Avenue and North of Ohio Avenue. The Westwood Park is divided into two sites. The primary park is approximately 15-20 acres and houses the recreation center and playgrounds. The second site is across Sepulveda Boulevard, next to the 405 Freeway and bordered by Ohio Avenue on the southern end. This portion of the park contains only the baseball diamonds/soccer fields. All park land was covered with mature grass, except for the baseball diamonds, play areas and parking lots. This area covered approximately 8-10 acres. This site is far enough from the GLAHS that it was selected to be the "control" site. That is, sites without any known contamination from medical wastes or without any known radioactive materials, were selected to provide a source for comparison with suspect sites under the scope of this project.

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Section 1.3 Scope of Work

Scope Objective:

The objective of this project was to conduct a comprehensive technical evaluation and risk assessment of radiological exposure to previously buried contaminants associated with historical medical waste disposal practices at select locations within the GLAHS and adjoining properties as described in Section 1.1.1.

Scope Technical Approach:

Millennium Consulting Associates ("Millennium") will lead a multi-disciplined group of Certified Industrial Hygienists (CIH), Certified Health Physicists (CHP), Toxicologists, Hydrologists and Engineers to conduct a comprehensive Technical Evaluation (Evaluation) of the existing GLAHS and Brentwood Dog Park site conditions relative to the effect of past waste disposal operations at the GLAHS site adjacent to the Brentwood Dog Park. The primary contaminant(s) to be evaluated will be low-level Alpha & Beta-emitter plus potential Gamma-emitter radioactive materials which were potentially present in medical research waste or other medical-related wastes, buried on GLAHS property. Examination of other documented waste constituents, including organic solvents, will be included in a separate phase of this study.

In general, the study will be conducted in accordance with technical procedures specified within the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), as developed by the United States Environmental Protection Agency (USEPA), United States Nuclear Regulatory Commission (USNRC), the United States Department of Energy (USDOE) and the United States Department of Defense (USDOD).

MARSSIM is a standardized approach to demonstrating compliance with a dose- or risk-based regulatory standard. MARSSIM provides an approach that is technically defensible and flexible enough to be applied to a variety of site-specific conditions. Applying this guidance to a dose- or risk-based regulation provides a statistically-reliable and consistent approach to protecting human health and the environment.

The Evaluation will include eight principal phases. Each phase will be conducted discretely with preliminary findings being reported in a written summary manner. The phases include the following:

Phase I – Radiological “Walkover” Survey

Phase 1a: Data Review

Phase 1b: Initial “Walkover” Site Screening/Scan Measurements

Phase II – Subsurface Investigation and Hydrology

Phase 2a: Workplan Development/Survey Design

Phase 2b: Initial Design Meeting with the Public

Phase 2c: Subsurface Site Survey & Investigation

Phase 2d: Data Analysis

Phase 2e: Risk Assessment

Phase 2f: Final Public Meetings

The Phase II portion of this evaluation will be covered under a separate report.

SECTION 2 DOCUMENTATION REVIEW

Section 2.1 Review of documents

Phase 1a: Client supplied data included historical data detailing interviews, studies, assessments, operations related to the disposal of radioactive containing waste materials at the referenced site. These data were reviewed to develop a fundamental understanding of the site and the environmental and public health concerns. The documents provided to Millennium include the following:

- a) Brentwood School Environmental Impact Report, 1981-1983;
- b) USEPA CERCLA Preliminary Assessment Report, September 1999 ;
- c) Los Angeles County DHS Site Determination Report, January 1995;
- d) Environmental Assessment (NEPA/CEQA), Jack K. Bryant ENGINEERS, June 1995;
- e) Geotechnical Soil Investigation, SID Geotechnical, Inc., March 16, 1995;
- f) Miscellaneous communications, various sources;
- g) Soil Investigation Report, URS Greiner Woodward Clyde, October 18, 1999;
- h) Soil Investigation Report – Brentwood School Athletic Fields, Locus Technologies, November 2000

It is understood that to complete the entire investigation, additional sources of documents will be sought. Such documents may include public or private documents relating to disposal operations at the site, information relating to medical experiments or research and the types of radioisotopes used and information related to chemicals used in such medical procedures or preservation of animal tissues. Millennium will also seek out persons with direct knowledge or information on such activities that may be relevant to this investigation and conduct personal interviews.

SECTION 3 METHODS AND PROCEDURES

Section 3.1 Phase I "Walkover" Survey Plan

Phase 1 – Surface Gamma Radiation Scan

3.1.1 Purpose

This work plan describes the guidelines and procedures for surface screening "Walkover Survey" for gamma-ray emitting radioactive contamination. This investigation is being performed to identify areas of elevated radiation (above background) and to facilitate classification under the MARSSIM process to support subsequent investigation of surface and subsurface radioactive contamination.¹

3.1.2 Applicability

This work plan is intended for personnel conducting investigation activities at sites potentially contaminated with gamma-ray emitting radionuclides or radionuclides traceable through their gamma-ray emitting daughter products. The primary survey instrument shall be a highly sensitive Sodium Iodide (NaI) gamma-emitter detector. In addition, a beta/gamma detector (GM probe) will be used to provide confirmatory/supplemental information once a "hot" spot is found.

This work plan is not applicable or intended to screen large outdoor soil areas for alpha or beta contamination as there is no instrumentation available that is field portable and provides reliable identification of such particles under the present conditions.

It is recognized that many of the contaminants of concern at this site will not be detectable with the gamma detection instrumentation used in this survey. The gamma survey is being conducted in the event that gamma-emitting radionuclides could also be present, as historical records of the site may be incomplete. Subsequent investigation involving soil sampling, followed by laboratory analyses, will be used to identify any non-gamma-emitting radionuclides (alpha and beta-emitters).

3.1.3 Terms and Definitions

Alpha radiation: A positively charged particle consisting of 2 protons and 2 neutrons. As it passes through matter, it produces a dense path of ionization. Due to their large mass and positive charge, alpha particles travel only a short distance before they slow down.

Background Radiation: Naturally occurring radiation from atmospheric sources and naturally occurring radioactivity in soils/ minerals.

Background Measurements: Measurements that are made in areas known to be unaffected by site operations using the same instruments to be employed for screening measurements described in this procedure.

Beta radiation: A high speed negatively charged electron.

CPM: Counts per minute.

Gamma radiation: Emitted as high energy electromagnetic radiation. Gamma rays have an extended range and can often penetrate several inches or more of soil.

Geiger Mueller (G-M) counter: A radiation detector in which radiation energy serves as a trigger producing an output of electrical impulses that are measurable when an interaction occurs in the detector. Geiger-Mueller counters detect primarily beta radiation and some gamma rays.

MARSSIM: Multi-Agency Radiological Survey Site Investigation Manual

Scintillation detector: A detector sensitive to gamma radiation that produces signals with a magnitude that is proportional to the radiation energy reaching the detector.

3.1.4 "Walkover" Survey Equipment

The following is a list of equipment is to be used during surface and subsurface low level radiation screening:

1. **Sodium Iodide scintillation detector (Nal detector):** Detects gamma radiation with high sensitivity. The Nal detector displays radioactivity in units of counts per minute. The detector is unshielded.
2. **Scaler rate meter:** Attached to the Nal detector during radiation screening. Displays counts per minute from the signal generated by the Nal detector over a predetermined time period.
4. **Geiger-Mueller (G-M) survey meter with pancake probe:** A Geiger-Mueller counter system with a flat, circular window (15 cm²) probe that is used to primarily detect beta radiation. It is also sensitive to a portion of the gamma ray spectrum.

All equipment was inspected for physical damage prior to use. All survey meters and detectors were calibrated according to manufacturer specifications and included a calibration certificate. Operations manuals for all instruments used were included with field equipment. All equipment was initially calibrated the day before use against a reference standard (¹³⁷CS). Before daily operations begin, the detectors were evaluated using a check source to assure that the equipment produces readings within a range of acceptable values (+/-20% of reference readings). If the probe or meter was damaged and/or the calibration check source reading does not fall within an acceptable range of values, the equipment was not used.

3.1.5 Screening Methodology

3.1.5.1 Background Survey - Westwood Park Control Site

A background survey was performed to establish radiation levels or activity for comparison with survey data from areas within suspect sites. Background levels were gamma measurements made in the vicinity of the suspect sites, taken at locations known to be unaffected by site operations related to the handling, processing, transportation or disposal of radiologically-contaminated medical waste or debris. Background measurements are performed as follows:

1. Two major areas were selected. The first was on the East side of Sepulveda Boulevard along Veteran Avenue. An area of approximately 5 acres was selected. The second area was on the West side of Sepulveda Boulevard, adjacent to the 405 Freeway. This second area was comprised of two baseball fields totaling approximately 7-8 acres.
2. The areas were gridded into 10 meter by 10 meter grid sections covering the established areas. The corners of each grid were staked with white marker flags. Each location was identified with GPS and recorded in a log.
3. Each grid was traversed by an individual using a Sodium Iodide (NaI) detector. The highest reading in each grid was marked with a red marker flag and the GPS location was obtained. The highest reading (Counts/minute) were recorded in a log.
4. Each red flag within a grid section was then re-surveyed with the NaI detector for a 6 second reading to provide greater precision in the reading. Results were again entered into the log for each location.
5. The average and standard deviation of the background measurements were calculated and recorded.

3.1.5.2 Walkover Survey – Suspect sites

1. Based upon current or historical information (disposal practices, aerial photographs, etc.), the approximate boundaries of the disposal area were identified. Adjustments to the site boundaries due to the presence of obstacles on the site (e.g., structures, debris) was considered. If any portion of the obstacle is within the landfill area, the boundary was expanded to include the obstacle.
2. A square primary grid was designed to encompass the entire area to be screened. The dimensions of the primary grid were established in multiples of 10 meters.^{1,3} Fixed metal stakes with white flags were driven at the corners of the primary grid. All of the corner stakes were surveyed with GPS and recorded in a log.
3. Once the perimeter was established, metal stakes with white flags were driven at 10-meter intervals around the perimeter to identify the boundaries of the inner grids. Each location was recorded with GPS.
4. Strings were then run from the side stakes, across the grid to the corresponding stake on the opposite side of the site, both lengthwise and crosswise. Continuous lengths of string were run under or over fixed obstacles. Grid strings were kept as close to the ground as possible. Each intersection was marked with a white flagged stake and the location recorded on GPS.
5. A sketch of the complete grid was drawn in the field notebook. Each cell within the grid received a unique alphanumeric identification. The cell naming convention generally began at the northwest corner of the grid. Rows were identified alphabetically from North to South. Columns were identified numerically from West to East.

3.1.6 Performing the Scanning Survey

1. The field survey teams first used a sodium iodide (NaI) detector connected to a survey meter to screen the grid. Each instrument had a valid record of calibration (within 12 months), and was tested against a standard calibration check source daily, prior to use in the field. Calibration check source readings were recorded in the field notebook.
2. Prior to beginning the grid cell screening process, background radiation measurements were collected from a non-contaminated area away from the site. All screening data was recorded on an appropriate field data sheet.
3. The detector was traversed slowly over the surface. The detector was maintained at a distance as close to the surface as conditions allow, nominally one to four centimeters and swung in a pendulum manner while progressing at a speed of a slow walk (0.5 m/sec).²
4. Increases in count rate were noted by the audible output.
5. The highest reading in each grid was flagged with a red flag. The measured gamma count at that location was recorded in a logbook along with the GPS location.
6. Each flagged location was screened using the GM pancake probe. Measurements (in counts per minute) were recorded on the data sheet as well as on the survey flag. The GM pancake probe was used to determine if identified gamma "hot spots" also contain beta emitting radionuclides.
7. Any suspicious objects or medical debris (vials, syringes, glass) were also screened with the GM pancake probe.
8. Results of the scanning survey were recorded in a logbook throughout the survey process.

3.1.7 References

- ¹ U.S. Nuclear Regulatory Commission. NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual. Washington, DC; Revision 1, August 2000.
- ² U.S. Nuclear Regulatory Commission. NUREG-1507, Minimum detectable concentrations with typical radiation survey instruments for various contaminants and field conditions. Washington, DC; June 1998.
- ³ U.S. Nuclear Regulatory Commission. NUREG/CR-5849, Manual for Conducting Radiological Surveys in Support of License Termination. Washington, DC, December 1993

SECTION 4 RESULTS OF THE SCANNING SURVEY

Section 4.1 "Walkover" Survey Areas Surveyed

Background Areas

Two background areas were selected and surveyed in this investigation. Both areas were deemed "Control" areas as there was no evidence of these areas being impacted by past medical waste disposal operations by the GLAHS. The locations of the background reference areas were: 1) Westwood Park, immediately west of Veterans avenue, between Rochester Avenue and Wilkins Avenue, and 2) the south and middle ball field located north of Ohio Avenue, west of S. Sepulveda Boulevard, and east of Interstate Highway 405. See Figure 3 for a site map.

Investigation Areas

Investigation areas included the former radioactive material disposal area, the Brentwood dog park and adjacent ball fields, Brentwood School athletic fields, and the Veterans Administration Golf Course driving range. To facilitate the completion of the survey, the areas of interest were broken into 10 functional areas (based on location) with each functional area documented on a common grid coordinate system. These designations are listed in Table 1, below.

Table 1, Functional Grids, Investigation Areas

Grid 1	Barrington Park South of ball fields and Brentwood dog park
Grid 2	Barrington ball field – South end of fields to North end of beachers
Grid 3	Barrington small fenced dog area
Grid 4	Barrington ball field behind Post Office
Grid 5	East canyon between VA and dog park
Grid 6	Brentwood School lower soccer field
Grid 7	Brentwood School ball Fields
Grid 8	West canyon between dog park and Barrington Ave.
Grid 9	VA Golf Course - driving range
Grid 10	Brentwood School - football field

See Figure 4 for a site map.

Section 4.2 Results of the "Walkover" Surface Scanning Survey

The surface scanning survey did not reveal any localized areas with individual significantly elevated levels of gamma radiation. However, as indicated in Figure 5, the average readings for the East Arroyo, West Arroyo and the Brentwood School lower soccer fields were notably above the Control areas. Although these areas were statistically different from the control areas, the levels of gamma radiation measured were not unsafe and should not cause any public concern.

The East Canyon, where medical waste was known to be buried showed average surface gamma levels above the 95% Confidence Interval for both Control Sites. The Brentwood Dog Park, the subject of significant concern by the community, showed average levels consistent with or lower than the Control Sites. The measured surface gamma levels at the other sites were consistent with levels measured at the two Control Sites.

The typical variance in radiation levels was present, as well as expected variations in radiation levels consistent with variations in site materials and terrain. Subsequent GM confirmatory measurements at red-flagged locations (highest reading in each grid), provided no additional information but were also consistent with expected variations in background radiation levels.

The reason for these variations may be due to differences in naturally occurring radioactive material content in the subsurface materials in these areas, but further surface and subsurface sampling is necessary to explain the Phase I "Walkover" Survey findings and determine what radioactive materials may be present.

SECTION 5 CONCLUSIONS

5.1 Conclusions

There was no evidence of elevated single readings in any of the surveyed areas. It was determined that the average readings in the two canyons (Arroyos) and the Brentwood School lower soccer fields bordering the GLAHS, were somewhat higher than other surveyed areas or the control areas, but there was no obvious explanation for the differences. Nothing was revealed by the surface "Walkover" scanning that would warrant additional focused surface scanning. Further attention will be given to these anomalies during the surface and subsurface investigative sampling efforts planned in Phase 2.

Although there are still significant questions to be answered regarding these sites, it was concluded that overall, there was nothing detected by surface scanning that appeared to be distinguishable from natural background radiation. One conclusion that can be drawn from this phase of the investigation is that any external gamma radiation exposure, received by current visitors to the parks or the surrounding areas, that may be due to potential contamination on or near the ground surface, is minimal (i.e., indistinguishable from natural background radiation).

SECTION 6 RECOMMENDATIONS

6.1 Recommendations

Based upon the historical documentation, physical evidence, anomalies in the "Walkover" scan data for the Arroyo(s) and strong concern by members of the community, Millennium is recommending that additional surface and subsurface investigation and sampling be performed in these areas.

The purpose of this Phase II investigation and testing will be to characterize existing radiological and chemical contamination in the Arroyos and limited areas outside of the Barrington Dog Park to answer the questions and concerns which have been raised. See Appendix C for a map of proposed Phase II investigation areas.

SECTION 7 DISCLAIMER AND LIMITATIONS

This assessment represents MILLENNIUM's professional interpretation and judgment of the existing site conditions based on the facts currently available within the limits of the mutually agreed scope of work, budget and schedule, which are not intended to be exhaustive in scope. MILLENNIUM's work was performed in accordance with generally accepted industrial hygiene consulting standards. It is MILLENNIUM's specific intent that the conclusions and recommendations presented herein be used as guidance and not necessarily as a firm course of action unless explicitly stated as such. We make no warranties, express or implied, as to the marketability of the property for a particular purpose. The information provided in this report is not to be construed as legal advice.

Our client acknowledges that this report has been prepared for the exclusive use of the client and agrees that MILLENNIUM reports and correspondence will not be used nor relied upon in by any third parties.

This report is based on data and information collected during MILLENNIUM's Assessment of the subject properties conducted by MILLENNIUM personnel and is based solely on the site conditions encountered on the date and time of the site visit, supplemented by historical information and data as described in this report. No assurance is made regarding changes in conditions subsequent to the time of the assessment.

In evaluating the site, MILLENNIUM has relied in good faith on information provided by individuals as noted in this report. We assume that the information provided is factual and accurate. We accept no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation, deception or fraudulent acts of the persons interviewed or contacted.

MILLENNIUM further states that this assessment was limited in nature and therefore MILLENNIUM will not be held responsible for conditions not identified or fully characterized during this limited investigation.

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Figures

*San Diego
San Diego, CA
619.328.6661*

*Southern California
Corona, CA
951-888-1193*

*Central Valley
Fremont, CA
559.263.9873*

*Northern California
Pleasant Hill, CA
925.808.6700*

Vicinity Map

Brentwood Dog Park

Burial Sites

Brentwood School

Westwood Park
(Control Site)



North

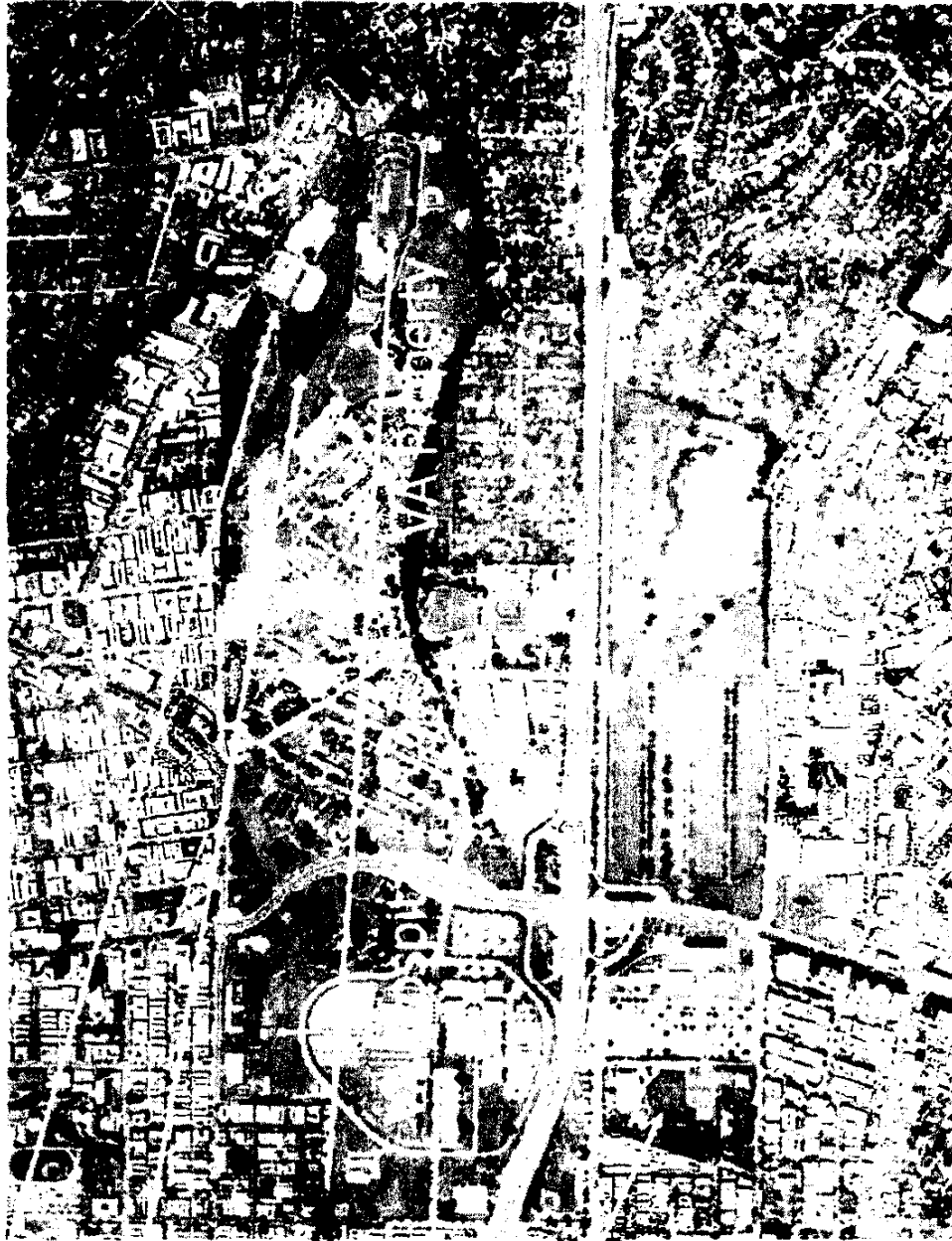


FIGURE 1

SITE LOCATION MAP

Veterans Administration GLAHS
Los Angeles, CA

MILLENNIUM CONSULTING ASSOCIATES



North



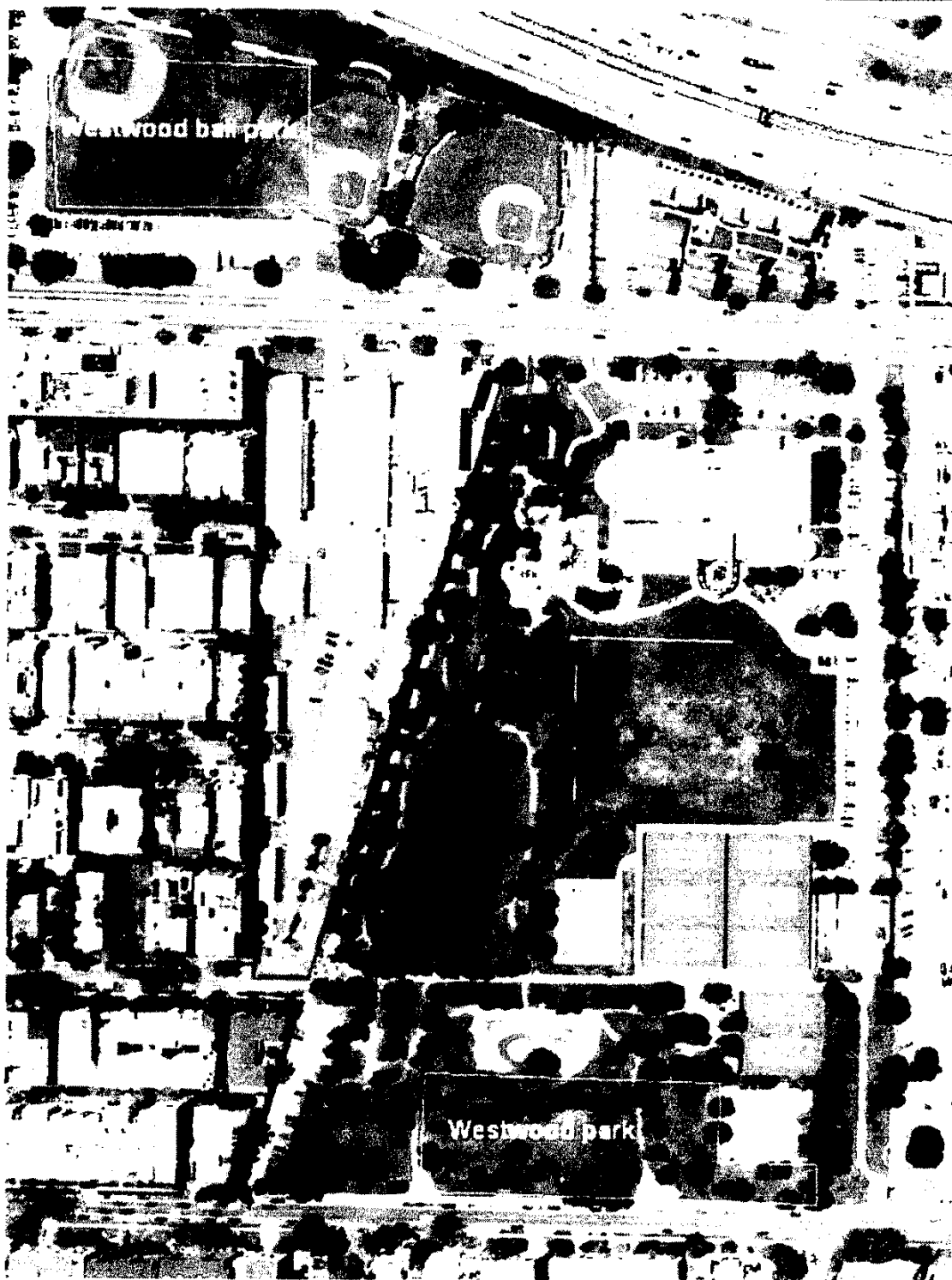
-  Previously Buried Medical Waste (Suspect Site)
-  Existing Surface Buried Medical Waste (Suspect Site)

FIGURE 2

WASTE LOCATION MAP

Veterans Administration GLAHS
Los Angeles, CA

MILLENNIUM CONSULTING ASSOCIATES



North

FIGURE 3

SURVEY CONTROL SITES LOCATION MAP

Veterans Administration GLAHS
Los Angeles, CA

MILLENNIUM CONSULTING ASSOCIATES



North

FIGURE 4
SURVEY SUSPECTSITES LOCATION MAP
Veterans Administration GLAHS
Los Angeles, CA

MILLENNIUM CONSULTING ASSOCIATES

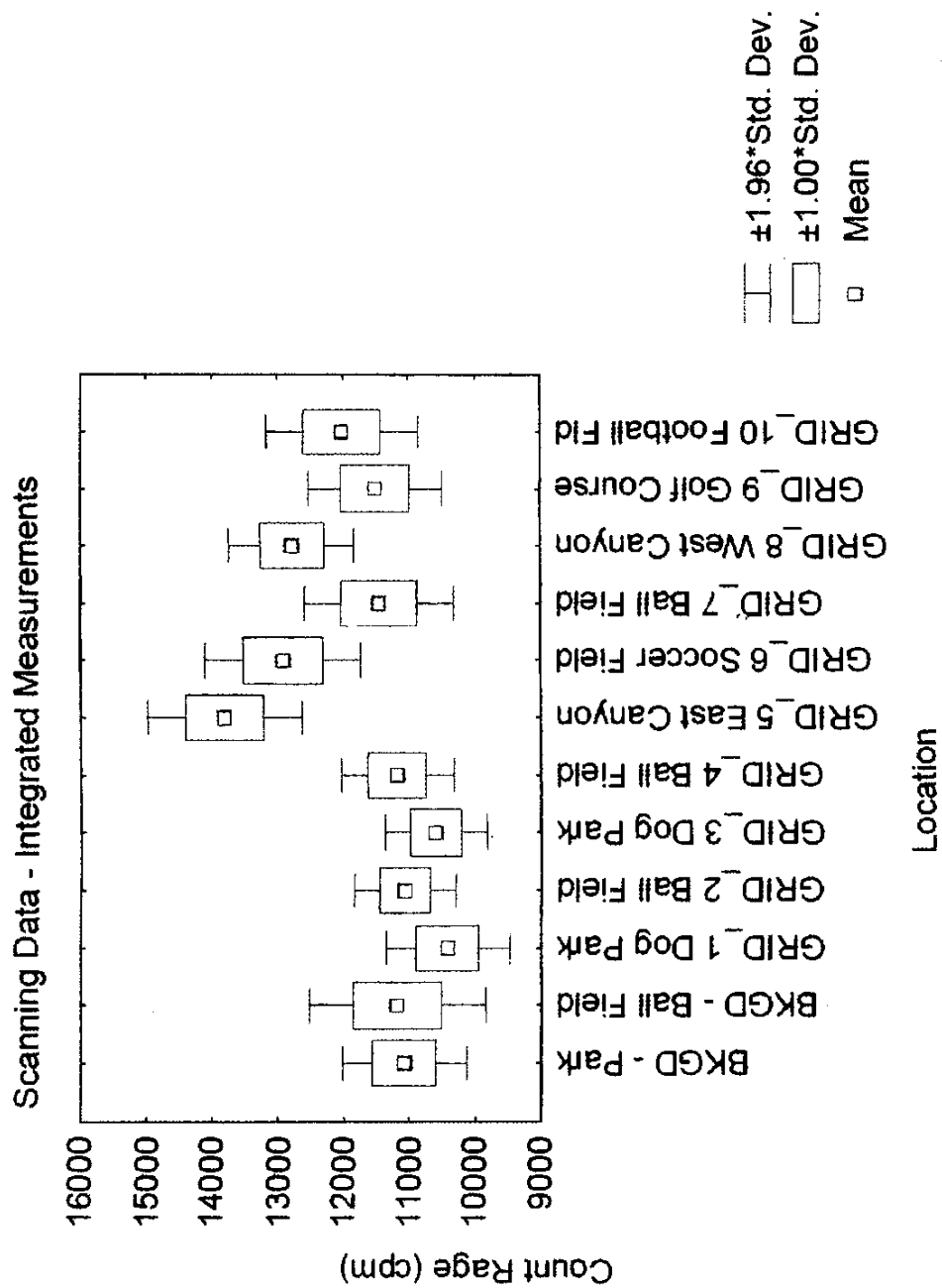


FIGURE 5
WALKOVER SCANNING DATA SUMMARY
 Veterans Administration GLAHS
 Los Angeles, CA

Appendix A

*San Diego
San Diego, CA
619.229.0661*

*Southern California
Corona, CA
951-898-1193*

*Central Valley
Fresno, CA
559.283.9873*

*Northern California
Pleasant Hill, CA
925.808.6700*

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 94955

All Ranges Calibrated Electronically; Ludlum Pulsar Generator Serial No.: ☐ 97743 ☒ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N231A - 1987.
NMRCB Registration No. 481-3 • Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☒ Isotropy ck. ☒ F/S Response ck. ☒ Audio ck.

☒ THR/WIN ck. High Voltage ck.: ☒ 500v ☒ 1000v ☒ 1500v ☒ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☒ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>+/-10%</u>	<u>400 Kcpm</u>
100 Kcpm		<u>100 Kcpm</u>
40 Kcpm		<u>40 Kcpm</u>
10 Kcpm		<u>10 Kcpm</u>
4 Kcpm		<u>4 Kcpm</u>
1 Kcpm		<u>1 Kcpm</u>
400 cpm		<u>400 cpm</u>
100 cpm		<u>100 cpm</u>

Reference Calibration Point	Integrated Counts (1-minute count)	Log Scale Count Rate	Instrument "As Found Reading"
400 Kcpm	<u>399048</u>	<u>400 Kcpm</u>	<u>399048</u>
40 Kcpm	<u>39909</u>	<u>40 Kcpm</u>	<u>39909</u>
4 Kcpm	<u>3991</u>	<u>4 Kcpm</u>	<u>3991</u>
400 cpm	<u>399</u>	<u>400 cpm</u>	<u>399</u>

Calibrated By: [Signature]

Calibration Date: 11/13/06

Calibration Due: 11/13/07

Reviewed By: [Signature]

Date: 11/13/06

Certificate of Calibration

Voltage Plateau Form

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR 144074
Counter Mfg.: Ludlum Model: 2221 Serial No.: 94955

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NRCB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____

Detector geometry to source: ☐ Face, ☒ Side, ☐ Below, ☐ Other: _____

Distance to source: ☐ Contact, ☒ 6 inches, ☐ Other: _____

Source: ☐ Th230 @ 13,500 dpm (2/13/03) sn: 4098-03 ☐ Te99 @ 18,100 dpm (2/13/03) sn: 4099-03

☒ Cs137 @ 6.5 µCi (1/27/03) sn: 4097-03 ☐ Other: _____

Count Time: 1 minute(s)

High Voltage	Gross Source Counts	Background Counts
600	25115	
700	58839	
800	78614	
900	84619	
1000	88493	
1100	89690	9962
1200	90006	

Comments: Recommended Operating High Voltage: 1100 volts

Calibrated By: [Signature]

Calibration Date: 11/13/06

Reviewed By: [Signature]

Calibration Due: 11/13/07

Date: 11/13/06

Certificate of Calibration

Ratemeter / Sealer Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 125457

All Ranges Calibrated Electronically; Ludlum Pulsar Generator Serial No.: ☐ 97743 ☒ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997.
NRC/CB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☒ Geotropism ck. ☒ F/S Response ck. ☒ Audio ck.

☒ THR/WIN ck. High Voltage ck.: ☐ 500v ☒ 1000v ☒ 1500v ☒ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☒ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>+/- 10%</u>	<u>400 Kcpm</u>
100 Kcpm		<u>100 Kcpm</u>
40 Kcpm		<u>40 Kcpm</u>
10 Kcpm		<u>10 Kcpm</u>
4 Kcpm		<u>4 Kcpm</u>
1 Kcpm		<u>1 Kcpm</u>
400 cpm		<u>400 cpm</u>
100 cpm		<u>100 cpm</u>

Reference Calibration Point	Integrated Counts (1-minute count)	Log Scale Count Rate	Instrument "As Found Reading"
400 Kcpm	<u>399262</u>	<u>400 Kcpm</u>	<u>399262</u>
40 Kcpm	<u>39928</u>	<u>40 Kcpm</u>	<u>39928</u>
4 Kcpm	<u>3993</u>	<u>4 Kcpm</u>	<u>3993</u>
400 cpm	<u>399</u>	<u>400 cpm</u>	<u>399</u>

Calibrated By: [Signature]

Calibration Date: 11/13/06

Calibration Due: 11/13/07

Reviewed By: [Signature]

Date: 11/13/06

Certificate of Calibration

Voltage Plateau Form

ERG

Environmental Restoration Group, Inc.
2809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR066864
Counter Mfg.: Ludlum Model: 2221 Serial No.: 125457

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N321A - 1997
NMB/CB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____
Detector geometry to source: ☐ Face, ☒ Side, ☐ Below, ☐ Other: _____
Distance to source: ☐ Contact, ☒ 6 inches, ☐ Other: _____
Source: ☐ Th230 @ 13,500 dpm (2/13/03) sn: 4098-03 ☐ Tc99 @ 18,100 dpm (2/13/03) sn: 4099-03
☒ Cs137 @ 6.5 µCi (1/27/03) sn: 4097-03 ☐ Other: _____

Count Time: 1 minute(s)

High Voltage	Gross Source Counts	Background Counts
500	32318	
600	69678	
700	82892	
800	89149	
900	89968	10557
1000	90942	
1100	90798	
1200	141057	

Comments: Recommended Operating High Voltage: 900 volts

Calibrated By: [Signature]

Calibration Date: 11/13/06

Reviewed By: [Signature]

Calibration Due: 11/13/07

Date: 11/13/06

Certificate of Calibration

Rateometer Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2241 Serial No.: 150714

All Ranges Calibrated Electronically: Ludlum Pulsar Generator Serial No.: ☐ 97743 ☐ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N321A - 1997
NRCB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☐ Geotropism ck. ☒ F/S Response ck. ☒ Audio ck.

☐ THR/WIN ck. High Voltage ck.: ☒ 500v ☒ 1000v ☒ 1500v ☐ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☒ Yes ☐ No

Reference Setting	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>+/- 10%</u>	<u>400Kcpm</u>
100 Kcpm	<u></u>	<u>100Kcpm</u>
40 Kcpm	<u></u>	<u>40Kcpm</u>
10 Kcpm	<u></u>	<u>10Kcpm</u>
4 Kcpm	<u></u>	<u>4Kcpm</u>
1 Kcpm	<u></u>	<u>1Kcpm</u>
400 cpm	<u></u>	<u>400cpm</u>
100 cpm	<u></u>	<u>100cpm</u>
Reference Setting	Instrument "As Found Reading"	Integrated Counts (1-minute count)
400 Kcpm	<u>399352</u>	<u>399332</u>
40 Kcpm	<u>39932</u>	<u>39932</u>
4 Kcpm	<u>3993</u>	<u>3993</u>
400 cpm	<u>399</u>	<u>399</u>

Calibrated By: [Signature]

Calibration Date: 11/2/06

Calibration Due: 11/2/07

Reviewed By: [Signature]

Date: 11/2/07

Efficiency Calibration



Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-9 Serial No: PR084357
Counter Mfg.: Ludlum Model: 2241 Serial No: 150714

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N121A - 1997
NADCB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

GM tube voltage: 900 volts Counter Threshold Setting: 40 mV
Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____
Detector geometry to source: ☒ Face, ☐ Planchet/In tray, ☐ Side, ☐ Other: _____
Distance to source: ☒ Contact, ☐ Planchet/In tray, ☐ 6 inches, ☐ Other: _____
Source: ☒ Tc99 @ 18,100 dpm (2/13/03) sn: 4099-03 ☐ Other: _____
Gross source counts: 2544 cpm
Background counts: 51 cpm
Net source counts: 2493 cpm

Comments:

4π Efficiency for Cal Source: 14 %

Efficiency = Net source counts (cpm) / Source activity (cpm,dpm)

Calibrated By: [Signature]

Calibration Date: 11/2/06

Calibration Due: 11/2/07

Reviewed By: [Signature]

Date: 11/2/07

Certificate of Calibration

Ratemeter Certificate of Calibration



Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2241 Serial No.: 150711

All Ranges Calibrated Electronically: Ludlum Pulser Generator Serial No.: ☐ 97743 ☒ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N423A - 1997.
NIMRCB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☐ Geotropism ck. ☐ \pm S Response ck. ☒ Audio ck.

☐ THR/VIN ck. High Voltage ck.: ☒ 500v ☒ 1000v ☒ 1500v ☐ Battery ck. (min 4.4 vdc)

Threshold Setting: 40 mV

Instrument found within tolerance ($\pm 10\%$) ☒ Yes ☐ No

Reference Setting	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>$\pm 10\%$</u>	<u>397 Kcpm</u>
100 Kcpm	<u></u>	<u>99.9 Kcpm</u>
40 Kcpm	<u></u>	<u>39.7 Kcpm</u>
10 Kcpm	<u></u>	<u>9.95 Kcpm</u>
4 Kcpm	<u></u>	<u>3.99 Kcpm</u>
1 Kcpm	<u></u>	<u>995 Kcpm</u>
400 cpm	<u></u>	<u>399 cpm</u>
100 cpm	<u></u>	<u>99 cpm</u>
Reference Setting	Instrument "As Found Reading"	Integrated Counts (1-minute count)
400 Kcpm	<u></u>	<u>399270</u>
40 Kcpm	<u></u>	<u>39929</u>
4 Kcpm	<u></u>	<u>3993</u>
400 cpm	<u></u>	<u>399</u>

Calibrated By: [Signature]

Calibration Date: 11/9/06

Calibration Due: 11/9/07

Reviewed By: Chad P. L.

Date: 11/9/06

Efficiency Calibration



Environmental Restoration Group, Inc.
4809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-G Serial No: AR125320
Counter Mfg.: Ludlum Model: 2241 Serial No: 150711

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N423A - 1997.
NRC/CB Registration No. 481-J - Calibration of Radiation Detection Instruments & Devices

GM tube voltage: 900 volts Counter Threshold Setting: 40 mV

Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____

Detector geometry to source: ☒ Face, ☐ Planchett/In tray, ☐ Side, ☐ Other: _____

Distance (to source): ☒ Contact, ☐ Planchett/In tray, ☐ 6 inches, ☐ Other: _____

Source: ☒ Tc99 @ 18,100 dpm (2/13/03) ser. 4099-03 ☐ Other: _____

Gross source counts: 2458 cpm

Background counts: 68 cpm

Net source counts: 2390 cpm

Comments:

4 π Efficiency for Cal Source: 13 %

Efficiency = Net source counts (cpm) / Source activity (cpm,dpm)

Calibrated By: [Signature]

Calibration Date: 11/9/06

Reviewed By: [Signature]

Calibration Due: 11/9/07

Date: 11/9/06

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 115157

All Ranges Calibrated Electronically; Ludlum Pulser Generator Serial No.: ☐ 97743 ☒ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997.
NRC Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☒ Geotropism ck. ☒ F/S Response ck. ☒ Audio ck.
☒ THR/WIN ck. High Voltage ck.: ☒ 500v ☐ 1000v ☐ 1500v ☒ Battery ck. (min 4.4 vdc)
Threshold Setting: 10 mV
Instrument found within tolerance (+/- 10%) ☒ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>+/- 10%</u>	<u>400 Kcpm</u>
100 Kcpm		<u>100 Kcpm</u>
40 Kcpm		<u>40 Kcpm</u>
10 Kcpm		<u>10 Kcpm</u>
4 Kcpm		<u>4 Kcpm</u>
1 Kcpm		<u>1 Kcpm</u>
400 cpm		<u>400 cpm</u>
100 cpm		<u>100 cpm</u>

Reference Calibration Point	Integrated Counts (1-minute count)	Log Scale Count Rate	Instrument "As Found Reading"
400 Kcpm	<u>+/- 10%</u>	<u>400 Kcpm</u>	<u>399527</u>
40 Kcpm		<u>40 Kcpm</u>	<u>39955</u>
4 Kcpm		<u>4 Kcpm</u>	<u>3996</u>
400 cpm		<u>400 cpm</u>	<u>400</u>

Calibrated By: [Signature]

Calibration Date: 11/29/06

Calibration Due: 11/29/07

Reviewed By: Kenneth C. Sah

Date: 11/29/06

Certificate of Calibration

Voltage Plateau Form

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR150851
Counter Mfg.: Ludlum Model: 2221 Serial No.: 115-157

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N433A - 1997.
NRC/CB Registration No. 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____

Detector geometry to source: ☐ Face, ☒ Side, ☐ Below, ☐ Other: _____

Distance to source: ☐ Contact, ☒ 6 inches, ☐ Other: _____

Source: ☐ Th230 @ 13,500 dpm (2/13/03) sn: 4098-03 ☐ Tc99 @ 18,100 dpm (2/13/03) sn: 4099-03

☒ Cs137 @ 6.5 µCi (1/27/03) sn: 4097-03 ☐ Other: _____

Count Time: 1 minute(s)

High Voltage	Gross Source Counts	Background Counts
600	619	
700	36088	
800	64778	
900	78724	
1000	83714	
1100	87829	10126
1150	88468	
1200	88327	

Comments: Recommended Operating High Voltage: 1100 volts

Calibrated By: [Signature]

Calibration Date: 11/29/06

Calibration Due: 11/29/07

Reviewed By: Kenneth Baker

Date: 11/29/06

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 103984

All Ranges Calibrated Electronically; Ludlum Pulsar Generator Serial No.: ☐ 97743 ☒ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997.
NAB/CB Registration No. 481-J - Calibration of Radiation Detection Instruments & Devices

☒ Mechanical ck. ☒ Meter Zeroed ☒ Geotopism ck. ☒ F/S Response ck. ☒ Audio ck.

☒ THR/WIN ck. High Voltage ck.: ☒ 500v ☒ 1000v ☒ 1500v ☒ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☒ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	<u>+/- 10%</u>	<u>400 Kcpm</u>
100 Kcpm		<u>100 Kcpm</u>
40 Kcpm		<u>40 Kcpm</u>
10 Kcpm		<u>10 Kcpm</u>
4 Kcpm		<u>4 Kcpm</u>
1 Kcpm		<u>1 Kcpm</u>
400 cpm		<u>400 cpm</u>
100 cpm		<u>100 cpm</u>

Reference Calibration Point	Integrated Counts (1-minute count)	Log Scale Count Rate	Instrument "As Found Reading"
400 Kcpm	<u>+/- 10%</u>	<u>400 Kcpm</u>	<u>399566</u>
40 Kcpm		<u>40 Kcpm</u>	<u>39957</u>
4 Kcpm		<u>4 Kcpm</u>	<u>3996</u>
400 cpm		<u>400 cpm</u>	<u>399</u>

Calibrated By: [Signature]

Calibration Date: 11/29/06

Calibration Due: 11/29/07

Reviewed By: [Signature]

Date: 11/26/06

Certificate of Calibration

Voltage Plateau Form

ERG

Environmental Restoration Group, Inc.
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 296-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR196944
Counter Mfg.: Ludlum Model: 2221 Serial No.: 103984

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N423A - 1997.
NRCRB Registration No. 481-3 - Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☒ 39 inch, ☐ 5 foot, ☐ Other: _____

Detector geometry to source: ☐ Face, ☒ Side, ☐ Below, ☐ Other: _____

Distance to source: ☐ Contact, ☒ 6 inches, ☐ Other: _____

Source: ☐ Th230 @ 13,500 dpm (2/13/03) sn: 4098-03 ☐ Tc99 @ 18,100 dpm (2/13/03) sn: 4099-03

☒ Cs137 @ 6.5 µCi (1/27/03) sn: 4097-03 ☐ Other: _____

Count Time: 1 minute(s)

High Voltage	Gross Source Counts	Background Counts
500	890	
600	47626	
700	73335	
800	81268	
900	83509	
1000	84312	
1100	84764	
1150	85760	10131
1200	87635	

Comments: Recommended Operating High Voltage: 1150 volts

Calibrated By: [Signature]

Calibration Date: 11/29/06

Calibration Due: 11/29/07

Reviewed By: [Signature]

Date: 11/29/06

Appendix B

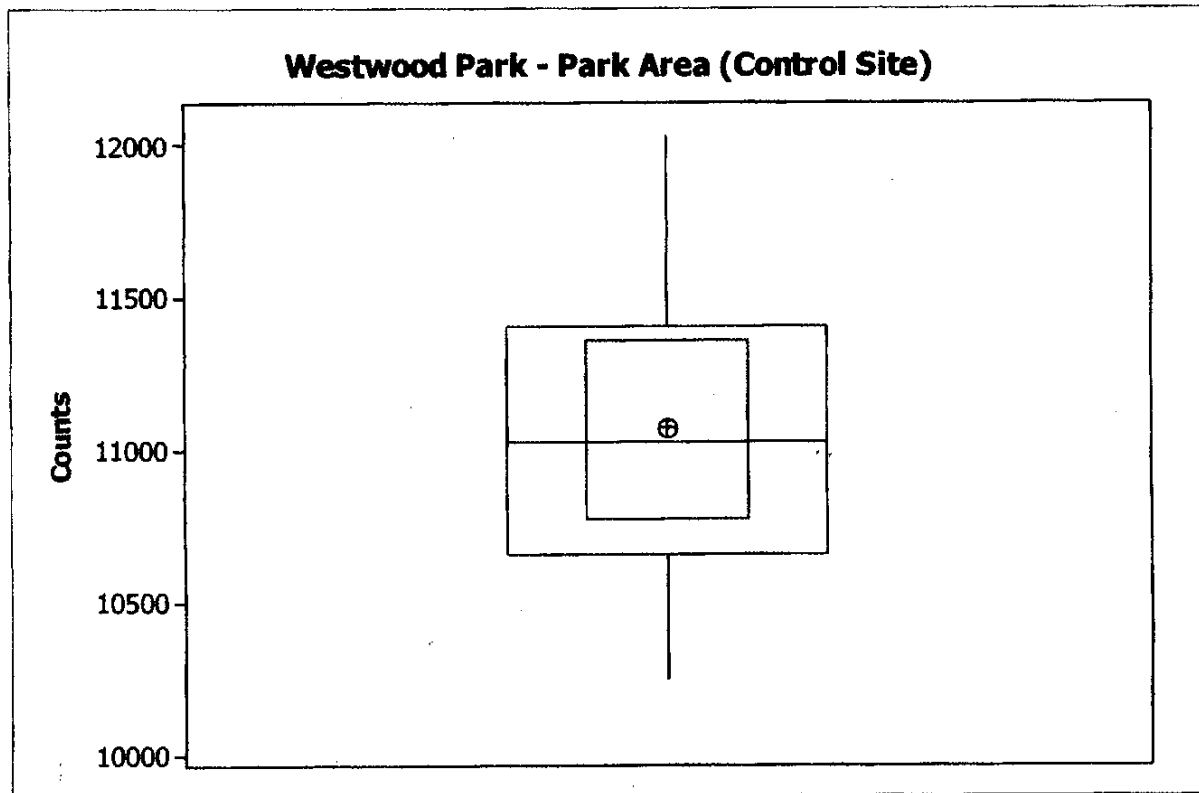
*San Diego
San Diego, CA
619.329.6661*

*Southern California
Corona, CA
851-898-1193*

*Central Valley
Fresno, CA
559.263.9873*

*Northern California
Pleasant Hill, CA
925.808.6700*

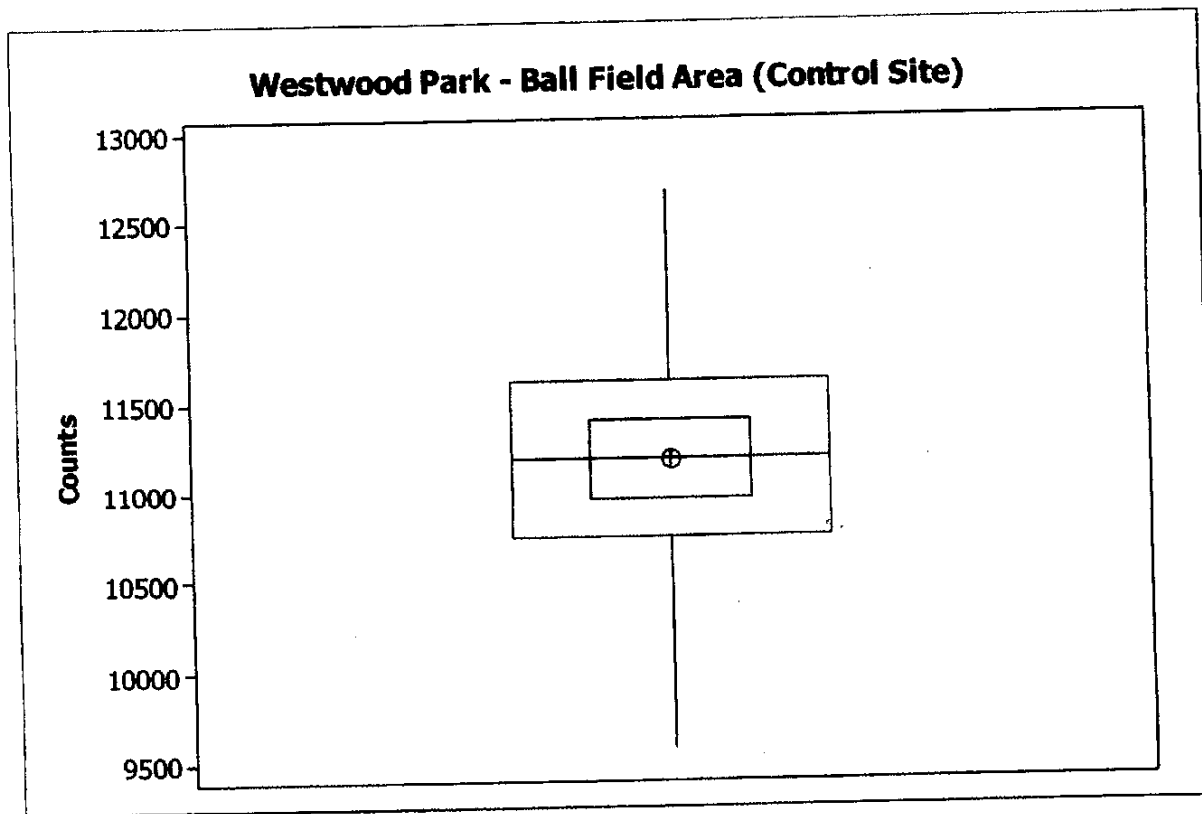
Individual Site Data Plot – Westwood Park – Park Area (Control Site)



Descriptive Statistics for this Site:

Average	11070.2
Standard Deviation	486.55176
High	12030
Low	10250

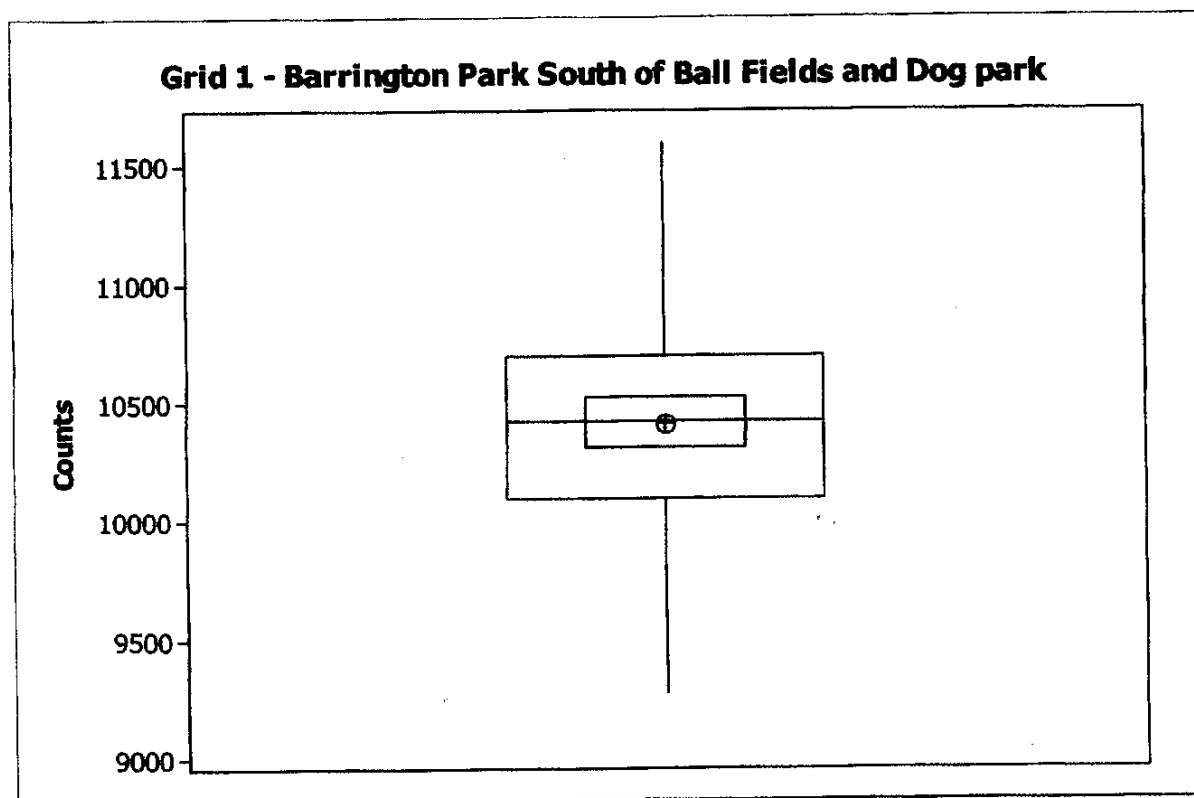
Individual Site Data Plot – Westwood Park – Ball Field Area (Control Site)



Descriptive Statistics for this Site:

Average		11187.857
Standard		
Deviation	68.2355	682.35503
High		12680
Low		9580

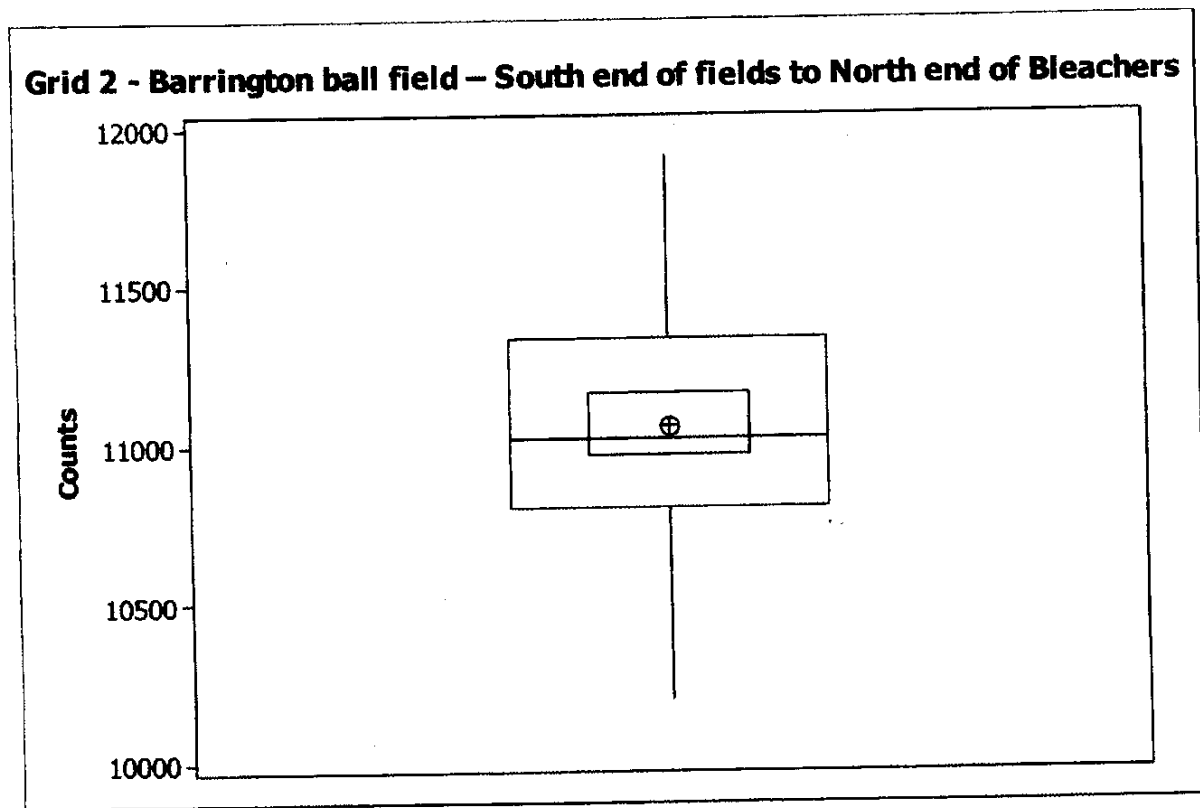
Individual Site Data Plot – Grid 1 – Barrington Park South of Ball Fields and Dog Park



Descriptive Statistics for this Site:

Average	10410.678
Standard Deviation	474.34116
High	11640
Low	9270

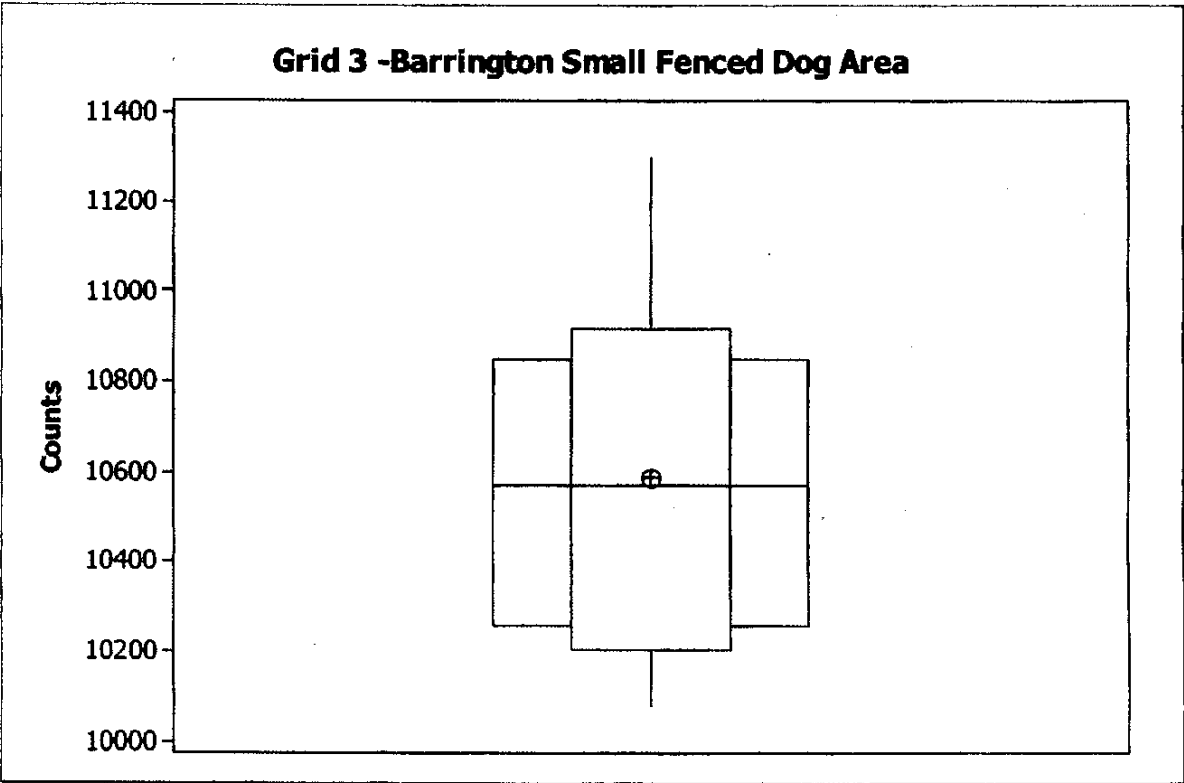
Individual Site Data Plot – Grid 2 – Barrington Ball Field –South end of Fields to North end of Bleachers



Descriptive Statistics for this Site:

Average	11060.9722
Standard	
Deviation	393.833309
High	11910
Low	10190

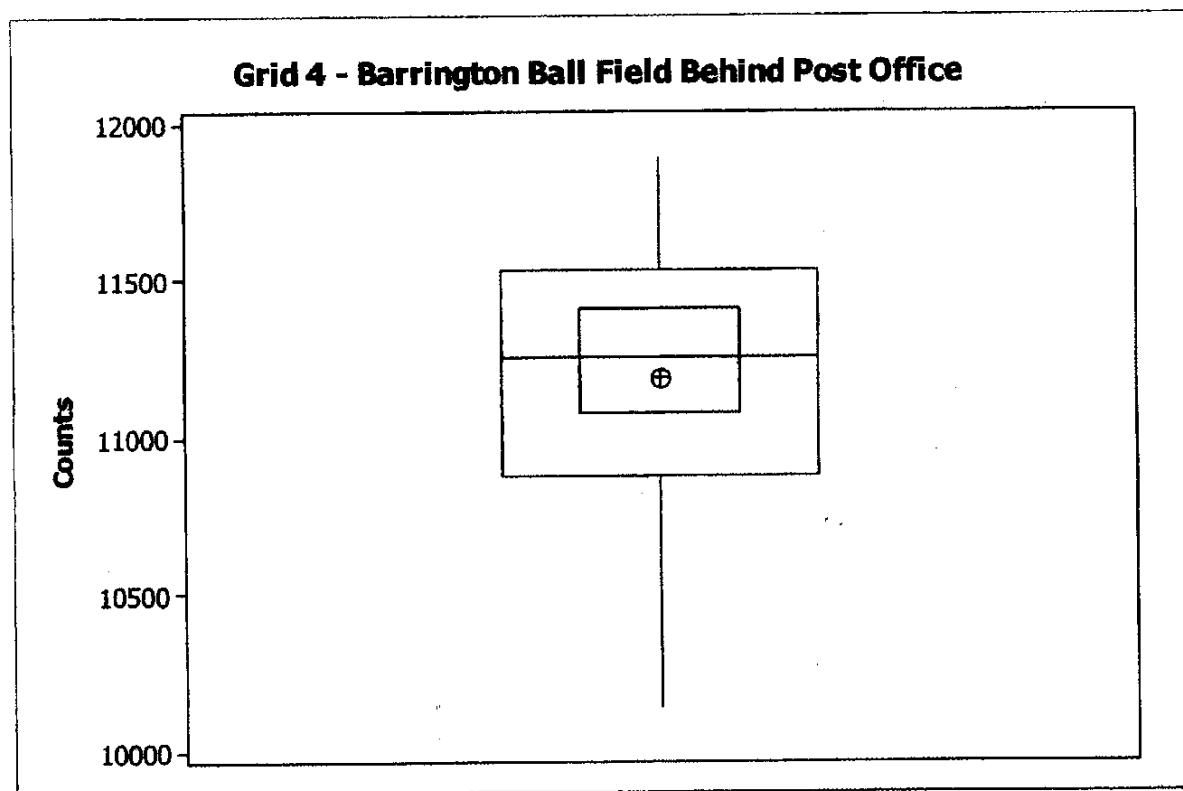
Individual Site Data Plot – Grid 3 – Barrington Small Dog Fenced Area



Descriptive Statistics for this Site:

Average	10592.5
Standard Deviation	392.419236
High	11300
Low	10080

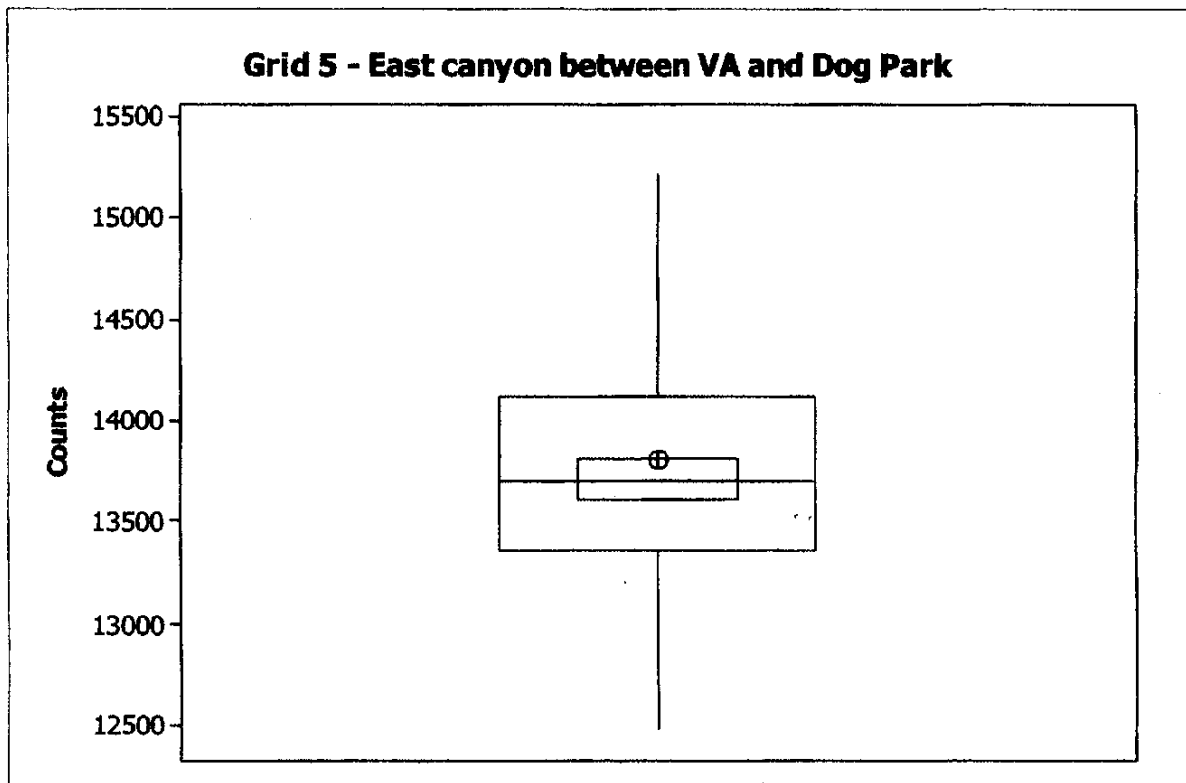
Individual Site Data Plot – Grid 4 – Barrington Ball Field Behind Post Office



Descriptive Statistics for this Site:

Average	11178.2895
Standard	
Deviation	443.523432
High	11890
Low	9670

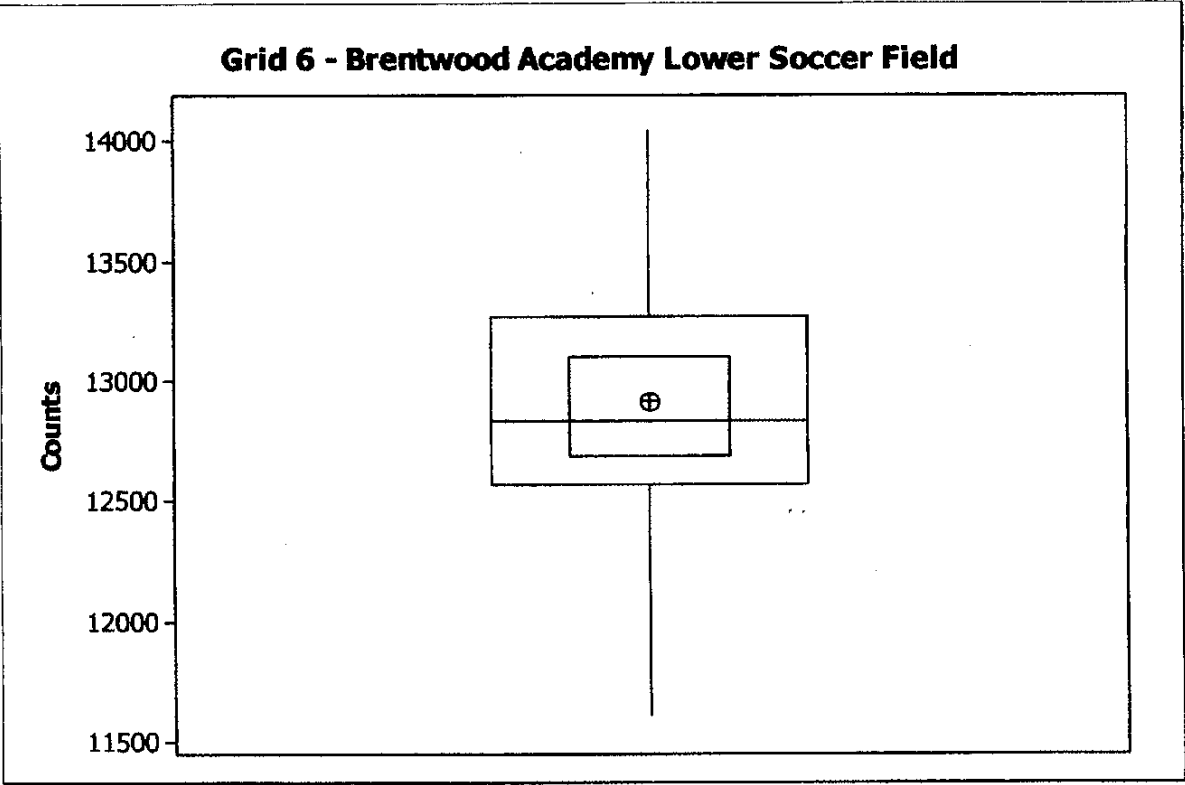
Individual Site Data Plot – Grid 5 – East Canyon between GLAHS and Dog Park



Descriptive Statistics for this Site:

Average	13810.3529
Standard Deviation	598.313994
High	15210
Low	12490

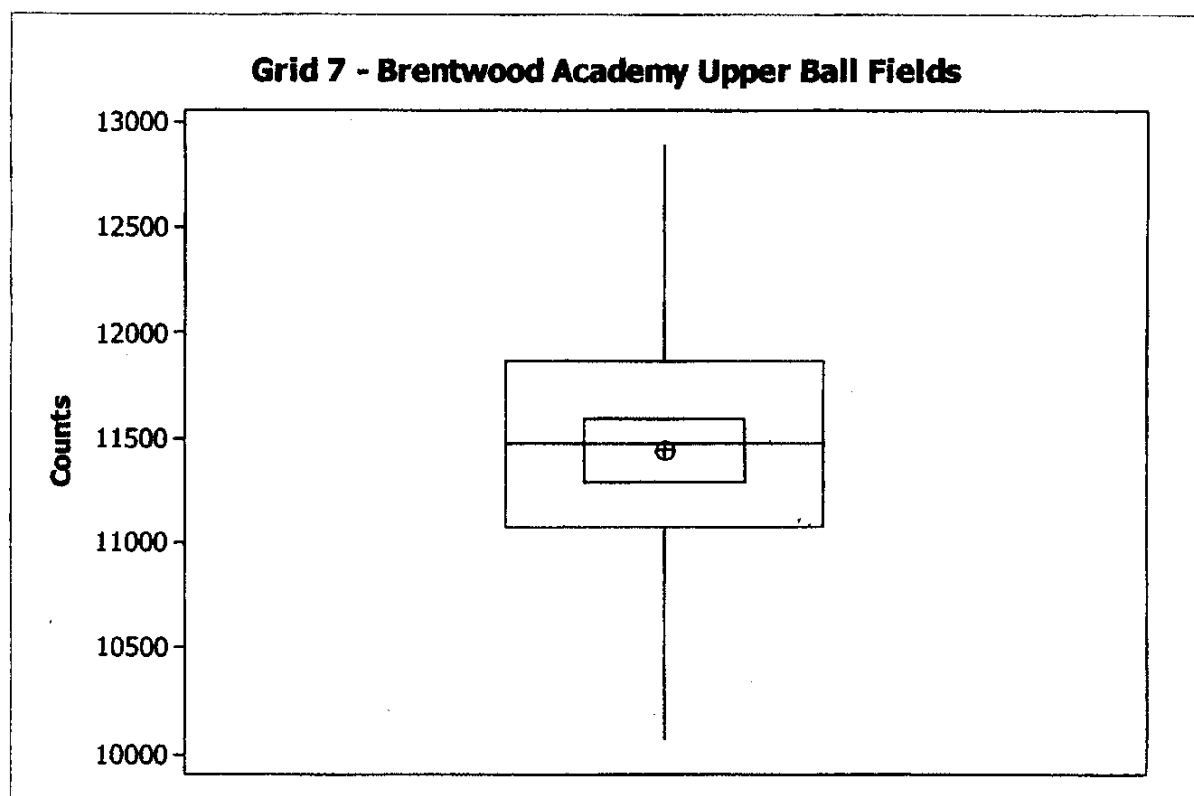
Individual Site Data Plot – Grid 6 – Brentwood Academy Lower Soccer Field



Descriptive Statistics for this Site:

Average	12917
Standard	
Deviation	602.935845
High	14480
Low	11610

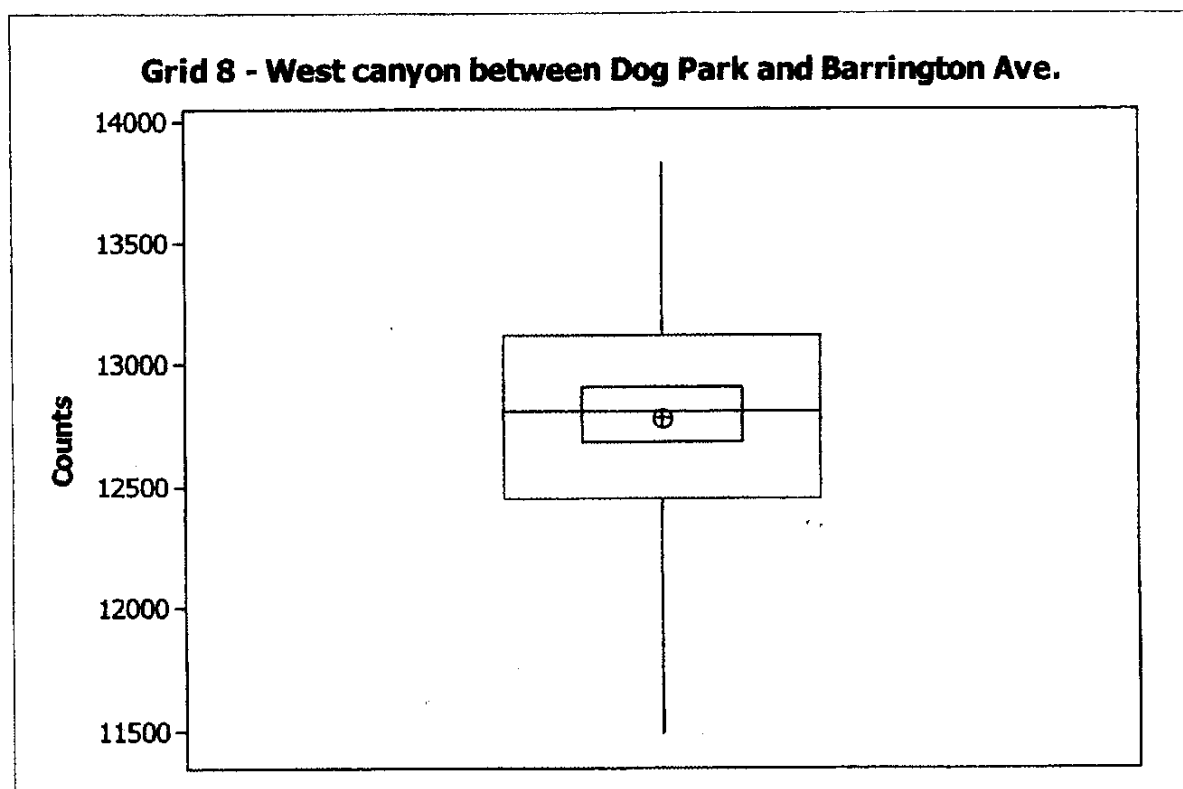
Individual Site Data Plot – Grid 7 – Brentwood Academy Upper Ball Fields



Descriptive Statistics for this Site:

Average	11453.1933
Standard	
Deviation	577.934564
High	12890
Low	10080

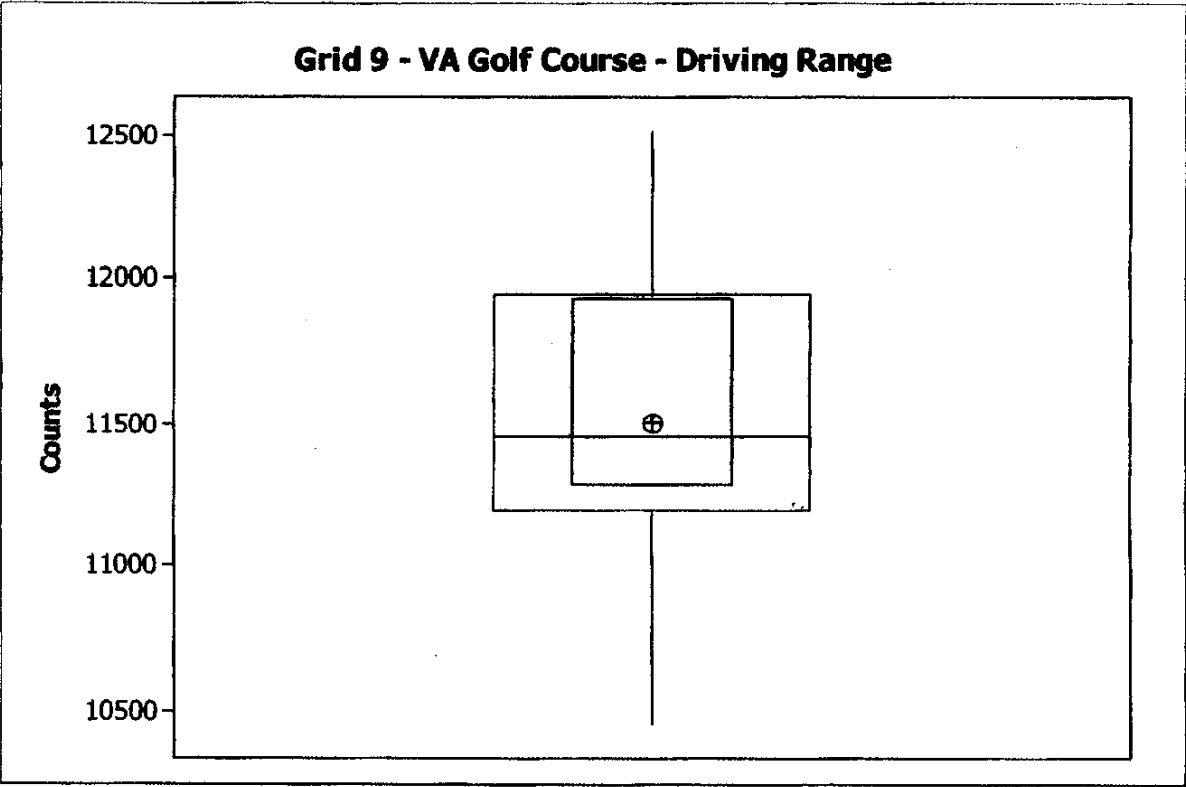
Individual Site Data Plot – Grid 8 – West Canyon between Dog Park and Barrington Ave.



Descriptive Statistics for this Site:

Average	12788.4375
Standard	
Deviation	486.446466
High	14640
Low	11490

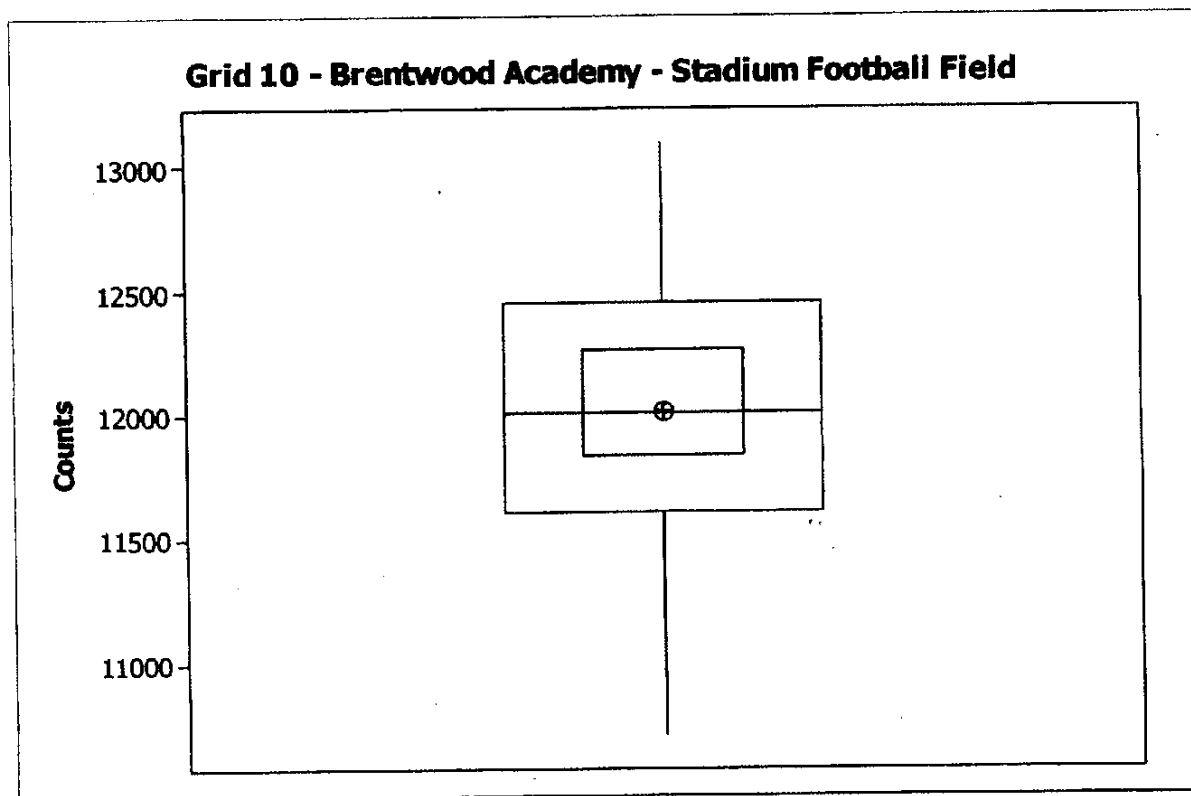
Individual Site Data Plot – Grid 9 – VA Golf Course Driving Range



Descriptive Statistics for this Site:

Average	11507.2222
Standard Deviation	521.071357
High	12510
Low	10460

Individual Site Data Plot – Grid 10 – Brentwood Academy – Stadium Football Field



Descriptive Statistics for this Site:

Average	12022.5
Standard Deviation	593.489917
High	14130
Low	10720

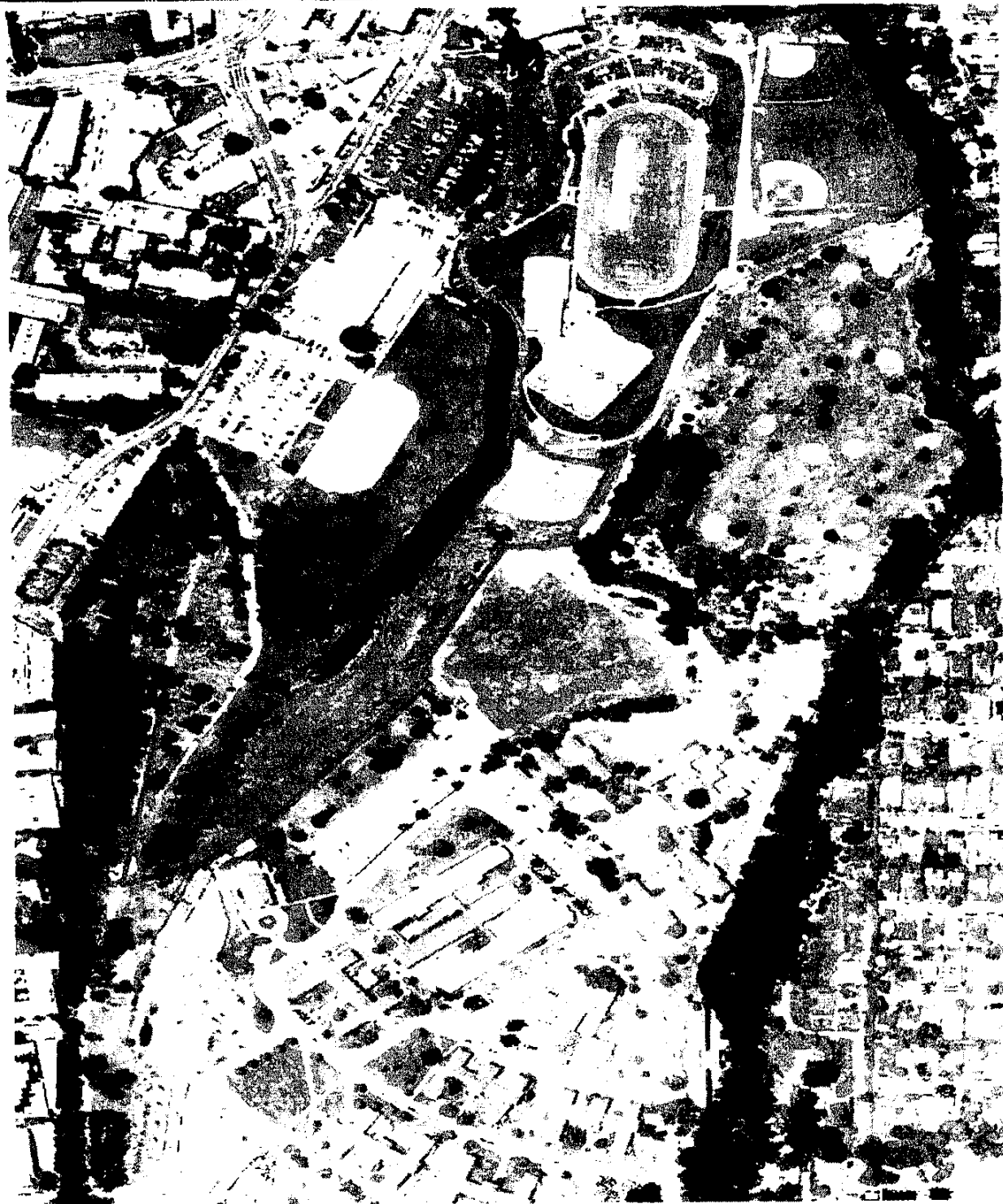
Appendix C

*San Diego
San Diego, CA
619.229.6661*

*Southern California
Corona, CA
951-898-1183*

*Central Valley
Fresno, CA
559.283.9873*

*Northern California
Pleasant Hill, CA
925.808.6700*



North

PROPOSED PHASE II INVESTIGATION LOCATION MAP

Veterans Administration GLAHS
Los Angeles, CA

MILLENNIUM CONSULTING ASSOCIATES