CIMARRON CORPORATION

P.O. BOX 315 • CRESCENT, OK 73028

January 31, 2001/2 Date was supposed to be 2002

Mr. Ken Kalman, Project Manager
Facilities Decommissioning Section
Low-Level Waste & Decommissioning Projects Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Docket No. 70-925; License No. SNM-928

Cimarron Corporation
Final Status Survey Report for Sub-Area "N"

Dear Mr. Kalman:

Cimarron Corporation has completed the Final Status Survey for Sub-Area "N" in accordance with the previously approved Phase III Final Status Survey Plan. This submittal letter transmits the FSSR for Sub-Area "N".

Two (2) copies of the FSSR are provided for your review and approval. Our distribution includes, among others, one (1) copy submitted to the NRC Docket and one (1) copy to Dr. Blair Spitzberg with NRC, Region IV.

Cimarron Corporation requests that Sub-Area "N" be released from Licensed No. SNM-928.

Please feel free to contact me if there are any questions or concerns.

Sincerely,

Karen Morgan

Karen Morgan
Radiation Safety Officer
Enclosures

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APPENDIX

REFERENCES

1. Cimarron Corporation Nuclear Materials License, SNM-928 Docket No. 70-0925, issued for possession only March 31, 1983; Amendment No. 17, issued April 9, 2001.

2. Cimarron Corporation Nuclear Materials License, SNM-1174, Docket No. 070-1193, terminated February 5, 1993.

3. Cimarron Corporation letter to USNRC, August 20, 1990.

4. USNRC letter from Mr. Richard E. Cunningham, Director, Division of Industrial and Medical Nuclear Safety, to Dr. John Stauter, Director of Environmental Services, Cimarron Corporation, dated February 5, 1993.

5. Chase Environmental Group, Inc. "Radiological Characterization Report for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", October 1994.

6. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated August 20, 1999.

7. Chase Environmental Group, Inc. "Decommissioning Plan for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", April 1995.

8. Chase Environmental Group, Inc. "Final Status Survey Plan for Unaffected Areas for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", October 1994.

9. USNRC letter from Mr. Michael F. Weber, Chief Low-Level Waste and Decommissioning Project Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President Kerr-McGee Corporation, dated May 1, 1995.

10. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, Cimarron Corporation to Mr. Michael F. Weber, Chief Low-Level Waste and Decommissioning Branch, Division of Waste Management, USNRC, dated November 13, 1995.

11. Cimarron Corporation, "Final Status Survey Report, Phase I Areas at the Cimarron Facility, License No. SNM-928", July 1995.

12. USNRC letter from Mr. R. A. Nelson Acting Chief Low-Level Waste and Decommissioning Project Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated April 23, 1996.

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16. Cimarron Corporation, "Final Status Survey Report, Phase II-Subarea J for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", September 1997.

17. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Low-Level Waste and Decommissioning Project Branch, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated July 31, 1998.

18. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Low-Level Waste and Decommissioning Project Branch, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated April 17, 2000.

19. Cimarron Corporation, "Final Status Survey Report for Subarea H for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", November 1998.

20. USNRC letter from Mr. Kenneth L. Kalman, Environmental Scientists, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated March 20, 2000.

21. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Ken Kalman, Project Manager, Decommissioning Projects Branch, Division of Waste Management, USNRC, dated April 6, 2000.

22. Cimarron Corporation, "Final Status Survey Report for Subarea I for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma," June 1999.

23. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Office of Nuclear Material Safety and Safeguards, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated May 16, 2000.

24. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Larry Camper, Chief, Decommissioning Branch, Office of Nuclear Material Safety and Safeguards, USNRC, dated May 26, 2000.

25. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated June 6, 2000.

26. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Office of Nuclear Material Safety and Safeguards, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated April 9, 2001.

27. Cimarron Corporation, "Final Status Survey Report for Phase II – Subarea G for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility," Crescent, Oklahoma, October 1999.

28. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated October 13, 2000.

29. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Ken Kalman, Project Manager, Facilities Decommissioning Section, Division of Waste Management, USNRC, dated October 26, 2000.

30. USNRC letter from Mr. Dwight D. Chamberlain, Director, Division of Nuclear Materials Safety, to Mr. Jeff Lux, Cimarron Corporation, dated November 26, 2001.

31. Cimarron Corporation, "Final Status Survey Report for Concrete Rubble in Subarea F, Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", March 1998.

32. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Low-Level Waste and Decommissioning Project Branch, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated March 1, 1999.

33. Chase Environmental Group, Inc., "Final Status Survey Plan for Phase III Areas for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility", Crescent, Oklahoma, June 1997.

34. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Facilities Decommissioning Section to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated September 11, 1998.

35. Cimarron Corporation, "Final Status Survey Report, Phase III-Subarea L (Subsurface) for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", May 1996.

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38. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, Cimarron Corporation, to Mr. Kenneth L. Kalman, Project Manager, Facilities Decommissioning Section, USNRC, dated October 17, 1996.

39. Cimarron Corporation letter from Mr. Jess Larsen, Vice President Cimarron Corporation to Mr. Kenneth L. Kalman, Project Manager, Facilities Decommissioning Section, USNRC, dated November 4, 1996.

40. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Facilities Decommissioning Section, to Mr. Jess Larsen Vice President, Cimarron Corporation, dated November 8, 1996.

41. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, Cimarron Corporation to Mr. Kenneth L. Kalman, Project Manager, Facilities Decommissioning Section, USNRC, dated July 27, 1998.

42. USNRC letter from Mr. Larry W. Camper, Chief Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated November 16, 1999.

43. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Ken Kalman, Project Manager, Facilities Decommissioning Section, Low-Level Waste and Decommissioning Projects Branch, USNRC, dated December 3, 1999.

44. USNRC letter from Mr. Larry W. Camper, Chief, Decommissioning Branch, Division of Waste Management to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated January 13, 2000.

45. USNRC letter from Mr. Kenneth L. Kalman, Project Manager, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated March 20, 2000.

46. Cimarron Corporation, "Final Status Survey Report Phase III – Subarea "O" Subsurface for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", dated March 1998.

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49. Cimarron Corporation, "Final Status Survey Report Phase III – Subarea "M" for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", dated December 1998.

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51. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Ken Kalman, Project Manager, Decommissioning Branch, Division of Waste Management, USNRC, dated April 24, 2000.

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53. USNRC letter from Mr. Kenneth L. Kalman, Environmental Scientist, Decommissioning Branch, Division of Waste Management, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated January 29, 2001.

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63. J. D. Berger, "Manual for Conducting Radiological Surveys in Support of License Termination"; Draft Report for Comment, Oak Ridge Associated Universities, NUREG/CR-5849, June 1992.

64. USNRC, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of License for By-Product, Source, or Special Nuclear Material", August 1987.

65. Cimarron Corporation letter from Mr. Jess Larsen, Vice President, to Mr. Michael F. Weber, Chief Low-Level Waste and Decommissioning Projects Branch, Division of Waste Management, USNRC, dated June 21, 1995.

66. American National Standards Institute, "Radiation Protection Instrumentation Test and Calibration", ANSI N323-1978, Institute of Electrical and Electronic Engineers, Inc. September 1977.

67. Cimarron Corporation, "Response to NRC Comments on Cimarron's Final Status Survey for Phase II, Subarea "J" for Cimarron Corporation's Former Nuclear Fuel Fabrication Facility, Crescent, Oklahoma", dated May 13, 1998.

68. USNRC letter from Mr. Ross A. Scarano, Director Division of Nuclear Materials Safety, Region IV, to Mr. S. Jess Larsen, Vice President, Cimarron Corporation, dated July 31, 1997.

69. USNRC letter from Mr. Ross A. Scarano, Director, Division of Nuclear Materials Safety, Region IV to Mr. S. Jess Larsen, Vice President, Cimarron Corporation, dated November 3, 1998.

70. USNRC letter from Mr. Dwight D. Chamberlain, Director, Division of Nuclear Material Safety, to Mr. Jess Larsen, Vice President, Cimarron Corporation, dated September 4, 1999.

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FINAL STATUS SURVEY REPORT
SUBAREA N

for

Cimarron Corporation's Former
Nuclear Fuel Fabrication Facility
Crescent, Oklahoma

License Number: SNM-928

Prepared for:

Cimarron Corporation
Oklahoma City, Oklahoma

January 2002

FINAL STATUS SURVEY REPORT FOR DECOMMISSIONING CIMARRON FACILITY SUBAREA N

1.0 PURPOSE

This Final Status Survey Report (FSSR) is being submitted by Cimarron Corporation to the Nuclear Regulatory Commission (NRC) for an area on the Cimarron Facility designated as Phase III Subarea N. This subarea is shown on Drawing No. 95MOST-RF3 which is included in Appendix 1, and includes both the Option 2 on-site disposal cell and open land areas that have been surveyed as part of the ongoing facility decommissioning process. This report discusses the initial characterization surveys which were performed to precisely define the extent and magnitude of residual contamination present in soils located within Subarea N. The characterization data generated during the initial surveys were utilized in designing the Final Status Survey (FSS) for this subarea which is included in the NRC approved Phase III Final Status Survey Plan (FSSP) and Decommissioning Plan. Based upon the Phase III FSSP, this FSS was performed for Subarea N to demonstrate that the established guideline values for unrestricted release had been met. The results of the Subarea N FSS are presented in this FSSR as justification for release of this Subarea from License SNM-928 for unrestricted use.

2.0 BACKGROUND

Cimarron Corporation, a subsidiary of Kerr-McGee Corporation, operated two plants near Crescent, Oklahoma, for the manufacture of enriched uranium and mixed oxide reactor fuels. The 840-acre Cimarron Facility was originally licensed under two separate SNM Licenses. License SNM-928[1] was issued in 1965 for the Uranium Plant (U-Plant) and License SNM-1174[2] was issued in 1970 for the Mixed Oxide Fuel Fabrication (Pu-Plant) Facility. Both facilities operated through 1975, at which time they were shut down and decommissioning work was initiated.

Decommissioning efforts at the Pu-Plant Facility were completed in 1990 and Cimarron Corporation applied to the NRC on August 20, 1990[3] to terminate License SNM-1174. After confirmatory surveys, the NRC terminated the Pu-Plant License, SNM-1174, on February 5, 1993[4].

Decommissioning efforts at the Cimarron U-Plant Facility involving characterization, decontamination and remediation were initiated in 1976 and are nearing completion. The goal of the decommissioning effort is to release the entire 840-acre site for unrestricted use.

Based upon historic knowledge of site operations and the characterization work completed to date, Cimarron Corporation completed and submitted the 1994 Cimarron Radiological Characterization Report[5] to the NRC. As discussed in that report, the site was divided into affected and unaffected areas. The affected and unaffected areas are shown on Drawing No. 95MOST-RF3 which is included in Appendix 1. For the final status survey, the entire 840-acre site was divided into three major areas containing both affected and unaffected areas. Each of these three major areas are shown on Drawing No. 95MOST-RF3 and are designated by Roman Numerals I, II, and III (herein referenced as Phases I, II, and III). These three major areas were

then further subdivided into smaller "subareas" (i.e., A, B, C, D, etc.). As presented in the NRC approved[6] Cimarron Decommissioning Plan[7], the FSSP's (Phases I, II and III) were discussed in general terms, with the understanding that each of these three phases would be submitted to the NRC under separate cover for approval. The FSSP's for the Phase I, II and III areas have been approved by the NRC and are discussed briefly below:

2.1 Phase I Area

The FSSP for the first of these three phases (Phase I[8]), which includes only unaffected Subareas A, B, C, D, and E, was approved by the NRC by letter dated May 1, 1995[9]. By letter dated November 13, 1995[10], Cimarron modified the southern boundary of two Phase I areas (i.e., Subareas C and E) and placed these portions of Subareas C and E into Phase II Subareas G and H. With this modification, the Phase I FSSR[11] was submitted to the NRC and confirmatory sampling for the Phase I Subarea was completed by the Oak Ridge Institute for Science and Education (ORISE). Cimarron Corporation received Amendment #13 which released all of the Phase I areas from License SNM-928; the amendment was forwarded to Cimarron by NRC letter dated April 23, 1996[12]. This amendment reduced the licensed facility acreage from 840 to approximately 152 acres.

2.2 Phase II Area

The area designated as Phase II on Drawing No. 95MOST-RF3 contains both affected and some contiguous unaffected areas and represents approximately 122 of the remaining licensed 152-acres. The Phase II FSSP was submitted to the NRC in July 1995[13] and approved on March 14, 1997[14]. Phase II includes Subareas F, G, H, I and J. Included within Phase II is former Burial Area #1 which was released in December 1992 by the NRC[15], subsequently backfilled with clean soil, and then seeded. Also included in Phase II are the East and West Sanitary Lagoons, the Pu-Plant Building yard area, the Emergency Building, Warehouse Building #4 and surrounding yard, and numerous drainage areas.

The FSSR for Subarea J was the first Phase II Subarea to be submitted to the NRC for license release; it was submitted in September 1997[16]. Subarea J is West of Highway #74, and represents approximately 7 of the 122 acres in Phase II. The FSSR for Subarea J has been approved by the NRC[17], and a confirmatory survey was performed by NRC staff during their site visit of September 21-23, 1998. By NRC letter dated April 17 2000[18], NRC staff issued license Amendment No. 16 which released Subarea J from license SNM-928.

Subarea H is the second Subarea included within Phase II where final status surveys have been completed. As discussed above, the East and West Sanitary Lagoons are included within Subarea H, which includes approximately 38.5 acres. The FSSR for Subarea H was submitted to the NRC on November 16, 1998[19]. Two questions were received from the NRC staff concerning Subarea H by letter dated March 20, 2000[20]. Cimarron responded to the NRC by letter dated April 6, 2000[21].

The Subarea I FSSR has been completed. This subarea includes both affected and unaffected open land areas, buildings, fences and walkways. The Subarea I FSSR was submitted to the NRC on June 29, 1999[22]. By letter dated May 16, 2000[23], the NRC's staff forwarded three questions to Cimarron pertaining to the Subarea I FSSR. Cimarron responded to these questions in their May 26, 2000[24] letter to the NRC. The NRC's June 8, 2000[25] letter responded with no further comments on Subarea I. Subarea I represents approximately 19.1 acres.

By License Amendment #17, NRC's staff removed Phase II Subareas H and I from the license and released both for unrestricted use. The Amendment was sent to Cimarron by cover letter dated April 9, 2001[26].

Subarea G was the next subarea included within Phase II where final status surveys have been completed. Included within Subarea G are both affected and unaffected open land areas. This subarea includes approximately 37.8 acres. The results of the FSS for Subarea G were presented in the FSSR submitted to the NRC on October 21, 1999[27]. By letter dated October 13, 2000[28], NRC's staff forwarded a request to clarify a drawing included in the Subarea G FSSR. Cimarron responded to this request by letter dated October 26, 2000[29]. The NRC performed confirmatory sampling of this subarea during their site visit on July 30, 2001. By letter dated November 26, 2001[30], NRS staff stated that "the confirmatory measurements were all below the applicable NRC release criteria."

Also included in Phase II is some concrete previously surveyed for release and placed in a drainage way located within Subarea F. Survey results for this concrete have been reported to the NRC in the March 1998 FSSR[31]. By letter dated March 1, 1999[32], the NRC informed Cimarron that all NRC staff comments concerning the Subarea F Concrete FSSR have been resolved.

Final Status Survey Report preparation for Subarea F, which will be the last FSSR for Phase II, is delayed pending resolution of the proposed groundwater remediation. Subarea F includes approximately 19.6 acres.

2.3 Phase III Area

The area designated as Phase III on Drawing No. 95MOST-RF3 contains only affected areas and represents approximately 30 acres. This area is designated as Phase III on Drawing No. 95MOST-RF3. The FSSP for release of this area from the site license, was submitted to the NRC for approval in June 1997[33]. Phase III includes the former Uranium Processing buildings and yard area, Burial Areas #2 and #3, New Sanitary Lagoon, the NRC approved BTP Option #2 On-site Disposal Cell (Burial Area #4), and the Five Former Waste Water Ponds, consisting of Uranium Waste Ponds #1 and #2, the Plutonium Waste Pond, the Uranium Emergency Pond, and the Plutonium Emergency Pond. By letter dated September 11, 1998[34], the NRC approved the Phase III Final Status Survey Plan.

The FSSR for Subarea L (Subsurface) was the first Phase III FSS to be submitted to the NRC. The Subarea L FSSR (Subsurface) was submitted to the NRC on May 29, 1996[35].

The NRC, by letter dated August 16, 1996[36], sent Cimarron comments concerning the Subarea L FSSR. Cimarron responded to the NRC comments by letters dated September 9, 1996[37] and October 17, 1996[38]. Additionally, in order to resolve the NRC staff concerns pertaining to the potential presence of subsurface contamination, additional subsurface soil samples were collected for analysis within Subarea L. Cimarron provided the results of this additional subsurface sampling event to the NRC by letter dated November 4, 1996[39]. Based upon the NRC staff review of these submittals and the additional subsurface sampling data, Cimarron's request to backfill Subarea L was approved by NRC letter dated November 8, 1996[40]. Subarea L was backfilled, contoured and vegetated. Subsequently, the FSS for the Subarea L surface soils was completed and the FSSR was submitted to the NRC on July 27, 1998[41]. After review of the Subarea L FSSR, the NRC forwarded one question[42] to Cimarron for clarification. Cimarron's response was provided to the NRC by letter dated December 3, 1999[43], which subsequently satisfied the NRC's concern as affirmed by their January 13, 2000[44] letter. On December 15, 1999, NRC staff arrived on site to collect confirmatory soil samples within Subarea L for verification that the guideline values for free releases had been achieved. Split samples were collected at 40 locations with the NRC's samples being sent to their Region III laboratory for analysis. By letter dated March 20, 2000[45], the NRC verified that the confirmatory sampling results demonstrated that residual soil contamination in Subarea L meet the criteria for unrestricted release. Subarea L represents approximately 5-acres.

The FSSR for Subarea O (Subsurface) was submitted to the NRC in March 1998[46]. Subsequent to the submittal of the FSSR for Subarea O (subsurface), a FSS was performed on the surface soils with the results presented in the February 1999[47] FSSR. Subarea O represents approximately 6.4 acres. By letter dated March 1, 1999[48], the NRC staff notified Cimarron that they have no further questions concerning the Subarea O (Subsurface) FSSR. The NRC collected confirmatory surface and subsurface soil samples for Subarea O while on site on July 9, 1999. By letter dated April 17, 2000[18], the NRC staff issued License Amendment #16 which released Subarea O for unrestricted use and removed it from Cimarron's license.

Another subarea addressed by Cimarron personnel was Subarea M, which is shown on Drawing No. 95MOST-RF3 and represents approximately 2.5 acres. The Subarea M FSS has been completed and the results were presented in Cimarron's December 1998 FSSR[49] to the NRC. One question was received from the NRC staff concerning Subarea M by letter dated April 10, 2000[50]. Cimarron responded to the NRC by letter dated April 24, 2000[51].

By Amendment 17, NRC's staff removed Phase III Subareas L and M from the license and released them for unrestricted use. The Amendment was sent to Cimarron by NRC cover letter dated April 9, 2001[26].

Subarea K was the fourth subarea included within Phase III for which final status surveys had been completed. Included within Subarea K were affected structures and open land areas. This subarea includes approximately 4.5 acres. The results of the FSS for

Subarea K were presented to the NRC in the February 2000 FSSR[52]. By letter dated January 29, 2001[53], two questions were received from NRC's staff concerning Subarea K. Cimarron responded to the two questions by letter dated February 20, 2001[54]. The NRC staff performed confirmatory sampling of this subarea during their site visit on July 30, 2001. By letter dated November 26, 2001[30], NRC staff stated that "the confirmatory measurements were all below the applicable NRC release criteria."

Subarea N is the last FSSR for Phase III, and includes the Option 2 on-site disposal cell, an access road, electrical substation, and the on-site disposal cell run-off holding pond. The results of the FSS for Subarea N are presented in this Report. This subarea is approximately 11.6 acres. Of the original 840 acres, 73.5 still remain under license with 42.3 acres out of the 73.5 committed by the NRC for release in the near future.

3.0 DECOMMISSIONING ACTIVITIES

The purpose of this section is to discuss briefly the status of the site decommissioning activities for Subarea N and to present the radiological criteria and guideline values utilized throughout the remediation and final status survey. Subarea N includes the Option 2 on-site disposal cell and the holding pond used to collect run-off during the time the cell was open. Additionally, within this subarea are the electrical substation, an access road and other open land areas surrounding the burial cell, pond and road. Also included in this section is a discussion of the volume and activity of materials placed into the on-site disposal cell and the characterization data and remediation performed on the open land areas located within Subarea N.

3.1 Identification of Contaminants

Based upon the knowledge of past site operations, the results of numerous characterization efforts to date, and other independent characterization efforts by regulatory agencies and their respective subcontractors, the radiological contaminants on the Cimarron site have been determined to consist of U-234, U-235, and U-238 with an average enrichment above the naturally occurring level of approximately 2.7 weight percent. Thorium natural, although not considered a significant contaminant of concern for this subarea, was found at several small surface locations just east of the electrical sub-station at a former storage laydown area for Cushing equipment in transit. Thorium natural analyses have been included in the soil and sediment analyses and reported on the data summary sheets along with the total uranium sample results.

3.2 Site Background Levels

For comparison to the guideline values, natural background levels for uranium activity and exposure rates have been established as follows:

3.2.1 Soils

Natural background levels for uranium in soil have been established through numerous measurements by Cimarron personnel utilizing the on-site soil counter and through independent regulatory review and laboratory analysis. Cimarron personnel collected,

analyzed and performed a statistical evaluation on 30 surface soil samples from the perimeter of the Cimarron site during the first quarter of 1995 to further validate background levels. Total uranium ranged from 2.3 pCi/g to 6.6 pCi/g, with the average being 4.0 pCi/g with a 2σ of $\pm$ 2.6. These values were obtained using the Cimarron on-site soil counter. This on-site soil counter is calibrated to assume an enrichment of 2.7 weight percent, as this is the average uranium enrichment found throughout the site. Based upon this sampling event and Cimarron's June 1995 letter[55] to the NRC, the average value of 4 pCi/g total uranium for background was adopted and applied when the on-site soil counter sample analytical results were compared to guideline values.

3.2.2 Exposure Rate

Background exposure rates have been established by Cimarron by taking micro-R readings and pressurized ion chamber (PIC) readings at off-site sample locations in addition to Cimarron site areas which are unaffected by past operations. Exposure rates of approximately 7 to 10 μR/h have been observed in background areas by Cimarron personnel utilizing Ludlum micro-R survey meters. In addition, site background exposure rates were measured by ORAU (now ORISE) personnel utilizing a PIC[56], and they were determined to be 9 to 10 μR/h.

Cimarron personnel performed exposure rate measurements at background locations along the site boundary in 1997 using a Reuter-Stokes PIC. These data are tabulated below in Table 3.1. Additionally, measurements at background locations were taken with the micro-R meter for comparison to the PIC. These data also are presented in Table 3.1. Based upon this data, Cimarron uses 9 μR/h as representative of background exposure rates for micro-R measurements. Table 3.1 demonstrates good agreement between the micro-R measurements and the PIC measurements.

TABLE 3.1
Comparison Micro-R vs. PIC Measurements

Sample ID No.	Grid Location	PIC Reading (μR/h)	Micro-R Reading μR/h
UAF-BKG-1	819W-81N	9.8	10
UAF-BKG-7	1600E-120N	7.6	7.5
UAF-BKG-11	840W-700S	9.5	10
UAF-BKG-13	840W-288S	9.8	10.5
UAF-BKG-16	808W-282N	9.7	9.5
UAF-BKG-19	640W-700S	10.5	11
UAF-BKG-23	1610E-300S	7.8	7.5
UAF-BKG-25	1610E-69N	7.6	8
UAF-BKG-27	1610E-469N	7.8	8.5
UAF-BKG-28	1610E-634N	9.6	9.5
	AVERAGE	**9.0 ± 2.3 (2σ)**	**9.2 ± 2.8 (2σ)**

3.3 Characterization Data/Remediation

Throughout the decommissioning process at the Cimarron site, a survey unit was characterized, remediated (if required), and then a final status survey was performed. The description of the decommissioning activities and final status survey data were then submitted to the NRC for review and approval (i.e., FSSR). After review of the final status survey report, the NRC either released the unit, performed a confirmatory survey with staff personnel, or contracted with ORISE to perform a confirmatory survey. Based upon the confirmatory survey (if requested by the NRC), the NRC would either release the unit or require additional characterization and/or remediation.

For characterization data and remediation discussions, Subarea N has been divided into affected areas as follows:

- Open Land Area;
- Option 2 On-Site Disposal Cell Area;
- Area Roadway;
- Electrical Substation; and
- Fencing.

3.3.1 Open Land Areas

This survey unit includes the open land areas of Subarea N from 115E to 385E excluding the roadway and electrical substation. This survey unit was classified as affected and surveyed accordingly. A large portion of this survey unit was included in the 1990 soil characterization survey. The area included was cored down to a depth of four feet on a 10m x 10m grid. This data set is presented in the Characterization Report[5], Section 12.0. Two locations showed total uranium concentrations above the guideline value of 30 pCi/g plus background. These locations were N140-E210 and N090-E340, which were identified for further investigation. The N140-E210 location was remediated and backfilled prior to the additional characterization that was completed in 1994 as discussed in the next paragraph. The second location, N090-E210, was also identified during the 1994 characterization effort and as noted in Table 3.2, remediated to less than 30 pCi/g total uranium.

To further characterize the soils in the area east of the electrical substation, which included a large portion of Subarea N, soil characterization on a 5m x 5m grid was completed in 1994 to a depth of four feet. The soil analytical results were presented in the Decommissioning Plan[7]. The 1994 sampling results for Subarea N identified sixteen locations that exceeded the BTP Option 1 guideline value[57] of 30 pCi/g total uranium. The locations, depth, sample results and final resolution of the areas surveyed are listed in Table 3.2.

Table 3.2 1994 Characterization Survey Results			
Location	Depth	Sample Results (pCi/g U)	Resolution* (pCi/g U)
N125-E240	0-6"	74	23
N110-E265	0-6"	37	16
N110-E270	0-6"	39	31
N105-E300	0-6"	38	4
N105-E310	0-6"	49	8
N105-E310	6"-1'	44	12
N105-E240	1'-2'	42	1
N105-E250	1'-2'	49	4
N105-E235	2'-3'	57	3
N105-E240	2'-3'	46	2
N090-E340	2'-3'	37	10
N100-E295	3'-4'	39	5
N235- E365	1'-2'	49	4
N235- E365	2'-3'	160	4
N220- E364	2'-3'	50	6
N235-E365	3'-4'	156	5**

*All locations remediated to the average concentrations listed.
**This location required excavation to approximately 6' in depth.

During the 1994 site characterization, residual natural thorium in soil was discovered in the area formally utilized as a staging area for material brought on-site for placement into Burial Area #1. This area was located east of the electrical sub-station and subsequently remediated with the removal of thirteen 55-gallon drums of soil containing residual thorium. The four locations that were remediated are listed in Table 3.3. The thirteen drums were shipped off site to a LLRW disposal facility.

Table 3.3 1994 Characterization Survey Results			
Location	Depth	Sample Results (pCi/g Th Nat)	Resolution* (pCi/g Th Nat)
N100-E305	0-6"	4	2
N115-E250	6"-1'	20	1
N105-E250	1'-2'	4	1
N105-E235	2'-3'	5	1

*Locations remediated to average concentrations listed.

This Open Land Area survey unit includes surface and subsurface soil sample data for the portion of Subarea N from 115E to 385E. The final status survey data locations, depth, and sample results are discussed in Section 5.2.1.

3.3.2 Option 2 On-Site Disposal Cell Area

This survey unit includes the open land area of Subarea N from 385E to 620E and includes the closed and capped on-site disposal cell. On September 4, 1987[58], Cimarron Corporation submitted a license amendment request to the NRC for on-site disposal of soils and incidental construction debris containing uranium and thorium meeting the NRC BTP Option 2 criteria[57]. As part of the decommissioning process, Cimarron personnel excavated, sorted, and stockpiled Option 2 materials in anticipation of disposing of these materials on-site. On November 4, 1994[59], the NRC issued Amendment #10 to License SNM-928, approving on-site disposal of up to 500,000 ft^3 of BTP Option 2 materials.

Under the original procedure for stockpiling soils and debris contaminated with enriched uranium, Cimarron personnel performed an initial characterization of an area, and if required, excavated and separated the soils utilizing a NaI "dirt probe" into BTP Option 1, 2, or 4 classifications. The BTP Option 2 material was placed in a stockpile as it was removed from an active remediation area. This allowed for final characterization of BTP Option 2 materials in the stockpile prior to placement in the on-site disposal cell.

Four stockpiles (referred to as DAP-1 through DAP-4) of BTP Option 2 materials, located northeast and east of the Uranium Plant Building were characterized by Cimarron personnel. The final characterization of the soils in the stockpile consisted of surface surveys with a Micro-R meter, dirt probe surveys and soil sampling, all on a 5-meter by 5-meter grid and with soil samples composited in half-meter intervals throughout the depth of the stockpile. ORISE performed confirmation survey and sampling on three stockpiles and submitted reports of their findings to the NRC. Those stockpiles were subsequently approved for on-site disposal by NRC, and placed in the on-site disposal cell. Next, Cimarron presented its characterization data for DAP-4 to the NRC for review. The NRC staff, after review of the characterization data and based upon Cimarron's acceptable performance on the three other stockpiles, approved disposal of the Option 2 material without confirmatory sampling by ORISE. The on-site disposal cell is comprised of three pits (Pit #1, #2, and #3). The soils in DAP-1 through DAP-4 were disposed in Pits #1 and #2 of the on-site disposal cell and completed the filling of Pit #2. A total of six lifts were placed into each pit.

As site decommissioning progressed to the point that the facility was running out of suitable areas for placement of soil stockpiles, Cimarron requested a procedural change addressing how material characterizations were completed. A change to the original method entailed transporting the sorted BTP Option 2 materials directly to Pit #3 of the disposal cell. Once in the pit, the materials were unloaded, spread and compacted in a single lift of 1-foot maximum depth. Once the lift had been placed, the material was sampled on a 5-meter by 5-meter grid. Soil samples were collected through the entire thickness of the lift and composited for analysis with the on-site soil counter. Any areas exceeding the BTP Option 2 limit (i.e., 100 pCi/g total uranium) were reviewed to determine if the "hot spot" average exceeded the guidelines. In addition, any areas exceeding the "hot spot" average of three times the guideline value were removed and packaged for off-site disposal. After the data review was completed, the lift was tested to

verify that a final compaction to 95% Proctor density was obtained. Subsequent lifts were placed, sampled, and compacted per this procedure. This procedural change was approved by the NRC staff.

Characterization data for each lift placed into Pit #3 was subsequently submitted to the NRC for review with notification to allow time for the NRC to schedule confirmatory surveys. NRC Region IV inspectors were on-site during the sampling phase for this first lift of Pit #3 and split samples with Cimarron. Based upon NRC's review of the data and activities associated with the emplacement of the first lift in Pit #3, NRC staff decided that it was unnecessary to perform confirmatory sampling on each lift. However, Cimarron was required to provide notification before beginning emplacement of material in each subsequent lift. Cimarron and the NRC staff agreed to a seven day notification period prior to beginning placement of Option 2 materials in the next lift.

Even though the NRC had determined that it was unnecessary to perform confirmatory sampling on each lift, NRC staff collected and analyzed split soil samples from Lifts #2, #3, and #4. The analytical data from these sampling events confirmed no significant basis or statistical error between Cimarron's and NRC's results and soil placed in Pit #3 was well within the concentration limits for BTP Option 2 disposal. A total of five lifts were placed into Pit #3.

The average activity and volume of Option 2 material placed into the on-site disposal cell is listed in Table 3.4. As shown in this table, the volume is below the 500,000 ft^3 authorized by the 1994 license amendment and the activity is substantially below the 100 pCi/g total uranium Option 2 limit and 10 pCi/g thorium limit. The total activity estimated to be present in the disposal cell is .98 curies of total uranium. Additionally, the average concentration of plutonium in the soils placed into the cell was verified to be less than the guideline value of 1 pCi/g. A detailed discussion of the activities associated with NRC approvals, cell construction, material placement, and cell closure are included in the "On-Site Disposal Cell Report"[60] dated December 2001.

Table 3.4
Option 2 On-Site Disposal Cell Volume and Activity

	Waste Placement	Volume (ft^3)	Average Activity pCi/g U	Average Activity pCi/g Th
Pit #1	1/95 – 2/95	164,518	45.0	1.0
Pit #2	4/95 – 9/96	155,950	43.3	1.4
Pit #3	3/97 – 7/00	131,718	35.7	1.3
Total		452,186	41.7	1.2

After placement and compaction of the final lift into each pit, the Option 2 material was covered with four feet of clean fill. The final cap was then contoured to achieve a slope ranging from 1.4% to 2.5%. Finally, markers will be placed at the four corners of the on-site disposal cell and its location recorded on the property deed filed with the County Recorder.

The corners of the disposal cell are to be marked by affixing a brass plate of nominal four to six-inch diameter to a concrete shaft of a similar diameter and a length extending a nominal two feet below the freeze line. The concrete shafts will be poured in place and extend above the surface of the ground by approximately two feet. The brass markers will be engraved with the coordinates of the corners of the disposal area as determined by a registered land surveyor, and include the words "Radioactive Disposal Area" and a line diagram indicating the relation of the disposal area to the marker.

Prior to placing Option 2 material into the on-site disposal cell, Cimarron constructed a holding pond to collect run-off from the disposal cell. This approximate half-acre pond was constructed in 1995 west of the disposal cell access ramp. During waste placement activities, any water collected in the pond was tested prior to being discharged. Soil samples within the perimeter of the pond area were periodically collected to monitor sediment activity. The final survey data for this area are included in this survey unit.

This Option 2 On-site Disposal Cell Area survey unit includes surface and subsurface soil sample data for the portion of Subarea N from 385E to 620E. The final status survey data locations, depth, and sample results are discussed in Section 5.2.2.

3.3.3 Area Roadway

This unit includes the gravel roadway that traverses through Subarea N, which was utilized by site vehicular traffic during prior site operations and decommissioning to access the eastern edges of the site and the on-site disposal cell. Even though this unit was classified as an affected area, the potential for residual contamination being present was minimal. However, portions of the roadway were included in the 1990 and 1994 characterization surveys that are discussed in Section 3.3.1. The FSS data for this survey unit are discussed in Section 5.2.3.

3.3.4 Electrical Substation

Since the electrical substation had to be de-energized by Oklahoma Gas & Electric (OG&E) prior to being surveyed, characterization surveys were not completed prior to commencement of the FSS on this unit. The substation was partially de-energized by OG&E on April 17,1998, and subsequently surveyed by Cimarron personnel. The entire sub-station was not de-energized completely because areas off-site would have been affected. Both gross alpha and gross beta-gamma surveys were taken on the exterior of the transformers, structural steel, concrete, and perimeter fencing. Additionally, soil samples at the surface were collected within the perimeter of the fence. Subsurface samples were not collected because of the presence of a below grade grounding grid. The FSS results for this survey unit are discussed in Section 5.2.4.

3.3.5 Fencing

A limited amount of fencing structures which previously provided security for the U-Plant yard area, were included in this survey unit and surveyed with the FSS for

Subarea N. The fencing was surveyed for both gross alpha and gross beta-gamma with the results discussed in Section 5.2.5.

3.3.6 Environmental Monitoring Data

As approved by the NRC in the Cimarron Decommissioning Plan[7], Cimarron Corporation committed to address groundwater for the site in separate reports. One such report titled "Decommissioning Plan – Groundwater Evaluation Report", was submitted to the NRC in July 1998[61]. This Groundwater Evaluation Report summarizes the site environmental data, presents trending analyses and a dose assessment, and commits to a plan for resolving the issues associated with elevated residual groundwater radionuclide concentrations. Per discussions held at NRC headquarters on January 11, 1999, and by letter dated January 19, 1999[62], the NRC approved a groundwater criteria of 180 pCi/l for total uranium. The total uranium concentrations in groundwater being monitored are to be below this concentration for eight consecutive quarterly samples or for two consecutive years depending upon the frequency of sampling. There are four environmental monitoring wells within Subarea N; Wells #1324, #1325, #1326, and #1335. None of these locations monitored within Subarea N contains total uranium concentrations in groundwater exceeding the criteria as prescribed in NRC's January 1999 letter. The concentrations at all four locations have always been below the guideline value of 180 pCi/l for total uranium.

4.0 FINAL STATUS SURVEY PROCEDURE

The purpose of this section is to discuss the methodology utilized for the collection of the survey and soil sampling data presented as FSS data in this report, and to discuss the radiological guideline values utilized for comparison to the FSS data. The FSS data were used to demonstrate that the applicable radiological parameters (i.e., guideline values) were satisfied for release of Subarea N from License SNM-928. The guideline values utilized for comparison to the FSS data are described in this section.

In general, for Phase III areas, Cimarron Corporation has committed to follow the methodology prescribed in NUREG/CR-5849[63] and as approved in the Phase III FSSP for performing the FSS. This report includes all necessary data to support the FSS for the soils, concrete and structures within Subarea N and the release for unrestricted use of Subarea N from License SNM-928.

4.1 Survey Method

Survey and soil sampling data were collected utilizing established methods that have been demonstrated through the release of other areas at the Cimarron site. The instrumentation available for use by site personnel as well as the minimum detectable activity (MDA) and typical efficiency for those instruments are listed in Table 4.1. The survey methods are discussed further below:

TABLE 4.1

RADIATION MONITORING INSTRUMENTS

INSTRUMENT TYPE	NUMBER AVAILABLE	RADIATION DETECTED	SCALE RANGE	BKG	TYPICAL EFFICIENCY	TYPICAL MDA 95% CONFIDENCE LEVEL
Scintillation (Ludlum 2224) Scaler/Ratemeter	2	Alpha Beta	0-500,000 cpm	< 10 cpm < 300 cpm	20% 19%	100 dpm/100 cm^2 500 dpm/100cm^2
Micro-R Meter (Ludlum 12 & 19) 1" x 1" NaI Detector	3	Gamma	0 – 5,000 μR/h	7 μR/h- 9 μR/h	N/A	2 μR/h
Ion Chamber (Victoreen)	1	Gamma	0.1 - 300 mR/h	<.0 1 mR/h	N/A	< 0.2 mR/h
3" x 1/2" NaI Scintillation (43-82) Digital Scaler (Ludlum 2220/2221)	3	Gamma	0 - 500,000 cpm	3,000 cpm avg shielded 9,000 cpm avg unshielded	N/A	250 cpm (Shielded) 500 cpm (Unshielded)
100 cm^2 gas flow (43-68) Digital Scaler (Ludlum 2220/2221)	2	Alpha	0 - 500,000 cpm	<10 cpm	20%	100 dpm/100 cm^2
60 cm^2 gas flow (43-4) Digital Scaler	1	Alpha	0 - 500,000 cpm	<10 cpm	25%	200 dpm/100 cm^2
60 cm^2 Count Rate Meter (PRM-6)	7	Alpha	0 - 500,000 cpm	<100 cpm	50%	350 dpm/100 cm^2
50 cm^2 Personnel Room Monitor (Ludlum 177)	2	Alpha	0 - 500,000 cpm	<100 cpm	50%	500 dpm/100 cm^2
Tennelec LB5100 Computer Based Auto Sample Counter	1	Alpha Beta	0 - 99,999,999 cpm	<0.3 cpm 1.5 cpm	38% 42%	0.4 dpm 1.5 dpm
Soil Counter - Computer Linked 4" x 4" x16" NaI (Tl) Detector	1	Gamma	---	4 pCi/g Total U 1.5 pCi/g Th (Nat)	4% 15%	5 pCi/g U (5min. count) 0.6 pCi/g Th (Nat) (5 min. count) 3 pCi/g U (15 min. count) 0.3 pCi/g Th (Nat) (15 min. count)
Soil Counter - Computer Linked 6" x 7" Well Detector	1	Gamma	---	4 pCi/g Total U 1.5 pCi/g Th (Nat)	30% 86%	1 pCi/g U (3 min. count) 0.2 pCi/g Th (Nat) (3 min. count)
100 cm^2 gas flow (43-68) Digital Scaler (Ludlum 2220/2221)	2	Beta, Gamma	0 - 10,000 cpm	<300 cpm	20%	600 dpm/100 cm^2
*Reuter-Stokes PIC Model RSS-112	1	Gamma	0 - 100 mR/h	9 – 10 μR/h	N/A	0.5 μR/h (10min. count)

*(Cushing Instrument available for Cimarron Use)

4.1.1 Grid Areas

Subarea N was subdivided into the 100m x 100m grid pattern shown on Drawing No 95MOST-RF3. The 100m x 100m grids were further subdivided for affected area surveys into 10m x 10m grids. For systematic surveys, the 10m x 10m grids were further subdivided into 5m x 5m grids. The 5m x 5m grids were utilized for locating survey and soil sampling points for this FSS. Cimarron employs a Global Positioning Survey (GPS) unit to check pre-established grid points and to locate sample collection and survey positions in the field. This GPS unit is accurate to within less than ± 1 m. The 0.0 grid point is located just south and slightly west of the U-Building and has been tied into a permanent marker for future reference.

4.1.2 Survey Procedure (Open Land Areas)

The Subarea N open land affected areas were 100% scanned utilizing a 3" x 1/2" shielded NaI detector. Each 10m x 10m grid was scan surveyed by technicians by traversing back and forth within each grid. Each traverse performed by the technician covered an area approximately 2 meters in width. The highest reading found within each 10m x 10m grid area was recorded. Survey performance, documentation, and record retention were performed in accordance with the Cimarron Radiation Protection Program. In the event that any of the survey readings exceeded the limits discussed in Section 4.2.3, their location was flagged for additional surveys and/or soil sampling. The survey procedures followed were specified in Cimarron's Special Work Permit(s) and Work Plan(s) for this subarea.

Additionally, at the intersect of each 5m x 5m affected area grid location, a systematic survey was completed at ground surface and at 1m above the surface for ambient radiation using a micro-R meter. Also, a gamma survey at the ground surface, using a lead shielded 3" x 1/2" NaI detector was performed and documented.

4.1.3 Soil Sampling Procedure

The soil sampling frequency was specified in the Cimarron Special Work Permit(s) and Work Plan(s). Where practicable, surface soil samples were collected at each 5m x 5m intersect location for open land areas and at 5 meter intervals along the length of the roadway. Additionally, systematic subsurface soil sampling to a depth of 4 feet was performed at each grid intersect location within the affected area at and west of the 385E gridline and at a frequency of one (1) out of every twenty (20) 5m x 5m grid points east of the 385E gridline. One sample location out of every twenty (20) 5m x 5m grid area equates to one (1) sample location for every 500 square meters. For the electrical substation, a 2.5m x 2.5m grid was used for the surface soil sampling, with the number of samples collected equaling a 5m x 5m grid and avoiding concrete and electrical hazards. All soil samples collected were analyzed for total uranium and natural thorium using the on-site soil counter. Any locations found exceeding the soil guideline values discussed in Section 4.2.2 for affected areas were investigated further by performing additional field surveys and soil sampling.

4.1.4 Survey Procedure for Structures

The specific procedures followed in scanning and surveying the structures to remain within Subarea N Phase III areas were similar to those utilized for previously released area and structures.

Accessible exterior surfaces for fence supports, concrete surface and transformers were 100% scanned for alpha and beta/gamma. Substation towers were scanned from the concrete supports to two meters in elevation. Areas of elevated activity that were identified during the scan were then further surveyed with direct measurements to define the extent and activity levels. Remediation was performed if guideline values (Table 1 of NRC's 1987 guidance[64]) were exceeded; areas were resurveyed as necessary.

Also, for exterior surfaces systematic surveys (fixed surveys and smear surveys) for alpha and beta-gamma were performed in general at spacing equivalent to a 1m x lm grid on flat surfaces or 1m in length grids on narrow surfaces.

4.2 Radiological Guideline Values

The radiological guideline values discussed in this section were utilized for comparison with the FSS data in order to confirm that Subarea N can be released for unrestricted use from License SNM-928.

4.2.1 Buildings and Equipment

The unconditional release limits for surface contamination on structures and fixtures are in compliance with Facility License SNM-928, and are identical to the limits specified in Table 1 of the NRC's "Guidance for Decommissioning of Facilities and Equipment Prior to Release for Unrestricted Use"[64]. Residual activity exceeding 15,000 dpm/100 cm^2 were remediated and follow-up surveys performed. Areas of elevated activity between 5,000 and 15,000 dpm/100 cm^2 were tested in accordance with NUREG-5849[63], Section 8.5.2 to assure that the average surface activity level within a contiguous 1 m^2 area containing the elevated areas was less than 5,000 dpm/100 cm^2.

4.2.2 Volumetric Activity of Soil

For Subarea N, the unrestricted release guideline value for residual concentrations of total uranium, which may remain in the soil for unrestricted release is specified as BTP[57] Option 1 material. For enriched uranium, as specified in Table 2 of the BTP, the Option 1 limit is 30 pCi/g total uranium above background. The average total uranium background concentration for the Cimarron site has been established at 4 pCi/g[55]. Systematic soil sampling was performed within each 10m x 10m grid area to determine the average residual total uranium concentration. This systematic sampling equates to four surface samples per 100 m^2 area; which is the same sample frequency as one sample collected at the intersect of each 5m x 5m grid intersect. Areas of elevated activity were determined based upon discrete sampling within the grid or were assumed to have a constant value (e.g., 25m^2 based upon 5m x 5m grid sampling frequency). The average

value for the 10m x 10m grid then was compared to the BTP Option #1 guideline value of 30 pCi/g total uranium above background. Remediation or hot spot averaging was performed for each individual location which contained average total uranium concentrations in excess of 30 pCi/g above background as described in NUREG/CR-5849. Areas of elevated activity not remediated between one and three times the guideline value were tested to assure that the average concentration was less than $(100/A)^{1/2}$ times the guideline value, where "A" is the area of elevated activity in m^2.

The Option #1 unconditional release guideline value for residual concentrations of natural thorium, which may remain in soil per Table 2 of the BTP[57], is up to 10 pCi/g above background. The average background for natural thorium has been determined to be 1.5 pCi/g for soil analyzed with the on-site counter.

4.2.3 Gamma Surface Survey (Open Land Areas)

Cimarron personnel utilize a lead shielded 3" x 0.5" sodium iodide (NaI) detector as a final screening device for qualitative identification of residual contamination in soil. Prior to the commencement of site-wide remediation, Cimarron evaluated several portable survey instruments for performing scan surveys including the 2" x 2" NaI detector. Based upon recommendations from Ludlum Instruments, Inc., Cimarron decided to use the 3" x 0.5" NaI detector for general area scans. This system is one of the more sensitive field detection instruments available to Cimarron.

Since the inception of Cimarron's site decommissioning, twice background has been used as the guideline for scan surveys when utilizing the 3" x 0.5" NaI detector. Survey readings above this guideline indicate an area requiring additional investigation. This guideline has been a standard in the nuclear industry for many years. With the submittal and approval by the NRC of numerous plans and reports, twice background also has become the accepted standard for the Cimarron Facility as a qualitative screening measure. This qualitative guideline was included in the Phase I Final Status Survey Plan[8], Phase I Final Status Survey Report[11], and the Phase II Final Status Survey Plan[13] just to name a few of the documents where this guideline was addressed and approved by NRC staff for this site.

Twice background (as noted in Section 6.4.2 of NUREG/CR-5849) is at the lower end of the range discernable for scanning instrumentation. During the scan survey, the technician, upon noting a "discernable" difference in the audio output from the meter, will stop and attempt to locate the elevated area. It is difficult to discriminate low levels of residual uranium contamination when other naturally occurring isotopes are present which affect the gross count rate of the scan instrument. The guideline value of twice background provides a sufficient margin for technicians when conducting a scan to conclude that residual contamination may be present when a signal exceeds the twice background level (i.e., a discernable audible increase above background). This discernable audible response alerts the surveyor to momentarily stop moving the probe (i.e., 2 to 3 seconds) and to further investigate the area. The survey instruments utilized at Cimarron indicate changes in radioactivity levels via either a higher or a lower pitch.

These changes in pitch are easier to detect rather than simply noting an audible change in the count rate.

The lead shielded detector was utilized to perform the initial 100% surface scan survey for Subarea N open land areas to identify regions or areas of slightly elevated activity. Also, the lead shielded detector was utilized for systematic surveys at each grid intersect to identify elevated areas. As stated above, this instrument is only utilized for qualitative measurements. Quantitative measurements of residual contamination levels in soil are performed with the Cimarron soil counter. Additionally, daily "background" surveys are taken prior to performing surveys within a survey unit. These average daily "backgrounds" are listed on the data tables and drawings and were used for comparison to the guideline (i.e., twice background).

4.2.4 Exposure Rate Survey (Open Land Area)

The average exposure rate for Subarea N open land areas to be released for unrestricted use is 10 μR/h above background, at 1 meter above the surface. This also includes paved surfaces and building exteriors. Exposure rates may be averaged over a 100 m^2 grid area as described in NUREG/CR-5849. The maximum exposure rate at any discrete location within a 100 square meter area cannot exceed 20 μR/h above background. Any area with average exposure rates greater than 10 μR/h above background and any discrete location within a 100 square meter area with an exposure rate greater than 20 μR/h above background was delineated and remediated as required. As discussed in Section 3.2.2, Cimarron has demonstrated that 9 μR/h is representative of the average background exposure rate for micro-R measurements.

4.3 Equipment Selection

Special Work Permits (SWP) and Work Plans (WP) were written and approved prior to commencement of the field work required for this FSS. The SWP and/or WP for Subarea N specified the type of instrumentation to be utilized in performing the FSS.

4.3.1 Equipment and Instrumentation

The instrumentation utilized to generate the FSS data discussed was maintained by site personnel in accordance with the Cimarron Radiation Protection Program procedures. These procedures utilize the guidance contained in ANSI N323-1978, "Radiation Protection Instrumentation Test and Calibration"[65]. Specific requirements, as specified by the Cimarron procedures for instrumentation, include traceability of calibrations to NIST standards, field checks for operability, background radioactivity checks, operation of instruments within established environmental bounds, training of individuals, scheduled performance checks, calibration with isotopes of energies similar to those to be measured, quality assurance tests, data review, and recordkeeping. An explanation of how Cimarron's Radiation Protection Program procedures are implemented with respect to instrumentation was discussed in Cimarron's responses to the NRC letter dated May 13, 1998[66].

With the exception of the exposure rate instrumentation (ion chamber, PIC and micro-R meter), health physics staff performs calibration on each of the instruments listed in Table 4.1. Portable survey instruments are calibrated on a semi-annual frequency. Also, the exposure rate instruments are sent off site for vendor calibration on a semi-annual basis. Where applicable, activities of sources utilized for on-site calibration are corrected for decay. In addition to the periodic calibration requirements, source response checks are performed on a daily basis for all instruments being utilized during characterization, remediation and final status survey work.

All calibration and source check records are completed, reviewed, signed-off and retained in accordance with the Cimarron Quality Assurance Program. The instrumentation utilized by site personnel is discussed below:

4.3.1.1 Lead Shielded 3" x 0.5" NaI Gamma Detector

The 3" x 0.5" detector is a NaI crystal gamma detector which is shielded with lead around the top socket and sides to improve the directional sensing capabilities of the equipment. The lead shielded detector is utilized with a portable scaler/rate meter that has single channel analyzer capacity. Americium-241, Uranium-235, and Natural Thorium sources are utilized to set the instrumentation window and threshold to detect gamma energies in the range of 50 to 250 keV. This energy range corresponds to the energies of interest when surveying for uranium and natural thorium contamination. The instrument is normally operated in the window "out" mode, meaning that the instrument response is for the entire range of detectable energies. This instrument is normally utilized in areas where background may be elevated.

4.3.1.2 Micro-R Meters

The micro-R meter is a 1" x 1" NaI crystal gamma detector which measures exposure rates between 0 and 5,000 μR/h. Background readings are obtained daily at a defined location prior to placing each instrument into service. This instrument is utilized, in general, for determination of exposure rates at both systematic and random locations and at locations of elevated radiation identified by area scans.

Confirmatory measurements are obtained routinely to provide information concerning any measurement bias. These comparisons or confirmatory measurements are made using a pressurized ion chamber. Confirmatory measurements for Subarea N are included in Table 4.2 and demonstrate good agreement between the micro-R meter and the PIC.

TABLE 4.2 SUBAREA N CONFIRMATORY MEASUREMENTS (Readings 1 Meter Above Grade)			
Reading Location	**Micro-R Reading**		**PIC Reading**
	Model 19 #138420 (μR/h)	**Model 12-5 #9081 (μR/h)**	**Model M4896 (μR/h)**
132E-165N	10.0	10.5	9.2
106E-50N	10.5	11.0	10.0
165E-87N	9.2	9.5	8.2
92E-125N	9.4	10.0	9.3
160E-163N	11.2	11.5	10.1
BKG Highway MK #1	8.5	9.0	8.5
Average	**9.8**	**10.3**	**9.2**

4.3.1.3 Gross Alpha/Beta–Gamma Detector

Surface activity measurements for gross beta-gamma were obtained using a Ludlum Model 2221 with a Model 43-68 gas proportional probe, or equivalent (e.g., Ludlum Model 43-89). Gross alpha surface scans were obtained using an Eberline Model PRM-6 with an Eberline Model AS-15 probe.

4.3.1.4 Soil Counter (Gamma Spectroscopy)

The Cimarron Soil Counter System consists of a 4" x 4" x 16" sodium iodide crystal housed in a shielded chamber which is computer linked to a multi-channel analyzer (MCA). Cimarron's counting system is programmed to determine the total uranium present in the soil sample by calculating the U-234 activity based upon the U-235 activity measured in the soil sample. The U-234 and U-235 activities are summed with the detected U-238 activity to obtain the total U activity. The counter also adjusts for system background. In February 2001, the 4" x 4" x 16" detector and turntable were replaced with a 6" x 7" NaI Well Detector with four inches of lead shielding surrounding the detector. The improvement in detector sensitivity has allowed Cimarron Corporation to reduce soil counter MDA from approximately 10 pCi/g total uranium to approximately 1 pCi/g.

Calibration of this counting system is performed annually and is traceable to NIST standards through contractor laboratory evaluations of the on-site standards. Established quality assurance measures for the soil counter include Cesium-137 centroid checks, Chi-square tests, background determinations, and the counting of soil standards. All of these quality assurance controls are recorded on control cards and are trended on a continuing basis.

Standards used for calibration and quality assurance checks for the soil counter have been analyzed by outside laboratories and are NIST traceable through these analyses. Comparisons have been made between the standards as counted using the soil counter and two off-site laboratories. The assigned values for the standards are the average of the results obtained from the off-site laboratories, when the standards were analyzed by more than one laboratory. The standards range in concentration from 4.5 pCi/g total uranium

to 292 pCi/g total uranium. Additional information pertaining to these standards and typical MDA calculations for the counting system were included in Cimarron's response to the NRC's comments on Subarea J[67].

Cimarron personnel determine uranium and thorium activities in soil based upon the evaluation of net counts from the soil counter. Activities are calculated through the use of efficiency and correction factors obtained using appropriate standards. Soil concentrations are calculated by dividing the net activity by the soil mass. Soil masses are determined on a laboratory scale which is checked on a daily basis (when in use) utilizing NIST traceable standards.

ORISE has been used by the NRC from time to time for verification of the decommissioning work completed to date at the Cimarron site. ORISE has conducted an evaluation of the Cimarron Soil Counting system's ability to measure accurately total uranium concentrations in soil samples. This was done by comparing ORISE sample analysis results obtained by gross alpha pulse height analysis and gamma spectroscopy with the results obtained from the use of the Cimarron Soil Counter. ORISE and Cimarron analysis results compared favorably at levels above background as demonstrated by the confirmatory analysis performed for the On-Site Disposal Cell, Pit #3 (NRC cover letter dated July 31, 1997)[67]. NRC inspection Report #70-925/97-02, which accompanied this letter, states that "no significant bias or statistical errors between the licensee's soil results and the NRC's results were identified".

Three other inspections by the NRC also confirmed Cimarron's Soil Counting system's ability to accurately measure total uranium concentrations in soil samples. On September 24, 1998, the NRC collected twelve (12) soils and sediment samples from Subarea J. The samples were first counted on the On-Site Counter by Cimarron and then shipped by NRC to their Region III laboratory for analyses. The November 3, 1998 Inspection Report[68] (i.e., Report No. 70-925/98-02) stated the following:

> "Overall, the NRC measurements confirmed that Subarea J soil and sediment had less than 30 pCi/g uranium. No significant bias or statistical errors between the licensee's soil and sediment sample results and the NRC's results were identified. Licensee measurement methods and counting times were found to be acceptable."

On July 9, 1999, the NRC collected soil samples from Subarea O for comparison to Cimarron's on-site soil counting system. The September 14, 1999 Inspection Report[69] (i.e., Report No. 70-925/99-01), stated the following:

> "The results of the 12 NRC soil samples were found to be consistent with the licensee sample results."

The NRC staff performed confirmatory sampling on Subareas K and G during their site visit on July 30, 2001, with the collection of 31 soil samples from Subarea K and 43 soil samples from Subarea G. The soil samples were split between Cimarron and the NRC.

The NRC splits were sent to the NRC's Region III laboratory. By letter dated November 26, 2001[30], NRC staff concluded in their inspection report:

> "The confirmatory exposure-rate measurements, soil sample analysis results, and alpha and beta building measurements were all below the applicable NRC release criteria. These confirmatory measurements were consistent with the licensee's determination that Sub-Areas K and G of the Cimarron Site meets the criteria established in NRC License SNM-928,, License Condition 27 for unrestricted use."

4.4 Procedures/Plans

As discussed in Section 4.3, SWPs and WPs were written and approved prior to commencement of fieldwork required for this final status survey. These SWPs and WPs are an integral part of this site's Radiation Protection and Quality Assurance Program. Project organization and responsibilities, which are a part of the site's quality assurance program, are discussed in this section.

4.4.1 Organization

The Subarea N FSS was performed by a survey team consisting of qualified personnel from the Cimarron Facility. The FSS team operated under the general direction of a Project Manager who reports directly to the Site Manager at the Cimarron Facility.

The selection of field measurement equipment and sample collection techniques was under the direction of the RSO/Health Physics Supervisor. Actual field measurements and sample collection were under the direction of the Project Manager. The Project Manager was responsible for developing the SWP and WP for Subarea N with input from the RSO/Health Physics Supervisor. The SWP and WP were reviewed and approved by the Cimarron Site Manager.

4.4.2 Training

Cimarron Corporation provides continuing training to Cimarron personnel and any other personnel (i.e., contractors, visitors, etc.) who are allowed access to the site. All members of the FSS team attended an in-house training session on the SWP and WP prior to commencement of work. All FSS procedures and quality assurance requirements were reviewed during this training session.

4.4.3 Radiation Protection Program

Cimarron Corporation maintains a Radiation Protection Program that meets and/or exceeds all of the applicable regulatory requirements associated with activities conducted under Special Nuclear Materials License SNM-928. The Cimarron Radiation Protection Program currently in place for all decommissioning activities is administered through the use of the following documents:

- Cimarron Radiation Protection Plan (Annex A) and Procedures
- Cimarron Site Health and Safety Plan
- Cimarron Quality Assurance Plan and Procedures
- Cimarron Emergency Plan

It is the policy of Cimarron Corporation to perform all work in strict compliance with applicable regulatory and internal requirements. The goal of the Cimarron decommissioning effort is to conduct all operations at a level of excellence that exceeds regulatory requirements. Cimarron staff will continue to exercise appropriate radiation protection precautions throughout the remaining decommissioning work and final survey process.

Independent Kerr-McGee Corporate audits for regulatory and internal requirements are conducted on a periodic basis and include the review of the Cimarron Radiation Protection Program and associated programs. Assessments of program effectiveness are also performed periodically by the Cimarron RSO/Health Physics Supervisor. Additionally, NRC Region IV and NRC Headquarters staff inspect the Cimarron Radiation Protection Program for compliance with applicable rules and regulations.

4.4.4 Cimarron Quality Assurance Program (QAP)

The Cimarron Corporation QAP is an integral part of the Cimarron Radiation Protection Program. A principal component of the QAP is the confirmation of the quality of project work performed during decommissioning by assuring that all tasks are performed in a quality manner by qualified personnel. The Program ensures that samples are collected, controlled, and analyzed in accordance with applicable quality controls to provide confidence in the resulting data accuracy and validity. Cimarron's QA/QC program is structured to generate data that can be verified through independent review.

The Cimarron QAP is implemented and maintained in accordance with written policies, procedures, and instructions. This Program is administered under the direction of the Quality Assurance Coordinator. Periodic surveillance and reviews are conducted to ensure that all aspects of the Program are addressed. The Cimarron QAP satisfies the applicable requirements of ASME NQA-1[70].

Written procedures designated as SWPs and WPs, are prepared, reviewed and approved for activities involved in carrying out the decommissioning process. The Subarea N Survey SWP and WP were written in accordance with the Cimarron QAP. These documents designate the type of surveys to be performed, samples to be collected, frequency of sample collection, and the type of field instrumentation required for the tasks required.

Selection, calibration and use of radiation detection instrumentation used for final status survey at Cimarron are directed by the Radiation Safety Officer (RSO). The RSO is responsible for the calibration performed by Cimarron Health Physics staff or by contract

services. The RSO maintains a file for each technician on staff as to their qualifications and training.

The facility performs its own radiological soil analysis in accordance with written procedures and QA/QC protocols. Field data are gathered and maintained in logs for all samples in accordance with the Cimarron QAP. Necessary data are transferred to the on-site laboratory sample log when the sample is brought to the on-site laboratory for analysis. The sample logs provide a record of sample collection, transport (chain of custody), and are incorporated into the facility quality assurance records.

In addition, off-site independent radiological analysis of split samples (samples are first counted on site and then sent to an off-site independent laboratory) is an integral part of the Cimarron QAP. Samples sent to an off-site independent laboratory for analysis are accompanied by a chain of custody form in accordance with the Cimarron QAP. These forms provide documentation for all aspects of sample control and are maintained by the Quality Assurance Coordinator as permanent records.

Sample and survey data are reviewed by the Health Physics Department for accuracy and consistency and to determine if further characterization or remediation is required or if the data is acceptable. Additionally, the data are compared to the guideline values on a regular basis. The data review process verifies that approved QA/QC procedures have been followed. When identified, corrections to recognized deficiencies are performed in accordance with the QAP.

5.0 SURVEY FINDINGS

As discussed in Section 1.0, FSS data were generated for Subarea N to justify the release of this subarea from License SNM-928. The survey findings, including the statistical methodology employed to evaluate the data for Subarea N, are discussed in this section.

5.1 Data Evaluation

As discussed in NUREG/CR-5849, the guideline values for soil activity concentrations, surface activity, and exposure rates are average values (above background) established for individual survey units. In order to compare the analytical and survey data developed for the final status survey with guideline values; data at each individual survey grid location were first compared to the appropriate guideline values discussed in Section 4.2.

Also, to enable comparison of the survey data with the appropriate guideline, the mean of all measurements in the survey unit were calculated. If the averages satisfy the guideline values, the results were further evaluated to determine whether the data for each survey unit provides a 95% confidence level that the true mean activity level meets the guidelines.

5.2 Comparison with Guideline Values

The FSS data for Subarea N shown on Drawing No. 95MOST-RF3 (Appendix 1) was compared to the guideline value criteria and are discussed separately in this section. This section evaluates the data collected from both the scan and the systematic survey performed at the grid intersects for both structures and open land areas for Subarea N. For discussion and comparison purposes, the FSS data for Subarea N were divided into the survey units outlined below. These survey units are discussed separately in the following sections.

- FSS Soil Data for the Open Land Area;
- FSS Soil Data for On-Site Disposal Cell Area;
- FSS Soil Data for Access Roadway;
- FSS Data for Electrical Substation; and
- FSS Data for Fencing.

5.2.1 Data Evaluation - Open Land Area

This survey unit includes the open land areas of Subarea N from 115E to 385E excluding the roadway and electrical substation. This survey unit is shown on Drawing No. 02POSNOLSS-O. For this survey unit, a 100% scan was performed on the open land area with a shielded NaI detector for locating any area exceeding twice background. No readings exceeded the twice background guideline.

For the systematic soil sampling event, samples were collected at the surface at each 5m x 5m grid location. This surface area survey included a total of 710 FSS soil samples collected for analysis with soil sample analytical results ranging from 1 pCi/g to 31 pCi/g total uranium (including background of 4 pCi/g total uranium). The mean value for all surface samples was 9.7 pCi/g total uranium, with a standard deviation of 5.2 pCi/g. The 95% confidence level value was 10.0 pCi/g. Also, the soil sample analytical results for this subarea showed natural thorium ranging from 1 pCi/g to 3 pCi/g. The mean value was 1.3 pCi/g natural thorium, with a standard deviation of 0.48 pCi/g natural thorium.

For the final status surface sampling, all soil sample analytical results for this unit were below the total uranium guideline value (i.e., 34 pCi/g total uranium including background). The soil sample analytical results and statistical analyses for each 5m x 5m grid location are included in Appendix 2. Also, the soil sample grid locations are shown on Drawing No. 02POSNOLSS-O, which is included in Appendix 2.

For the subsurface sampling survey, soil samples were collected at each 5m x 5m grid intersect at the locations shown on Drawing No. 02POSNOLDSS-O. Samples were collected and composited at intervals of 0-6", 6"-1', 1'-2', 2'-3', and 3'-4' or to rock. A total of 2,905 FSS soil samples were collected for analysis with soil sample analytical results ranging from 1 pCi/g to 40 pCi/g total uranium. The mean value for all samples was 8 pCi/g total uranium, with a standard deviation of 5 pCi/g. The sample analytical results and statistical evaluations are included in Appendix 2. The soil sample locations

and data are shown on Drawing Nos. 02POSNOLDSS-0 through 02POSNOLDSS-4, which are included in Appendix 2.

Five sampling locations included "hot spot" averaging and subsurface trending. The three locations that exceeded the guideline value of 34 pCi/g (i.e., 30 pCi/g plus background) where "hot spot" averaged. The locations and results are included in Table 5.1, with the evaluations included in Appendix 2.

Table 5.1
"Hot Spot" Averaging Results

Location	"Hot Spot" pCi/g U	Depth	"Hot Spot" Average pCi/g U
120E – 185N	37	6" - 1'	11.3
140E – 185N	40	6" – 1'	14.8
260E – 340N	40	6" – 1'	6.4

Two locations indicated an upward trend with depth and thus, were sampled below the four foot level. Location 355E-95N indicated a total uranium in soil at the four foot depth of 21 pCi/g. The soil sample collected from the 4'-5' depth showed total uranium of 19 pCi/g. Rock was encountered below the 5' level. Location 360E-195N indicated a total uranium in soil at the four foot depth of 30 pCi/g. The soil samples collected from the 4'-5' and 5'-6' depths showed total uranium concentrations in soil at 9 pCi/g and 10 pCi/g respectively. Results below the four foot depth at both locations showed residual activity in soil less than the guideline value of 30 pCi/g total uranium above background.

The soil sample analytical results for this subarea showed natural thorium ranging from 1 pCi/g to 3 pCi/g. The mean value was 1.3 pCi/g natural thorium, with a standard deviation of 0.5 pCi/g thorium. The statistical analyses and data tables addressing the natural thorium values are included in Appendix 2.

Systematic surveys were performed during the FSS at the 5m x 5m grid intersects with 3" x 0.5" shielded NaI detectors and the μR meter. The exposure rates at the surface and at one meter above the surface ranged from 5 μR/h to 13 μR/h, with the mean being 8 μR/h and from 5 μR/h to 12 μR/h, with the mean being 8 μR/h, respectively. All measured exposure rates were below the guideline value of 19 μR/h (i.e., 10 μR/h above the average background of 9 μR/h). The exposure rate data tabulation is included with the soil data in Appendix 2. The ground level shielded NaI detector survey results for the grid intersect sample locations ranged from 1,616 CPM to 3,494 CPM. All survey results were less than twice background with background recorded at 3,000 CPM. The survey results are included in Appendix 2.

5.2.2 Data Evaluation - On-Site Disposal Cell Area

This survey unit includes the soil sample data for the open land area from 385E to 620E and includes the on-site disposal cell final cap. As discussed in Section 3.3.2 the Option 2 soils and debris placed into the on-site disposal cell were capped with four feet of clean

fill prior to the area being contoured to promote drainage. These soils were then surface surveyed along with the other areas in the survey unit to meet the FSS requirements for the survey unit. The open land area included in this survey unit is shown on Drawing No. 02POSNDCSS-O. For this survey unit, a 100% scan was performed on the open land area with a shielded NaI detector for locating any area exceeding twice background. No readings exceeded the twice background guideline.

For the systematic soil sampling event, samples were collected at the surface at each 5m x 5m grid intersect location. This surface area survey included a total of 1,421 FSS soil samples collected for analysis with soil sample analytical results ranging from 1 pCi/g to 24 pCi/g total uranium (including background of 4 pCi/g total uranium). The mean value for all surface samples was 3.6 pCi/g total uranium, with a standard deviation of 2.2 pCi/g. The 95% confidence level value was 3.6 pCi/g. Also, the soil sample analytical results for this subarea showed natural thorium ranging from 1 pCi/g to 3 pCi/g. The mean value was 1.6 pCi/g natural thorium, with a standard deviation of 0.4 pCi/g natural thorium.

For the final status surface sampling, all soil samples analytical results for this unit were below the total uranium guideline value (i.e., 34 pCi/g total uranium including background). The soil sample analytical results and statistical analyses are included in Appendix 3. Also, the soil sample locations are shown on Drawing No. 02POSNDCSS-O, which is included in Appendix 3.

Subsurface soil samples also were collected within this affected survey unit with the exception of the on-site disposal cell. At 89 locations, shown on Drawing No. 02POSNDCDSS-O, samples were collected and composited at intervals of 0-6", 6"-1', 1'-2', 2'-3' and 3'-4' or to rock. These samples were collected to satisfy the Phase III FSSP requirement that area subsurface samples be collected at 500 m^2 intervals or less (i.e., one for every 20 surface sample locations) if not previously surveyed. Subsurface soil samples were not collected within the perimeter of the on-site disposal cell as this area was backfilled and capped with "clean" soil and compacted to the required license specifications.

A total of 388 soil samples were collected for analysis, with the analytical results ranging from 1 to 24 pCi/g total uranium. The mean value for all sample locations was 5 pCi/g total uranium, with a standard deviation of 3 pCi/g. Also, the soil sample analytical results for this data set showed natural thorium varying from 1 pCi/g to 3 pCi/g. The mean value was 2 pCi/g natural thorium, with a standard deviation of 0.5 pCi/g thorium.

Drawing Nos. 02POSNDCDSS-O through 02POSNDCDSS-4, the data tabulation sheets, and the statistical analyses are included in Appendix 3. All final status sample analytical results were less than the guideline value of 30 pCi/g total uranium above background. All sample results are presented as total uranium and include background.

Systematic surveys were performed during the FSS at the 5m x 5m grid intersects with 3" x 0.5" shielded NaI detectors and the μR meter. The exposure rates at the surface and

at one meter above the surface ranged from 5 μR/h to 14 μR/h, with the mean being 10 μR/h and from 5 μR/h to 13 μR/h, with the mean being 10 μR/h, respectively. All measured exposure rates were below the guideline value of 19 μR/h (i.e., 10 μR/h above the average background of 9 μR/h). The exposure rate data are included in Appendix 3. The ground level shielded NaI detector survey results for the grid intersect sample locations ranged from 1,490 CPM to 4,420 CPM. All survey results were less than twice background with background recorded at 2,500 CPM. The survey results are included in Appendix 3.

Prior to backfilling the access ramp to the on-site disposal cell with "clean" fill, soil samples were collected for analyses. A total of thirty (30) locations were sampled with the activity ranging from 2.0 pCi/g total uranium to 12.0 pCi/g total uranium. The average activity was 5.7 pCi/g. Natural thorium analyses ranged from 1.1 pCi/g to 2.0 pCi/g.

5.2.3 Data Evaluation – Access Roadway

This survey unit includes the gravel roadway which exits Subarea I at 185N-115E traverses approximately 630 meters through Subarea N, and enters Subarea G at 458N-443E. This survey unit is shown on Drawing No. 02POSNARSS-O.

For this survey unit, a 100% scan was performed on the open land roadway area with a shielded NaI detector for locating any areas exceeding twice background. No readings exceeded the twice background guideline value.

For the systematic soil sampling event, samples were collected at each 5m linear grid location along the length of the road centerline. A total of 124 samples were collected for analysis with the soil analytical results ranged from 1 to 22 pCi/g total uranium. The mean value for all surface sample locations was 6.5 pCi/g total uranium, with a standard deviation of 4.1 pCi/g. The 95% confidence level value was 7.1 pCi/g which is below the guideline value for total uranium. Also, the soil sample analytical results for this data set showed natural thorium varying from 1 pCi/g to 3 pCi/g. The mean value was 1.7 pCi/g natural thorium, with a standard deviation of 0.5 pCi/g thorium.

For the final status surface sampling, all soil sample analytical results for this unit were below the total uranium guideline value (i.e., 34 pCi/g total uranium including background). The soil sample analytical results for each 5m linear grid location are tabulated in tables included in Appendix 4. Also, the soil sample locations are shown on Drawing No. 02POSNARSS-O, which is included in Appendix 4.

Subsurface soil samples were collected within this affected roadway area in accordance with the approved Phase III FSSP at a frequency of one sample location (or greater) for each 100 meters in length of a roadway. This requirement was exceeded with the collection of 441 samples at 94 locations. Samples were collected at depths of 0-6", 6"-1', 1'-2', 2'-3' and 3'-4' or to rock. The analytical results for these subsurface samples ranged from 1 pCi/g to 27 pCi/g total uranium with a mean value of 7 pCi/g total

uranium. The standard deviation was 4 pCi/g total uranium. All sample analytical results were below the guideline value of 34 pCi/g total uranium including background with background established at 4 pCi/g. Also, the soil sample analytical results showed natural thorium varying from 1 pCi/g to 3 pCi/g. The mean value was 1 pCi/g natural thorium with a standard deviation of 0.3 pCi/g thorium. The sample locations and analytical results are shown on Drawing Nos. 02POSNARDSS-O through 02POSNARDSS-4. This drawing, the statistical analyses, and the data tabulation sheets are included in Appendix 4.

The systematic surveys performed at the 5m linear grid locations with the 3" x 0.5" lead shielded NaI detector and the μR meter were all within guideline values. The exposure rates at the surface and at one meter above the surface as measured using a μR/h meter ranged from 7 μR/h to 10 μR/h, with the mean being 8 μR/h and from 7 μR/h to 11 μR/h, with the mean being 9μR/h, respectively. All measured exposure rates were below the guideline value of 19 μR/h (i.e., 10 μR/h above the average background of 9 μR/h). Exposure rate survey data is presented in tables included in Appendix 4. The ground level lead shielded NaI detector survey results for the 5m linear grid sample locations ranged from 1,560 CPM to 4,850 CPM. One survey result at 225E – 130N was greater than twice background with background recorded at 2,200 CPM. The soil sample at this grid location was recorded at 5 pCi/g total U which was slightly above background and substantially below the guideline value. The 3" NaI survey results are presented in tables included in Appendix 4.

5.2.4 Data Evaluation – Electrical Substation

This survey unit includes surface soils within the perimeter of the security fencing, the concrete foundations and curbs for the fence and transformers, the perimeter fencing, and finally the exterior of the transformers and support steel. The different components are shown on general arrangement Drawing No. 02POSNESSS-O, included in Appendix 5.

For the surface soils, a 100% scan was performed with a lead shielded NaI detector for locating any areas exceeding twice background. No readings exceeded the twice background guidelines.

For the systematic soil sampling event, samples were collected at random surface locations at 2.5m x 2.5m grid intersects with the number of samples collected equivalent to a 5m x 5m grid. The sampling was performed within the perimeter of the 20m by 20m security fence avoiding concrete foundations and electrical hazardous. This surface area survey included a total of 31 FSS soil samples collected for analysis with soil sample analytical results ranging from 3 pCi/g to 15 pCi/g total uranium (including background of 4 pCi/g total uranium). The mean value for all surface samples was 8.9 pCi/g total uranium, with a standard deviation of 3.2 pCi/g. The 95% confidence level value was 9.9 pCi/g. Also, the soil sample analytical results for this subarea showed natural thorium ranging from 0.8 pCi/g to 1.8 pCi/g. The mean value was 1.1 pCi/g natural thorium, with a standard deviation of 0.2 pCi/g natural thorium.

For the final status surface sampling, all soil samples analytical results for this unit were below the total uranium guideline value (i.e., 34 pCi/g total uranium including background). The soil sample analytical results for each sampled grid location are tabulated in tables included in Appendix 5. The soil sample grid locations are shown on Drawing No. 02POSNESSS-O, which is included in Appendix 5.

Systematic surveys were performed during the FSS at each accessible 2.5m x 2.5m grid intersects with 3" x 0.5" lead shielded NaI detectors and the μR meter. A total of 72 locations were surveyed. The exposure rates at the surface and at one meter above the surface ranged from 5 μR/h to 10 μR/h, with the mean being 7 μR/h and from 5 μR/h to 10 μR/h, with the mean being 7 μR/h, respectively. All measured exposure rates were below the guideline value of 19 μR/h (i.e., 10 μR/h above the average background of 9 μR/h). The exposure rate data tabulation is included in Appendix 5. The ground level lead shielded NaI detector survey results for the grid intersect sample locations ranged from 2,110 CPM to 5,290 CPM. Two locations at 215E – 115N and 220E – 105N exceeded the twice background soil guideline values requiring further investigation with background recorded at 2,500 CPM. A review of the data tables shows the first location being a section of the concrete curb where no soil sample was collected. However, both Micro-R readings at the surface and at one meter were recorded at background levels. No additional surveys were deemed necessary. The second location, 220E – 105N, showed a soil sample analytical results of 15 pCi/g total uranium and a surface exposure rate of 8 μR/hr. Both survey results were below the applicable guideline values, so no additional surveys were necessary. All survey results are included in Appendix 5.

The chain link fences that surrounds the electrical substation was surveyed as an affected area survey unit. The fencing included in this survey unit is shown on Drawing No. 02POSNESSS-O, which is enclosed in Appendix 5. The vertical and horizontal support poles were 100% scanned for gross beta-gamma surface activity. Additionally, systematic measurements for gross alpha, beta-gamma and removable surface activity were taken at one meter intervals along all fence support. A total of 210 locations were surveyed with the direct gross alpha measurements ranging from 77 dpm/100 cm^2 to 1,199 dpm/100 cm^2, with a mean of 385 dpm/100 cm^2 and a standard deviation of 202 dpm/100 cm^2. The 95% confidence level value for this data set was 408 dpm/100 cm^2. The direct gross beta-gamma survey results ranged from 0 to 3,381 dpm/100 cm^2, with a mean of 746 dpm/100 cm^2 and a standard deviation of 481 dpm/100 cm^2. The 95% confidence level value for this data set was 801 dpm/100 cm^2. All survey results were below the guideline value of 5,000 dpm/100 cm^2. The survey results for removal activity were all at or below 15 dpm/100 cm^2. The survey locations, data, and statistical evaluations are included in Appendix 5.

The perimeter concrete and transformer support footers were surveyed as a single survey unit. The vertical and horizontal surfaces were 100% scanned for gross beta-gamma surface activity. Additionally, systematic measurements for gross alpha, beta-gamma and removable surface activity were taken at one meter intervals along the fence support perimeter and on the four sides of the transformer and tower footers. A total of 202 locations were surveyed with the direct gross alpha measurements ranging from 20

dpm/100 cm^2 to 430 dpm/100 cm^2, with a mean of 156 dpm/100 cm^2 and a standard deviation of 84 dpm/100 cm^2. The 95% confidence level value for this data set was 166 dpm/100 cm^2. The direct gross beta-gamma survey results ranged from 0 to 1,990 dpm/100 cm^2, with a mean of 916 dpm/100 cm^2 and a standard deviation of 332 dpm/100 cm^2. The 95% confidence level value for this data set was 955 dpm/100 cm^2, which is below the guideline value. All survey results were below the guideline value of 5,000 dpm/100 cm^2. The survey results for removal activity were all below 15 dpm/100 cm^2. The survey locations, data, and statistical evaluations are included in Appendix 5.

Accessible areas of the transformers and support steel were surveyed as a single survey unit and 100% scan surveyed for gross beta-gamma surface activity. Additionally, systematic measurements for gross alpha, beta-gamma and removable surface activity were collected. For the transformer surfaces and structural steel, a total of 138 locations were surveyed for gross alpha and gross beta-gamma, both direct and smear readings were collected. The structural steels were surveyed at the 1 meter and 2 meter elevations and at five random locations above the 2 meter elevations. The transformers were surveyed at the 2 meter elevations and at five random locations above the 2 meter elevations. The direct alpha surveys ranged from 0 to 792 dpm/100 cm^2 with a mean of 238 dpm/100 cm^2 and a standard deviation of 174 dpm/100 cm^2. The 95% confidence level value for this data set was 262 dpm/100 cm^2. The beta-gamma survey results ranged from 0 to 1,060 dpm/100 cm^2, with a mean of 79 dpm/100 cm^2 and a standard deviation of 178 dpm/100 cm^2. The 95% confidence level value for this data set was 104 dpm/100 cm^2. All survey results were below the guideline value of 5,000 dpm/100 cm^2. The measurements of removal activity were all less than 15 dpm/100 cm^2. The data tabulations and statistical evaluations are included in Appendix 5.

5.2.5 Data Evaluation - Fencing

The chain link fencing that surrounds a portion of the U-Plant controlled area was surveyed as a Subarea N affected area survey unit. The fencing included in this survey unit is shown on Drawing No. 02POSNAF-O, which is included in Appendix 6. Also include in Appendix 6 is an illustration drawing, Drawing No. FNC-SURVEY, that was used to locate the surveys that are referenced in the data tables. The vertical and horizontal support poles were 100% scanned for gross beta-gamma surface activity. Additionally, systematic measurements for gross alpha, beta-gamma and removable surface activity were taken at one meter intervals along all fence supports where accessible. A total of 492 locations were surveyed with the direct gross alpha measurements ranging from 0 dpm/100 cm^2 to 3,084 dpm/100 cm^2, with a mean of 352 dpm/100 cm^2 and a standard deviation of 309 dpm/100 cm^2. The 95% confidence level value for this data set was 375 dpm/100 cm^2. The direct gross beta-gamma survey results ranged from 0 to 5,290 dpm/100 cm^2, with a mean of 819 dpm/100 cm^2 and a standard deviation of 665 dpm/100 cm^2. The 95% confidence level value for this data set was 868 dpm/100 cm^2. All survey results were below the guideline value of 5,000 dpm/100 cm^2 with the exception of two support post locations which were "hot spot" averaged. The post at 183.5N – 164E, which showed a beta/gamma survey reading of 5,290 dpm/100 cm^2, was "hot spot" averaged at 3,826 dpm/100 cm^2. The second post located at 159E – 186N, which showed a beta/gamma survey reading of 5,221 dpm/100 cm^2, was "hot

spot" averaged at 3,733 dpm/100 cm^2. The survey results for removal activity were all below 20 dpm/100 cm^2. The survey locations, data, and statistical evaluations are included in Appendix 6.

5.3 QA/QC Procedures

Cimarron Corporation's Quality Assurance Plans and Procedures are an integral part of the overall site decommissioning program and include off-site independent isotopic analysis of split samples. For the soil activity ranges that apply to this final status survey and for soil samples collected during the time frame that the survey data was being generated, a total of ten soil samples were split and sent off site for analysis. The soil samples were first analyzed using the on-site counter prior to being packaged and sent off site for analysis at an independent laboratory. The independent laboratory for this project was Core Laboratories and they participate in a national inter-comparison quality assurance program. The results for both off and on-site analysis are listed in Table 5.2. These sample results show good agreement.

The data that was included in Table 5.2 represented soil samples with activities in the ranges that applies to the Subarea "N" FSS and also for samples collected within Subarea N. The first letter designation (i.e., "N") for the sample numbers included in Table 5.2 indicates the subareas where the samples were collected. The number designation represents an annual environmental on-site soil sample location. Table 5.2 soil data are provided as examples of the success of Cimarrons's Quality Assurance Procedures by showing agreement between analysis from the on-site soil counter and those of an independent off-site laboratory.

Table 5.2
Subarea N – QA/QC Comparisons

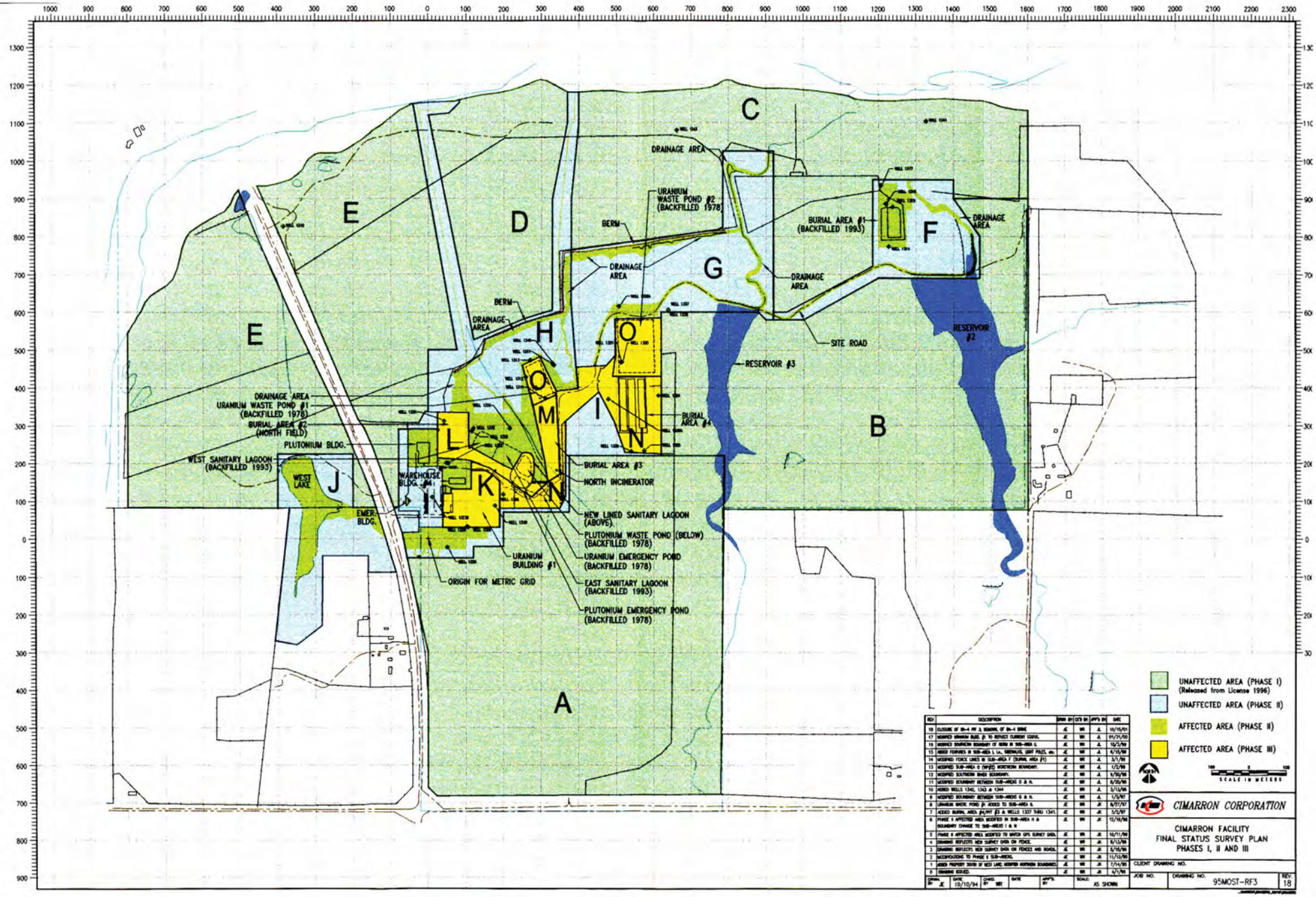
Sample ID No.	Cimarron (pCi/g Total-U)	Core Lab (pCi/g Total–U)
NA-55	18.7 ± 1.8	21.9 ± 7.6
NA-175	37.2 ± 1.7	47.5 ± 7.8
NA-480	56.1 ± 2	54.7 ± 13.4
NA-485	54.3 ± 2.2	57.2 ± 16.3
NA-648	59.1 ± 2.1	52.0 ± 12.6
NA-1106	50.1 ± 2.2	61.0 ± 10.8
NA-1363	29.9 ± 1.7	32.3 ± 6.8
NA-1604	31.1 ± 1.8	32.4 ± 7.0
NA-1764	49.3 ± 3.3	49.9 ± 8.6

6.0 SUMMARY

A FSS was performed in accordance with the NRC approved Phase III FSSP and Decommissioning Plan, and the SWP and WP approved by Cimarron Management for Subarea N. This report presents a comparison of the FSS results to the guideline values for affected areas at the Cimarron site. The comparisons presented herein demonstrate that all guideline values for unrestricted release have been met and thus Subarea N can now be released

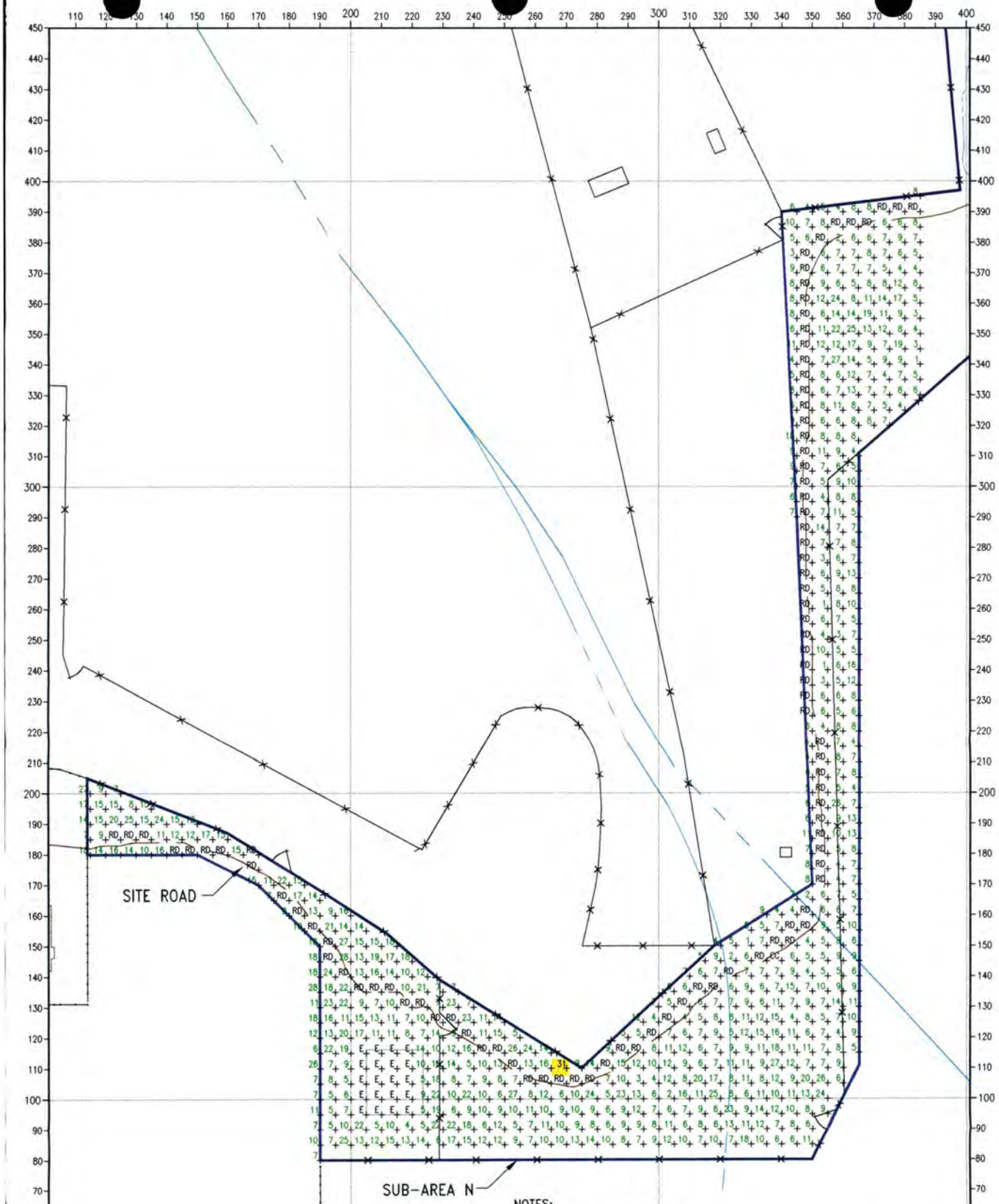
from License SNM-928. Therefore, this report is being submitted to the NRC in conjunction with a request to release Subarea N from License SNM-928 for unrestricted use.

APPENDIX 1 – DRAWINGS 95MOST-RF3



REV	DESCRIPTION	DRAWN BY	CK'D BY	APP'D BY	DATE
18	CLOSURE OF BN-4 PIT & REMOVAL OF BN-4 BERM.	JE	MR	JL	10/15/01
17	MODIFIED URANIUM BLDG. #1 TO REFLECT CURRENT STATUS.	JE	MR	JL	01/21/00
16	MODIFIED SOUTHERN BOUNDARY OF BERM IN SUB-AREA L	JE	MR	JL	10/2/99
15	ADDED FEATURES IN SUB-AREA L i.e. SIDEWALKS, LIGHT POLES, etc.	JE	MR	JL	6/15/99
14	MODIFIED FENCE LINES IN SUB-AREA F (BURIAL AREA #1)	JE	MR	JL	3/1/99
13	MODIFIED SUB-AREA O (WP#2) NORTHERN BOUNDARY.	JE	MR	JL	1/2/99
12	MODIFIED SOUTHERN BERM BOUNDARY.	JE	MR	JL	9/30/98
11	MODIFIED BOUNDARY BETWEEN SUB-AREAS O & M.	JE	MR	JL	8/25/98
10	ADDED WELLS 1342, 1343 & 1344	JE	MR	JL	3/13/98
9	MODIFIED BOUNDARY BETWEEN SUB-AREAS G & H.	JE	MR	JL	1/3/97
8	URANIUM WASTE POND #1 ADDED TO SUB-AREA G.	JE	MR	JK	8/27/97
7	ADDED BURIAL AREA #4/PIT #3 & WELLS 1337 THRU 1341.	JE	MR	JK	5/2/97
6	PHASE II AFFECTED AREA MODIFIED IN SUB-AREA H & BOUNDARY CHANGE TO SUB-AREAS I & N	JE	MR	JK	12/16/96
5	PHASE II AFFECTED AREA MODIFIED TO MATCH GPS SURVEY DATA.	JE	MR	JK	10/11/96
4	DRAWING REFLECTS NEW SURVEY DATA ON FENCE.	JE	MR	JK	8/13/96
3	DRAWING REFLECTS NEW SURVEY DATA ON FENCES AND ROADS.	JE	MR	JK	5/15/96
2	MODIFICATIONS TO PHASE I SUB-AREAS.	JE	MR	JK	11/13/95
1	ADDED PROPERTY DATA OF WEST LAKE, MODIFIED NORTHERN BOUNDARIES.	JE	MR	JK	7/14/95
0	DRAWING ISSUED.	JE	MR	JK	4/1/95

APPENDIX 2 – OPEN LAND AREA FSS DATA - DRAWINGS, DATA TABLES, GRAPHS, AND STATISTICAL EVALUATIONS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

45+ URANIUM, > 30 pCi/g U

RD+ ROADWAY

CC+ CONCRETE CULVERT

E+ ELECTRICAL SUB-STATION

30 0 30

SCALE IN METERS

NORTH

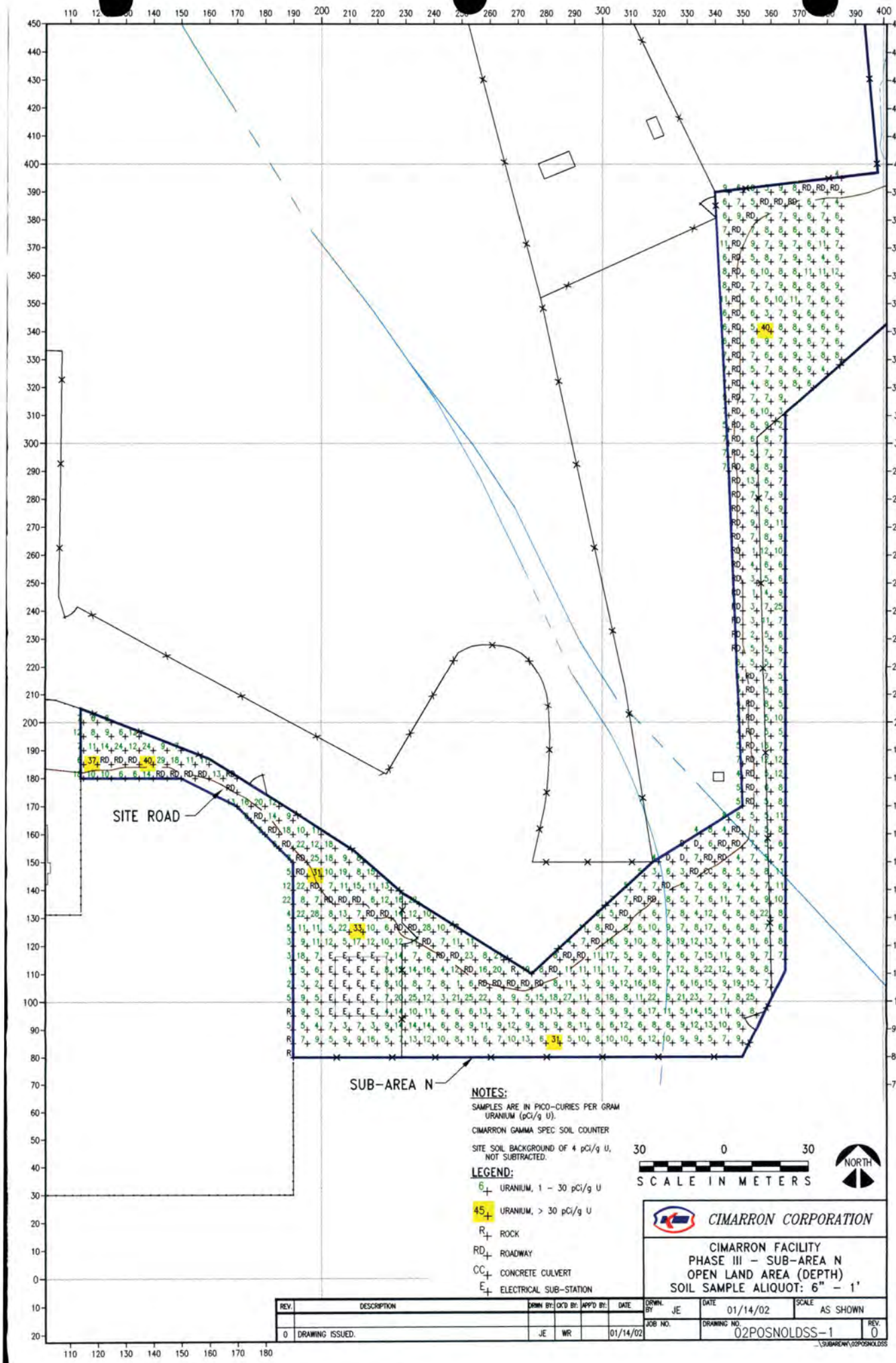
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
OPEN LAND AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 0 - 6"

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO.	REV.
	02POSNOLDSS-0	0

_\SUBAREAN\02POSNOLDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

45+ URANIUM, > 30 pCi/g U

R+ ROCK

RD+ ROADWAY

CC+ CONCRETE CULVERT

E+ ELECTRICAL SUB-STATION

30 0 30

SCALE IN METERS

NORTH

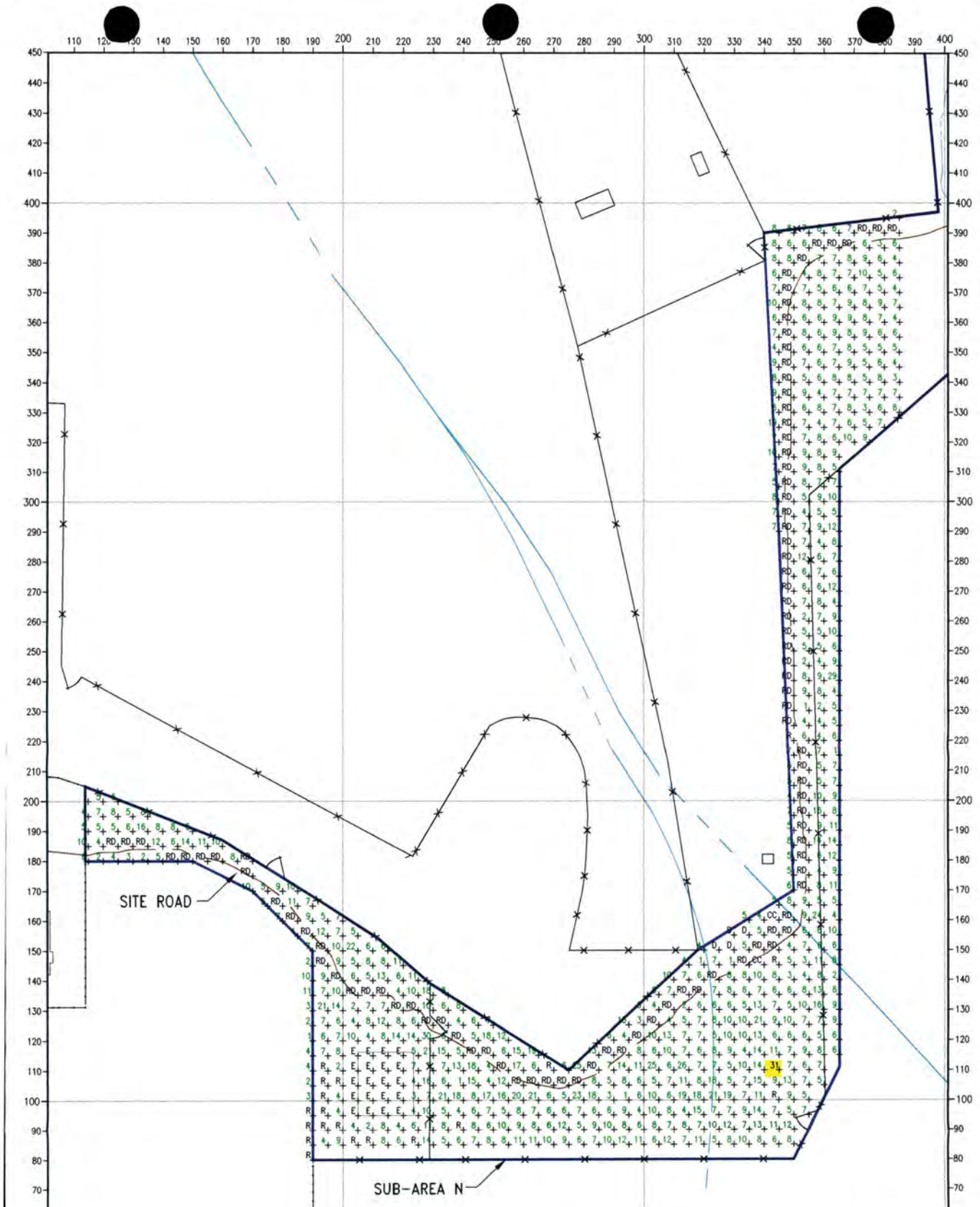
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
OPEN LAND AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 6" - 1'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY JE	DATE 01/14/02	SCALE AS SHOWN	
JOB NO.	DRAWING NO. 02POSNOLDSS-1		REV. 0

...\SUBAREAN\02POSNOLDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 – 30 pCi/g U

45+ URANIUM, > 30 pCi/g U

R+ ROCK

RD+ ROADWAY

CC+ CONCRETE CULVERT

D+ DRAINAGE

E+ ELECTRICAL SUB-STATION

30 0 30

SCALE IN METERS

NORTH

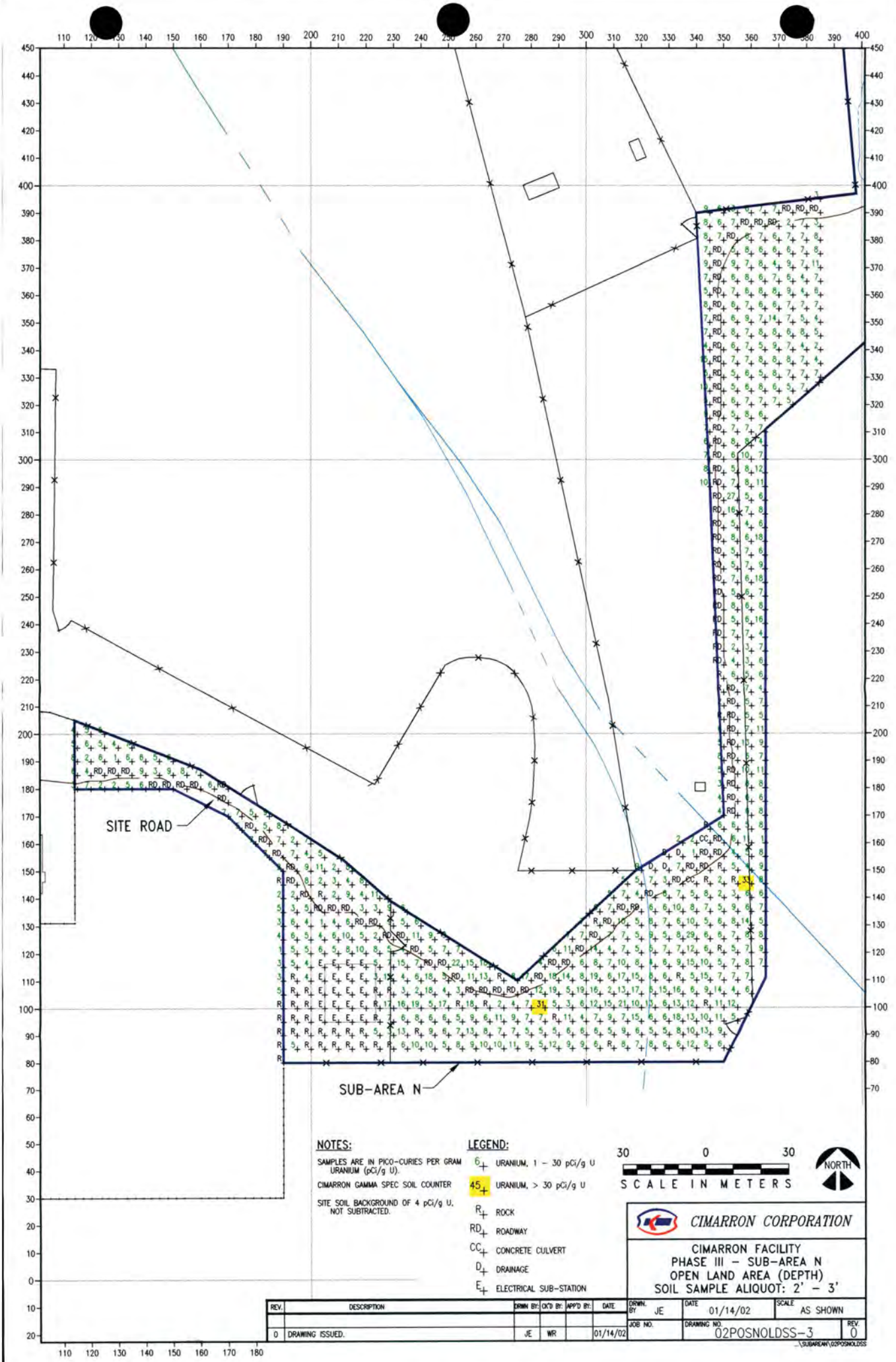
CIMARRON CORPORATION

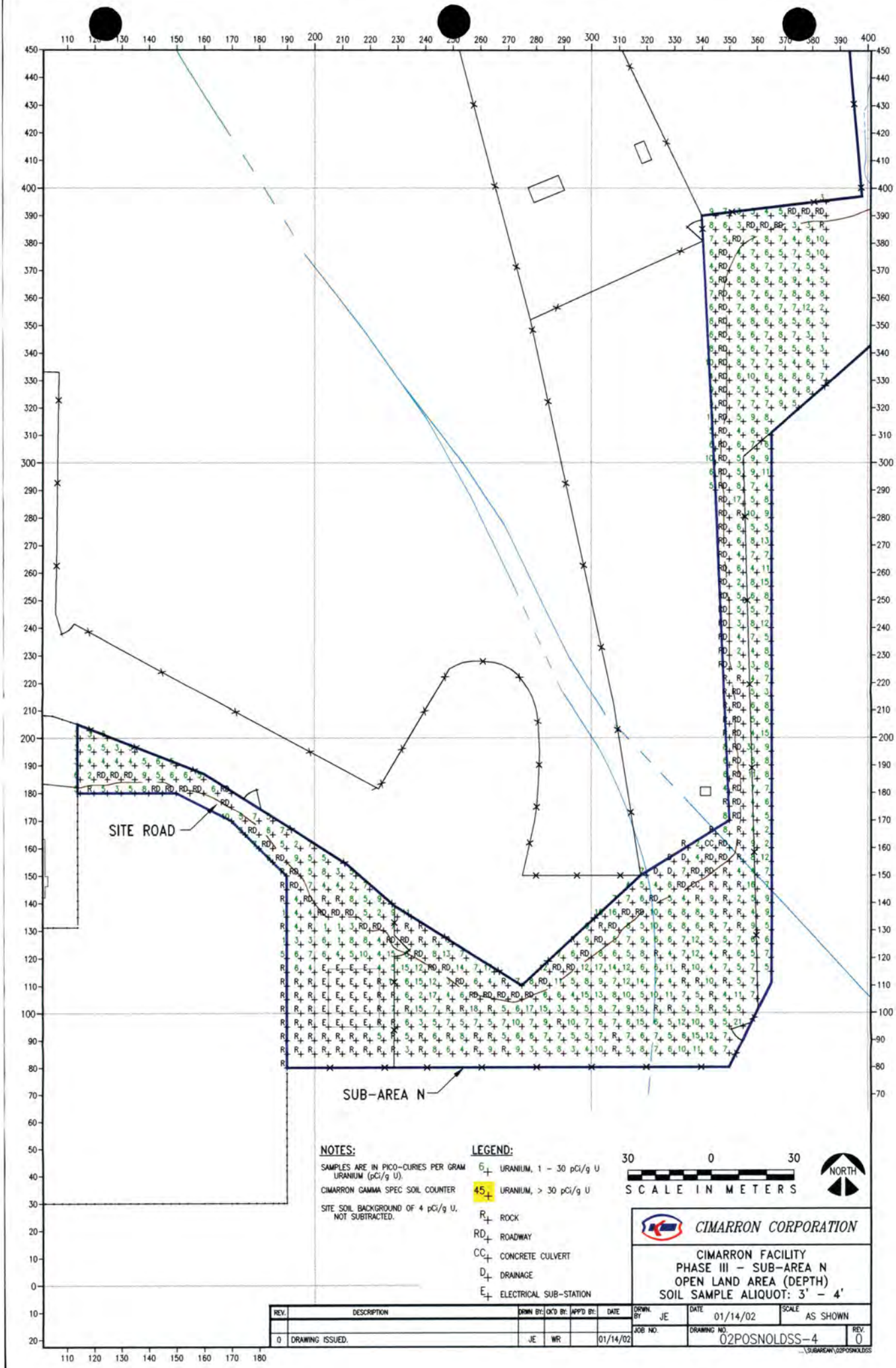
CIMARRON FACILITY
PHASE III – SUB-AREA N
OPEN LAND AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 1' – 2'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO.	REV.
	02POSNOLDSS-2	0

..\SUBAREAN\02POSNOLDSS


SITE ROAD
SUB-AREA N
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U. NOT SUBTRACTED.
LEGEND:
6+ URANIUM, 1 – 30 pCi/g U
45+ URANIUM, > 30 pCi/g U
R+ ROCK
RD+ ROADWAY
CC+ CONCRETE CULVERT
D+ DRAINAGE
E+ ELECTRICAL SUB-STATION
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III – SUB-AREA N
OPEN LAND AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 2' – 3'
REV. DESCRIPTION DRWN BY: CK'D BY: APP'D BY: DATE
0 DRAWING ISSUED. JE WR 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNOLDSS-3
REV. 0


SITE ROAD
SUB-AREA N
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.
LEGEND:
6+ URANIUM, 1 - 30 pCi/g U
45+ URANIUM, > 30 pCi/g U
R+ ROCK
RD+ ROADWAY
CC+ CONCRETE CULVERT
D+ DRAINAGE
E+ ELECTRICAL SUB-STATION
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
OPEN LAND AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 3' - 4'
REV. DESCRIPTION DRWN BY: CK'D BY: APP'D BY: DATE
0 DRAWING ISSUED. JE WR 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNOLDSS-4
REV. 0
...\SUBAREAN\02POSNOLDSS

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	115	E	-	180	N	4680	11	9	18	1	18	1	6	1	3	1	5	1
2	115	E	-	185	N	3310	9	8	7	1	6	1	10	1	6	1	6	1
3	115	E	-	190	N	4730	10	11	14	1	7	1	5	1	8	1	3	1
4	115	E	-	195	N	5170	10	10	17	1	12	1	4	1	5	1	3	1
5	115	E	-	200	N	4520	11	12	27	1	7	1	1	1	4	1	3	1
6	120	E	-	180	N	4450	9	10	14	1	10	1	2	1	7	1	ROCK	ROCK
7	120	E	-	185	N	5290	9	9	9	1	37	1	4	1	4	1	2	1
8	120	E	-	190	N	5180	9	9	15	1	11	1	5	1	2	1	4	1
9	120	E	-	195	N	4870	12	10	15	1	8	1	7	1	6	1	5	1
10	120	E	-	200	N	4210	9	8	9	1	6	1	5	1	5	1	3	1
11	125	E	-	180	N	4880	12	12	16	1	10	1	4	1	2	1	5	1
12	125	E	-	185	N	ROADWAY												
13	125	E	-	190	N	4750	10	11	20	1	14	1	5	1	6	1	4	1
14	125	E	-	195	N	5040	11	9	15	1	9	1	8	1	5	1	5	1
15	125	E	-	200	N	4100	9	9	7	1	8	1	6	1	5	1	6	1
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	130	E	-	180	N	4450	10	10	14	1	6	1	3	1	2	1	3	1
2	130	E	-	185	N	ROADWAY												
3	130	E	-	190	N	4520	10	9	25	1	24	1	6	1	1	1	4	1
4	130	E	-	195	N	4090	9	9	8	1	6	1	5	1	4	1	3	1
5	135	E	-	180	N	4580	10	10	10	1	6	1	2	1	5	1	5	1
6	135	E	-	185	N	ROADWAY												
7	135	E	-	190	N	4610	9	8	15	1	12	1	16	1	6	1	4	1
8	135	E	-	195	N	4230	10	9	15	1	12	1	8	1	7	1	5	1
9	140	E	-	180	N	4370	10	11	16	1	14	1	5	1	6	1	8	1
10	140	E	-	185	N	3250	9	9	11	1	40	1	12	1	9	1	9	1
11	140	E	-	190	N	5000	11	12	24	1	24	1	8	1	6	1	5	1
12	145	E	-	180	N	ROADWAY												
13	145	E	-	185	N	3110	11	8	12	1	29	1	6	1	3	1	5	1
14	145	E	-	190	N	4560	11	11	15	1	9	1	8	1	5	1	6	1
15	150	E	-	180	N	ROADWAY												
16	150	E	-	185	N	3710	8	8	12	1	18	1	14	1	9	1	6	1
17	150	E	-	190	N	4620	9	9	12	1	7	1	5	1	6	1	5	1
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	155	E	-	180	N	ROADWAY												
2	155	E	-	185	N	4930	9	9	17	1	11	1	11	1	8	1	6	1
3	160	E	-	180	N	ROADWAY												
4	160	E	-	185	N	4450	9	10	15	1	11	1	10	1	7	1	5	1
5	165	E	-	180	N	4930	11	10	15	1	13	1	8	1	6	1	6	1
6	170	E	-	170	N	5210	11	11	15	1	13	1	10	1	7	1	10	1
7	170	E	-	175	N	ROADWAY												
8	170	E	-	180	N	ROADWAY												
9	175	E	-	165	N	5410	12	12	7	1	8	1	5	1	5	1	3	1
10	175	E	-	170	N	3970	9	9	11	1	16	1	5	1	7	1	5	1
11	180	E	-	160	N	6000	13	11	8	1	5	1	7	1	7	1	7	1
12	180	E	-	165	N	ROADWAY												
13	180	E	-	170	N	5250	11	10	22	1	20	1	9	1	5	1	7	1
14	185	E	-	155	N	5330	10	11	10	1	6	1	4	1	7	1	6	1
15	185	E	-	160	N	ROADWAY												
16	185	E	-	165	N	4160	9	9	17	1	14	1	11	1	5	1	6	1
17	185	E	-	170	N	5440	12	10	15	1	12	1	10	1	9	1	5	1
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	190	E	-	80	N	2870	7	9	7	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
2	190	E	-	85	N	3080	8	7	10	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
3	190	E	-	90	N	3770	8	8	7	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
4	190	E	-	95	N	3350	7	8	11	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
5	190	E	-	100	N	4440	8	8	7	1	5	1	3	1	ROCK	ROCK	ROCK	ROCK
6	190	E	-	105	N	3860	8	9	7	1	2	1	2	1	5	1	ROCK	ROCK
7	190	E	-	110	N	5170	11	10	26	1	1	1	4	1	3	1	ROCK	ROCK
8	190	E	-	115	N	4480	10	10	6	1	3	1	4	1	3	1	ROCK	ROCK
9	190	E	-	120	N	4210	8	9	12	1	3	1	1	1	1	1	5	2
10	190	E	-	125	N	3170	7	8	18	1	5	1	2	1	4	1	1	1
11	190	E	-	130	N	4290	10	10	11	1	4	1	3	1	3	1	ROCK	ROCK
12	190	E	-	135	N	5060	11	10	28	1	22	1	11	1	5	1	1	1
13	190	E	-	140	N	5310	12	11	18	1	12	1	10	1	2	1	ROCK	ROCK
14	190	E	-	145	N	5240	12	11	18	1	5	1	2	1	ROCK	ROCK	ROCK	ROCK
15	190	E	-	150	N	5450	13	10	18	1	7	1	7	1	2	1	ROCK	ROCK
16	190	E	-	155	N	ROADWAY												
17	190	E	-	160	N	4060	11	9	13	1	18	1	9	1	7	1	5	1
18	190	E	-	165	N	5310	11	11	14	1	9	1	7	1	8	1	7	1
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Bogart DATE: 1-8-02

CIMARRO\. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	195	E	-	85	N	3720	9	7	7	1	7	1	4	1	5	1	ROCK	ROCK
2	195	E	-	90	N	3150	6	7	5	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
3	195	E	-	95	N	3410	8	9	5	1	9	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
4	195	E	-	100	N	3520	7	9	5	1	9	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
5	195	E	-	105	N	3750	9	8	8	1	3	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
6	195	E	-	110	N	4270	9	10	7	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
7	195	E	-	115	N	4400	12	11	22	1	18	1	7	1	5	1	6	1
8	195	E	-	120	N	5830	10	10	13	1	9	1	6	1	5	1	6	1
9	195	E	-	125	N	4660	10	12	16	1	11	1	7	1	6	1	3	1
10	195	E	-	130	N	4380	10	12	23	1	22	1	21	1	6	1	4	1
11	195	E	-	135	N	4590	10	9	18	1	8	1	7	1	3	1	4	1
12	195	E	-	140	N	3410	8	9	24	1	22	1	9	1	2	1	4	1
13	195	E	-	145	N	ROADWAY												
14	195	E	-	150	N	ROADWAY												
15	195	E	-	155	N	2380	7	7	21	1	22	1	12	1	7	1	9	1
16	195	E	-	160	N	4230	9	11	9	1	10	1	5	1	2	1	2	1
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	200	E	-	85	N	3890	8	9	25	1	9	1	9	1	ROCK	ROCK	ROCK	ROCK
2	200	E	-	90	N	3870	9	8	10	1	4	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
3	200	E	-	95	N	4350	11	9	7	1	5	1	4	1	ROCK	ROCK	ROCK	ROCK
4	200	E	-	100	N	3980	10	8	6	1	5	1	4	1	ROCK	ROCK	ROCK	ROCK
5	200	E	-	105	N	3850	9	8	5	1	2	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
6	200	E	-	110	N	4170	9	9	9	1	6	1	2	1	4	1	ROCK	ROCK
7	200	E	-	115	N	4710	9	9	19	1	7	1	8	1	4	1	4	1
8	200	E	-	120	N	5030	10	11	20	1	11	1	7	1	5	1	7	1
9	200	E	-	125	N	2900	10	9	11	1	11	1	6	1	5	1	3	1
10	200	E	-	130	N	4270	9	10	22	1	28	1	14	1	4	1	ROCK	ROCK
11	200	E	-	135	N	4480	9	10	22	1	7	1	10	1	5	1	4	1
12	200	E	-	140	N	ROADWAY												
13	200	E	-	145	N	2360	8	8	28	1	31	1	9	1	8	1	7	1
14	200	E	-	150	N	4710	10	11	27	1	25	1	10	1	9	1	5	1
15	200	E	-	155	N	4730	12	11	14	1	12	1	7	1	4	1	5	1
16	200	E	-	160	N	2970	9	7	16	1	11	1	7	1	7	1	7	1
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. O. Rogers DATE: 1-8-02

CIMARRO, ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	205	E	-	85	N	3760	8	9	13	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
2	205	E	-	90	N	5410	12	10	22	1	7	1	4	1	ROCK	ROCK	ROCK	ROCK
3	205	E	-	95	N	ELECTRICAL SUB-STATION												
4	205	E	-	100	N	ELECTRICAL SUB-STATION												
5	205	E	-	105	N	ELECTRICAL SUB-STATION												
6	205	E	-	110	N	ELECTRICAL SUB-STATION												
7	205	E	-	115	N	ELECTRICAL SUB-STATION												
8	205	E	-	120	N	4960	11	10	17	1	12	1	10	1	6	1	6	1
9	205	E	-	125	N	3820	9	8	15	1	5	1	4	1	4	1	6	1
10	205	E	-	130	N	3470	9	8	9	1	8	1	2	1	1	1	1	1
11	205	E	-	135	N	ROADWAY												
12	205	E	-	140	N	2730	9	9	13	1	7	1	6	1	ROCK	ROCK	ROCK	ROCK
13	205	E	-	145	N	2260	9	9	13	2	10	1	5	1	2	1	4	1
14	205	E	-	150	N	5140	9	11	15	1	18	1	22	1	11	1	8	1
15	205	E	-	155	N	4560	10	11	14	1	18	1	5	1	5	1	5	1
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	210	E	-	85	N	3840	8	9	12	1	9	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
2	210	E	-	90	N	3360	8	9	5	1	3	1	2	1	ROCK	ROCK	ROCK	ROCK
3	210	E	-	95	N	ELECTRICAL SUB-STATION												
4	210	E	-	100	N	ELECTRICAL SUB-STATION												
5	210	E	-	105	N	ELECTRICAL SUB-STATION												
6	210	E	-	110	N	ELECTRICAL SUB-STATION												
7	210	E	-	115	N	ELECTRICAL SUB-STATION												
8	210	E	-	120	N	4610	9	10	11	1	5	1	4	1	5	1	4	1
9	210	E	-	125	N	3510	9	10	13	1	22	1	8	1	6	1	1	1
10	210	E	-	130	N	3940	9	9	7	1	13	1	7	1	4	1	1	1
11	210	E	-	135	N	ROADWAY												
12	210	E	-	140	N	4210	11	10	16	1	11	1	5	1	2	1	ROCK	ROCK
13	210	E	-	145	N	2720	11	9	19	1	19	1	8	1	3	1	4	1
14	210	E	-	150	N	4360	9	10	15	1	9	1	6	1	2	1	3	1
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	215	E	-	85	N	4420	10	9	15	1	9	1	8	1	ROCK	ROCK	ROCK	ROCK
2	215	E	-	90	N	3550	8	9	10	1	7	1	8	1	ROCK	ROCK	ROCK	ROCK
3	215	E	-	95	N	ELECTRICAL SUB-STATION												
4	215	E	-	100	N	ELECTRICAL SUB-STATION												
5	215	E	-	105	N	ELECTRICAL SUB-STATION												
6	215	E	-	110	N	ELECTRICAL SUB-STATION												
7	215	E	-	115	N	ELECTRICAL SUB-STATION												
8	215	E	-	120	N	3680	10	10	11	1	17	2	8	1	8	1	5	1
9	215	E	-	125	N	3970	9	10	11	1	33	2	12	1	10	1	8	1
10	215	E	-	130	N	3800	8	8	10	1	7	1	7	1	6	1	3	1
11	215	E	-	135	N	ROADWAY												
12	215	E	-	140	N	4480	9	10	14	1	15	1	13	1	9	1	8	1
13	215	E	-	145	N	4660	9	10	17	1	8	1	8	1	4	1	2	1
14	215	E	-	150	N	2510	9	8	18	1	8	2	6	1	8	1	5	1
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Bogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	220	E	-	85	N	2710	10	10	13	1	16	1	6	1	ROCK	ROCK	ROCK	ROCK
2	220	E	-	90	N	2950	9	8	4	1	3	1	4	1	ROCK	ROCK	ROCK	ROCK
3	220	E	-	95	N	ELECTRICAL SUB-STATION												
4	220	E	-	100	N	ELECTRICAL SUB-STATION												
5	220	E	-	105	N	ELECTRICAL SUB-STATION												
6	220	E	-	110	N	ELECTRICAL SUB-STATION												
7	220	E	-	115	N	ELECTRICAL SUB-STATION											5	1
8	220	E	-	120	N	4080	9	10	8	1	12	1	14	1	10	1	10	1
9	220	E	-	125	N	3390	9	9	7	1	10	2	8	1	5	1	8	1
10	220	E	-	130	N	ROADWAY												
11	220	E	-	135	N	4310	10	9	10	1	6	1	4	1	3	1	5	1
12	220	E	-	140	N	4090	10	10	10	1	11	1	6	1	4	1	5	1
13	220	E	-	145	N	2250	6	7	18	1	15	1	11	1	8	1	7	1
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Bryan DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	225	E	-	85	N	3990	9	10	14	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
2	225	E	-	90	N	3440	9	9	5	1	9	1	6	1	5	1	5	1
3	225	E	-	95	N	3150	9	9	5	1	4	2	4	1	ROCK	ROCK	ROCK	ROCK
4	225	E	-	100	N	4800	11	10	9	2	7	1	3	1	ROCK	ROCK	ROCK	ROCK
5	225	E	-	105	N	3940	10	10	5	1	8	1	4	1	ROCK	ROCK	ROCK	ROCK
6	225	E	-	110	N	4510	10	9	10	1	8	1	7	1	3	1	ROCK	ROCK
7	225	E	-	115	N	4380	11	9	14	1	7	1	5	1	5	1	4	1
8	225	E	-	120	N	3900	10	10	7	1	10	1	14	2	8	1	4	1
9	225	E	-	125	N	3550	9	8	10	1	6	1	6	1	2	1	4	1
10	225	E	-	130	N	ROADWAY												
11	225	E	-	135	N	4270	11	10	21	1	12	1	10	1	3	1	2	1
12	225	E	-	140	N	2610	7	8	12	1	13	1	11	1	11	1	9	1
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRO\ ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	230	E	-	85	N	3830	6	6	6	2	7	2	14	1	ROCK	ROCK	ROCK	ROCK
2	230	E	-	90	N	3920	7	7	22	2	14	2	11	1	3	1	ROCK	ROCK
3	230	E	-	95	N	4310	8	7	19	1	14	1	10	2	7	1	ROCK	ROCK
4	230	E	-	100	N	4390	5	5	22	3	20	1	7	1	17	2	7	1
5	230	E	-	105	N	3520	8	7	18	2	10	2	16	2	ROCK	ROCK	ROCK	ROCK
6	230	E	-	110	N	4150	6	6	10	2	13	2	7	1	15	1	11	1
7	230	E	-	115	N	3850	8	8	10	2	14	2	21	2	7	1	5	1
8	230	E	-	120	N	4340	8	7	14	1	12	1	30	2	5	1	15	1
9	230	E	-	125	N	ROADWAY												
10	230	E	-	130	N	3640	6	6	7	2	14	1	10	3	9	1	7	1
11	230	E	-	135	N	4190	7	7	7	2	16	2	18	1	9	2	9	2
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRO, ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	235	E	-	85	N	4520	5	5	17	2	13	1	5	1	6	1	3	1
2	235	E	-	90	N	4380	8	7	22	2	14	2	8	1	13	1	5	1
3	235	E	-	95	N	4670	7	6	6	2	10	2	5	1	6	1	6	1
4	235	E	-	100	N	3690	6	5	10	2	25	1	21	2	16	1	ROCK	ROCK
5	235	E	-	105	N	2970	8	9	8	1	8	1	6	1	3	1	6	1
6	235	E	-	110	N	3970	7	6	14	2	14	2	7	1	4	1	6	1
7	235	E	-	115	N	3870	8	7	12	2	7	2	15	2	15	2	15	2
8	235	E	-	120	N	2910	6	6	9	1	11	1	6	1	4	1	8	1
9	235	E	-	125	N	ROADWAY												
10	235	E	-	130	N	4740	7	7	23	2	12	2	6	2	5	2	ROCK	ROCK
11	235	E	-	135	N	3860	7	6	7	1	22	1	8	2	6	2	11	1
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	240	E	-	85	N	5240	6	6	15	2	12	2	6	2	10	2	ROCK	ROCK
2	240	E	-	90	N	4210	7	8	18	2	14	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
3	240	E	-	95	N	3410	6	6	9	2	11	1	4	1	8	1	3	2
4	240	E	-	100	N	3150	5	6	22	2	12	1	18	1	19	2	15	2
5	240	E	-	105	N	2760	7	7	7	1	7	1	1	1	2	1	2	1
6	240	E	-	110	N	4040	6	6	5	2	16	2	13	2	6	1	15	1
7	240	E	-	115	N	3990	7	7	16	1	8	1	5	2	7	1	12	1
8	240	E	-	120	N	ROADWAY												
9	240	E	-	125	N	3280	7	9	23	2	28	2	4	1	11	2	ROCK	ROCK
10	240	E	-	130	N	3090	6	7	7	1	10	1	8	2	6	2	ROCK	ROCK
11	245	E	-	85	N	5260	8	7	12	3	10	2	7	3	10	2	8	1
12	245	E	-	90	N	4410	6	7	6	2	6	2	8	1	9	1	6	1
13	245	E	-	95	N	3990	6	7	10	2	6	2	6	1	6	1	5	2
14	245	E	-	100	N	2970	9	8	10	1	3	1	8	1	5	1	7	1
15	245	E	-	105	N	3450	8	8	9	1	8	2	15	2	18	1	17	2
16	245	E	-	110	N	4200	7	6	10	1	4	2	18	2	18	1	12	1
17	245	E	-	115	N	ROADWAY												
18	245	E	-	120	N	3630	6	6	11	1	7	1	5	1	5	1	8	1
19	245	E	-	125	N	3460	6	6	11	2	10	2	6	2	9	2	ROCK	ROCK
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	250	E	-	85	N	4920	6	6	12	3	8	2	8	2	5	2	6	2
2	250	E	-	90	N	4590	8	6	12	2	8	1	6	1	6	1	ROCK	ROCK
3	250	E	-	95	N	3890	7	7	9	2	6	2	7	1	6	1	7	1
4	250	E	-	100	N	3270	7	6	6	1	21	2	17	1	17	2	ROCK	ROCK
5	250	E	-	105	N	2840	9	9	8	2	1	1	4	1	4	1	4	1
6	250	E	-	110	N	3620	5	6	13	1	12	2	4	1	5	1	3	1
7	250	E	-	115	N	ROADWAY												
8	250	E	-	120	N	3660	6	6	15	1	11	1	18	1	7	1	13	1
9	250	E	-	125	N	3090	7	6	14	1	7	2	7	2	9	3	9	3
10	255	E	-	85	N	3840	6	7	9	2	11	1	8	2	8	2	4	2
11	255	E	-	90	N	3430	7	7	5	2	9	1	10	2	7	2	8	1
12	255	E	-	95	N	4180	7	7	10	2	6	2	5	2	5	2	5	1
13	255	E	-	100	N	3350	6	6	27	2	25	2	16	2	ROCK	ROCK	ROCK	ROCK
14	255	E	-	105	N	2180	8	8	7	1	6	1	12	1	3	1	6	1
15	255	E	-	110	N	ROADWAY												
16	255	E	-	115	N	4000	7	8	26	1	23	1	6	1	22	1	14	1
17	255	E	-	120	N	3160	6	6	5	1	11	1	12	1	7	1	7	1
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Bryan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	260	E	-	85	N	4480	6	6	7	3	6	2	11	1	9	2	ROCK	ROCK
2	260	E	-	90	N	3310	6	6	7	1	11	1	9	2	13	1	ROCK	ROCK
3	260	E	-	95	N	3740	6	6	11	2	13	2	8	2	9	1	7	2
4	260	E	-	100	N	3560	6	5	8	1	22	2	20	3	18	2	18	1
5	260	E	-	105	N	ROADWAY												
6	260	E	-	110	N	3350	5	6	13	1	16	1	17	1	11	1	6	1
7	260	E	-	115	N	4050	9	7	24	2	8	1	15	2	15	2	7	1
8	265	E	-	85	N	4380	6	6	10	3	7	2	11	3	10	2	9	2
9	265	E	-	90	N	3390	6	6	11	2	9	2	8	2	8	2	ROCK	ROCK
10	265	E	-	95	N	3450	8	7	10	2	5	2	7	2	6	2	5	1
11	265	E	-	100	N	3390	6	6	12	1	8	1	21	2	ROCK	ROCK	ROCK	ROCK
12	265	E	-	105	N	ROADWAY												
13	265	E	-	110	N	3460	10	9	16	1	20	1	6	2	13	1	4	1
14	265	E	-	115	N	4110	7	6	14	1	21	2	19	2	18	2	17	1
15	270	E	-	85	N	4350	6	6	10	3	10	2	10	1	10	1	ROCK	ROCK
16	270	E	-	90	N	4060	7	6	10	2	12	2	6	1	7	1	5	1
17	270	E	-	95	N	3870	6	7	9	2	7	2	6	2	11	2	7	1
18	270	E	-	100	N	2270	7	9	6	1	9	1	6	1	2	1	5	1
19	270	E	-	105	N	ROADWAY												
20	270	E	-	110	N	3470	9	11	31	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	275	E	-	85	N	4240	7	6	13	2	13	1	9	2	11	1	9	1
2	275	E	-	90	N	4120	6	7	9	2	9	2	12	2	7	2	6	1
3	275	E	-	95	N	3490	9	7	10	2	6	2	6	1	9	1	10	1
4	275	E	-	100	N	2490	7	8	10	1	5	1	5	1	4	1	6	1
5	275	E	-	105	N	ROADWAY												
6	275	E	-	110	N	3600	7	6	9	1	19	1	6	1	8	1	7	1
7	280	E	-	85	N	4390	7	7	14	1	6	1	6	1	9	1	3	2
8	280	E	-	90	N	4270	7	6	8	2	8	2	5	1	5	2	6	1
9	280	E	-	95	N	3530	6	6	9	2	6	2	7	1	7	2	7	1
10	280	E	-	100	N	3520	7	6	24	3	15	1	23	2	7	2	17	1
11	280	E	-	105	N	ROADWAY												
12	280	E	-	110	N	3150	7	6	14	2	8	2	25	2	17	1	8	1
13	285	E	-	85	N	2390	7	7	10	1	31	2	7	2	5	1	5	2
14	285	E	-	90	N	4300	7	7	6	2	9	1	9	2	5	2	7	1
15	285	E	-	95	N	2900	7	7	6	2	13	1	6	1	7	1	9	1
16	285	E	-	100	N	4100	8	7	5	2	18	2	18	1	31	3	15	1
17	285	E	-	105	N	3000	6	6	7	2	8	2	8	1	12	1	6	1
18	285	E	-	110	N	ROADWAY												
19	285	E	-	115	N	2650	6	6	9	1	8	1	13	2	4	1	12	1
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	290	E	-	85	N	4350	7	6	8	2	5	2	10	2	12	1	8	1
2	290	E	-	90	N	3810	6	7	9	2	8	2	10	2	5	2	7	1
3	290	E	-	95	N	3830	8	7	9	1	8	1	6	2	ROCK	ROCK	ROCK	ROCK
4	290	E	-	100	N	3220	9	9	23	1	27	1	3	1	5	1	3	1
5	290	E	-	105	N	4370	6	7	10	1	11	1	5	2	19	2	6	1
6	290	E	-	110	N	2940	6	6	15	2	11	1	7	2	18	1	11	1
7	290	E	-	115	N	ROADWAY												
8	290	E	-	120	N	3200	8	7	5	1	4	1	6	1	6	1	7	1
9	295	E	-	85	N	4150	8	6	7	1	10	2	12	1	9	2	3	2
10	295	E	-	90	N	3290	8	7	9	2	11	1	8	1	6	1	5	1
11	295	E	-	95	N	5150	8	7	12	2	8	1	9	1	11	1	10	1
12	295	E	-	100	N	3040	9	9	13	1	11	1	1	1	3	1	5	1
13	295	E	-	105	N	2760	9	9	3	1	3	1	8	1	5	1	4	1
14	295	E	-	110	N	3480	6	7	12	2	11	1	14	2	14	2	5	1
15	295	E	-	115	N	ROADWAY												
16	295	E	-	120	N	2810	6	6	5	1	7	1	4	1	11	1	6	1
17	295	E	-	125	N	3280	5	6	12	2	11	2	13	1	7	1	ROCK	ROCK
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRO. CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	300	E	-	85	N	3720	7	7	9	2	8	2	11	3	9	2	4	1
2	300	E	-	90	N	3740	6	6	8	2	6	2	6	2	6	1	5	1
3	300	E	-	95	N	4230	7	6	7	2	5	1	4	1	4	1	7	1
4	300	E	-	100	N	2640	10	9	6	1	8	1	6	1	6	1	5	1
5	300	E	-	105	N	2810	8	7	4	1	9	1	6	2	19	2	15	2
6	300	E	-	110	N	2780	9	9	10	2	11	2	11	1	8	1	8	1
7	300	E	-	115	N	3020	7	7	8	1	11	1	8	1	6	1	12	1
8	300	E	-	120	N	ROADWAY												
9	300	E	-	125	N	3270	7	6	4	2	8	2	3	3	7	3	9	2
10	300	E	-	130	N	3110	6	7	7	1	6	1	6	1	7	1	9	1
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: William O. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	305	E	-	85	N	4510	6	6	12	2	10	3	6	2	6	2	10	1
2	305	E	-	90	N	3860	7	6	11	1	6	2	8	2	6	2	7	2
3	305	E	-	95	N	4470	6	6	6	2	9	1	10	1	7	1	6	2
4	305	E	-	100	N	3280	9	8	2	2	18	2	10	1	12	2	8	2
5	305	E	-	105	N	4420	7	7	12	1	9	2	5	2	16	2	13	2
6	305	E	-	110	N	3130	8	8	12	1	11	1	25	1	19	1	9	1
7	305	E	-	115	N	2690	7	7	11	2	17	2	6	2	8	1	17	2
8	305	E	-	120	N	2530	5	5	7	1	16	1	10	2	14	1	8	1
9	305	E	-	125	N	ROADWAY												
10	305	E	-	130	N	3520	8	7	5	2	5	2	4	2	ROCK	ROCK	ROCK	ROCK
11	305	E	-	135	N	3210	6	6	6	1	7	1	8	2	6	1	16	1
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	310	E	-	85	N	3770	6	7	10	2	10	2	12	1	ROCK	ROCK	ROCK	ROCK
2	310	E	-	90	N	4270	5	7	6	2	12	2	7	2	5	2	ROCK	ROCK
3	310	E	-	95	N	4200	7	6	7	2	9	2	8	1	9	2	7	2
4	310	E	-	100	N	3540	6	6	16	2	8	1	6	1	15	2	7	1
5	310	E	-	105	N	2880	7	7	8	1	12	1	7	1	2	1	8	1
6	310	E	-	110	N	2990	8	8	9	2	7	2	6	2	6	1	7	1
7	310	E	-	115	N	3280	7	8	12	2	5	2	10	1	7	1	14	2
8	310	E	-	120	N	2620	5	6	6	1	9	1	13	1	4	1	6	1
9	310	E	-	125	N	2680	7	6	4	2	8	2	4	2	7	2	5	2
10	310	E	-	130	N	ROADWAY												
11	310	E	-	135	N	3750	5	6	6	1	7	1	7	2	7	2	16	1
12	310	E	-	140	N	3250	6	7	7	2	5	1	10	1	5	2	7	1
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRO CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	315	E	-	85	N	3660	7	7	7	2	6	2	7	2	8	2	5	1
2	315	E	-	90	N	3790	6	6	8	1	6	2	8	1	9	2	7	1
3	315	E	-	95	N	3750	7	7	9	2	6	1	4	1	7	1	6	1
4	315	E	-	100	N	4300	7	6	11	2	11	2	19	2	21	2	9	1
5	315	E	-	105	N	3540	8	7	20	2	16	2	11	1	13	2	10	1
6	315	E	-	110	N	3740	8	7	6	2	8	1	26	2	17	2	12	1
7	315	E	-	115	N	3750	7	7	6	1	9	1	7	2	10	2	12	1
8	315	E	-	120	N	3080	6	6	7	1	10	2	7	2	7	1	5	1
9	315	E	-	125	N	3130	7	6	5	2	6	2	5	1	7	1	7	2
10	315	E	-	130	N	2240	8	8	6	1	7	1	2	1	10	1	8	1
11	315	E	-	135	N	ROADWAY												
12	315	E	-	140	N	3120	6	6	6	2	7	2	7	2	7	2	7	2
13	315	E	-	145	N	2390	8	8	5	1	5	1	4	1	5	1	4	1
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	320	E	-	85	N	3880	6	6	10	1	12	1	11	1	7	2	8	1
2	320	E	-	90	N	4140	7	7	6	3	8	2	7	1	6	1	6	1
3	320	E	-	95	N	3680	6	6	6	1	17	1	15	2	15	1	15	1
4	320	E	-	100	N	3710	6	6	25	3	22	3	18	1	10	1	15	1
5	320	E	-	105	N	4100	7	6	17	2	18	3	8	2	17	2	5	1
6	320	E	-	110	N	3400	8	7	7	2	19	1	7	1	15	1	14	2
7	320	E	-	115	N	3850	7	7	7	2	6	2	6	2	8	1	6	1
8	320	E	-	120	N	2980	6	7	9	1	8	2	7	1	5	1	8	1
9	320	E	-	125	N	3070	6	6	8	2	10	2	7	2	5	1	9	1
10	320	E	-	130	N	3820	8	7	7	2	6	2	6	1	5	1	5	2
11	320	E	-	135	N	ROADWAY												
12	320	E	-	140	N	3600	6	7	7	2	7	2	6	2	4	2	6	2
13	320	E	-	145	N	2360	9	9	9	1	3	1	1	1	5	1	5	1
14	320	E	-	150	N	2710	8	8	4	1	4	1	4	2	9	2	7	2
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	325	E	-	85	N	4040	6	7	7	2	10	1	5	1	8	1	7	1
2	325	E	-	90	N	4300	7	7	13	2	8	2	10	1	5	1	7	1
3	325	E	-	95	N	3250	6	7	23	1	11	1	7	1	6	1	6	1
4	325	E	-	100	N	2920	6	6	8	2	8	1	21	1	13	2	ROCK	ROCK
5	325	E	-	105	N	3640	6	7	8	1	7	2	18	2	6	1	10	1
6	325	E	-	110	N	4320	8	8	11	2	7	2	7	2	8	1	7	2
7	325	E	-	115	N	3370	8	7	9	1	7	2	8	2	4	1	6	2
8	325	E	-	120	N	3790	7	7	5	2	8	2	5	1	5	1	ROCK	ROCK
9	325	E	-	125	N	4640	8	8	8	3	9	2	8	2	9	2	6	2
10	325	E	-	130	N	3660	7	6	7	2	7	2	6	2	8	2	10	2
11	325	E	-	135	N	3570	7	7	6	2	8	1	7	2	6	2	10	2
12	325	E	-	140	N	ROADWAY												
13	325	E	-	145	N	2780	8	8	2	1	6	1	7	1	7	1	4	1
14	325	E	-	150	N	2710	8	8	5	1	DRAINAGE							
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	330	E	-	85	N	4330	7	7	18	2	9	1	8	2	6	1	6	1
2	330	E	-	90	N	4230	7	7	11	1	9	2	12	1	5	1	5	1
3	330	E	-	95	N	4200	8	8	9	1	5	1	7	1	6	1	5	1
4	330	E	-	100	N	3540	8	8	6	1	21	2	19	1	6	1	ROCK	ROCK
5	330	E	-	105	N	3570	8	7	11	2	6	1	5	1	15	2	11	2
6	330	E	-	110	N	2710	10	9	11	1	12	1	5	1	6	2	4	2
7	330	E	-	115	N	4640	8	8	9	2	6	2	9	2	6	1	11	2
8	330	E	-	120	N	4190	8	7	12	2	19	2	10	2	7	2	4	2
9	330	E	-	125	N	3600	8	7	11	2	7	2	10	2	5	2	6	2
10	330	E	-	130	N	4200	8	8	9	2	8	2	6	2	7	2	6	2
11	330	E	-	135	N	3570	7	7	9	2	5	2	8	1	6	2	6	3
12	330	E	-	140	N	2980	6	7	7	2	6	1	8	2	8	2	5	2
13	330	E	-	145	N	1860	7	7	6	1	3	1	1	1	3	1	6	1
14	330	E	-	150	N	2590	8	8	1	1	DRAINAGE							
15	330	E	-	155	N	2070	8	8	5	1	DRAINAGE							
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARROI ɔRPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	335	E	-	85	N	2750	7	6	10	2	9	2	10	2	6	2	10	2
2	335	E	-	90	N	4390	6	7	12	2	12	1	7	1	8	2	6	2
3	335	E	-	95	N	3140	9	9	14	1	14	1	9	1	18	1	12	1
4	335	E	-	100	N	3720	8	7	11	1	23	3	7	2	13	1	5	1
5	335	E	-	105	N	3970	7	7	8	2	16	2	7	2	16	2	7	2
6	335	E	-	110	N	4060	8	8	9	2	8	1	10	1	ROCK	ROCK	ROCK	ROCK
7	335	E	-	115	N	3850	8	7	11	2	7	2	4	2	9	1	ROCK	ROCK
8	335	E	-	120	N	4690	7	7	15	1	12	2	10	1	7	2	7	2
9	335	E	-	125	N	4760	8	8	12	2	8	2	10	2	8	2	7	2
10	335	E	-	130	N	4060	7	7	6	2	4	2	5	2	6	2	8	2
11	335	E	-	135	N	3570	9	8	6	2	7	2	6	2	10	2	8	2
12	335	E	-	140	N	3550	7	7	7	2	7	1	8	1	7	1	4	2
13	335	E	-	145	N	ROADWAY												
14	335	E	-	150	N	2430	8	8	7	1	7	1	5	1	7	1	7	1
15	335	E	-	155	N	2220	8	8	5	1	DRAINAGE							
16	335	E	-	160	N	2680	9	8	9	1	4	1	5	1	2	2	ROCK	ROCK
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Bogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	340	E	-	85	N	4560	8	7	6	2	5	2	8	1	12	1	11	2
2	340	E	-	90	N	4400	6	6	7	2	13	2	13	1	10	2	15	2
3	340	E	-	95	N	2780	9	9	12	1	15	1	14	1	13	1	10	1
4	340	E	-	100	N	4050	6	7	10	1	7	2	11	2	12	2	5	2
5	340	E	-	105	N	3190	7	8	12	1	15	1	15	2	6	2	5	2
6	340	E	-	110	N	4570	7	8	27	2	22	2	14	2	5	2	ROCK	ROCK
7	340	E	-	115	N	3770	6	7	18	2	15	2	14	2	15	1	10	2
8	340	E	-	120	N	3920	8	6	16	2	13	2	13	2	12	2	12	2
9	340	E	-	125	N	3560	7	8	15	1	17	2	21	1	29	1	12	2
10	340	E	-	130	N	4410	7	8	11	2	12	1	13	2	10	2	6	2
11	340	E	-	135	N	4350	8	7	7	2	6	2	7	2	8	2	8	1
12	340	E	-	140	N	4460	6	7	7	2	6	2	10	1	5	2	ROCK	ROCK
13	340	E	-	145	N	2080	7	7	CONCRETE CULVERT									
14	340	E	-	150	N	ROADWAY												
15	340	E	-	155	N	2300	8	8	7	1	6	1	5	1	1	2	4	2
16	340	E	-	160	N	2710	8	8	4	1	8	2	4	1	2	2	2	2
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	345	E	-	85	N	3780	8	6	6	2	7	2	6	1	8	1	6	2
2	345	E	-	90	N	3670	7	6	8	2	10	1	11	1	13	1	12	1
3	345	E	-	95	N	2870	7	8	10	1	11	1	7	1	10	1	9	1
4	345	E	-	100	N	2620	8	8	11	1	7	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
5	345	E	-	105	N	2970	7	8	9	1	9	1	9	1	9	2	ROCK	ROCK
6	345	E	-	110	N	3650	6	6	12	1	12	2	31	1	15	1	10	2
7	345	E	-	115	N	3300	6	6	11	2	11	2	11	2	10	2	4	2
8	345	E	-	120	N	3290	7	7	11	1	7	1	6	2	6	1	4	1
9	345	E	-	125	N	3630	7	6	4	2	6	2	9	2	6	3	5	1
10	345	E	-	130	N	2790	5	6	7	1	6	2	7	2	5	2	ROCK	ROCK
11	345	E	-	135	N	3670	7	6	15	1	11	2	6	2	7	2	9	2
12	345	E	-	140	N	2730	6	7	9	2	9	2	8	3	8	3	9	2
13	345	E	-	145	N	1616	8	8	6	1	8	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
14	345	E	-	150	N	ROADWAY												
15	345	E	-	155	N	ROADWAY												
16	345	E	-	160	N	2490	8	8	4	1	4	1	CONCRETE COLVERT					
17	345	E	-	165	N	2760	8	8	7	1	8	1	5	1	ROCK	ROCK	ROCK	ROCK
18	345	E	-	290	N	3250	9	9	7	1	7	2	7	1	10	1	5	1
19	345	E	-	295	N	2310	7	8	6	1	7	1	7	2	8	2	6	1
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	345	E	-	300	N	2350	7	7	7	1	7	2	8	1	7	1	10	2
2	345	E	-	305	N	3850	9	9	9	1	5	2	5	1	6	2	6	2
3	345	E	-	310	N	4210	9	8	9	1	7	2	7	2	7	2	5	1
4	345	E	-	315	N	4400	9	9	18	2	9	2	10	1	9	1	11	1
5	345	E	-	320	N	4300	11	10	9	2	7	2	7	2	5	1	5	1
6	345	E	-	325	N	3730	9	9	6	1	7	1	19	2	10	2	9	2
7	345	E	-	330	N	4150	10	10	8	2	7	2	6	1	5	1	4	1
8	345	E	-	335	N	4390	9	9	5	1	6	1	9	1	15	1	10	1
9	345	E	-	340	N	4300	9	11	4	1	6	1	8	2	4	2	8	2
10	345	E	-	345	N	4640	11	11	11	1	6	2	9	1	7	1	6	2
11	345	E	-	350	N	5030	9	10	6	1	11	1	4	2	7	2	8	2
12	345	E	-	355	N	3850	9	9	8	1	8	2	7	2	8	2	6	2
13	345	E	-	360	N	3640	10	11	8	1	8	1	6	1	5	1	7	1
14	345	E	-	365	N	3070	8	8	8	1	6	2	10	2	7	1	5	2
15	345	E	-	370	N	2900	9	9	9	1	11	2	7	1	9	1	4	2
16	345	E	-	375	N	2610	11	10	3	1	7	1	6	1	7	1	6	2
17	345	E	-	380	N	2790	10	11	5	1	6	1	8	2	8	1	7	1
18	345	E	-	385	N	3820	11	11	10	1	6	1	8	2	8	2	8	1
19	345	E	-	390	N	3640	10	10	6	2	9	1	8	1	9	1	9	1
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 12S #9081	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3570	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	350	E	-	85	N	3970	6	6	11	2	9	2	8	2	6	1	7	2
2	350	E	-	90	N	3840	7	7	6	2	9	1	12	1	9	2	7	1
3	350	E	-	95	N	3560	5	6	8	2	6	2	5	2	11	2	5	2
4	350	E	-	100	N	3130	9	9	13	1	8	1	9	1	11	1	5	1
5	350	E	-	105	N	3400	7	7	20	2	19	2	13	2	14	2	4	1
6	350	E	-	110	N	3030	6	7	7	2	9	1	7	1	7	1	ROCK	ROCK
7	350	E	-	115	N	3390	6	6	11	1	8	1	7	1	5	1	7	1
8	350	E	-	120	N	3230	7	7	6	1	6	1	6	1	ROCK	ROCK	ROCK	ROCK
9	350	E	-	125	N	3940	6	7	8	1	6	1	10	1	6	1	5	1
10	350	E	-	130	N	3320	6	6	9	1	8	1	5	1	6	1	7	1
11	350	E	-	135	N	3720	8	9	7	2	7	2	6	1	5	1	ROCK	ROCK
12	350	E	-	140	N	2580	9	8	4	1	4	1	3	1	2	1	ROCK	ROCK
13	350	E	-	145	N	2590	8	8	5	1	5	1	5	1	2	1	ROCK	ROCK
14	350	E	-	150	N	2450	8	8	4	1	4	1	4	1	ROCK	ROCK	ROCK	ROCK
15	350	E	-	155	N	ROADWAY												
16	350	E	-	160	N	ROADWAY												
17	350	E	-	165	N	2720	8	8	2	1	8	1	8	1	6	1	8	2
18	350	E	-	170	N	2610	8	8	8	1	5	1	6	1	4	1	8	1
19	350	E	-	175	N	2630	8	9	8	1	5	1	5	1	4	1	ROCK	ROCK
20	350	E	-	180	N	2240	7	8	7	1	4	1	5	1	3	1	4	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					DETECT C.P.M.	R' SURF	R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	350	E	-	185	N	2200	8	9	11	1	7	1	8	1	5	1	6	1
2	350	E	-	190	N	2610	9	8	6	1	5	1	5	1	8	1	6	1
3	350	E	-	195	N	2570	8	8	6	1	4	1	7	1	5	1	8	1
4	350	E	-	200	N	2730	8	7	5	1	5	1	4	1	6	1	ROCK	ROCK
5	350	E	-	205	N	2540	8	7	6	1	6	1	5	1	ROCK	ROCK	ROCK	ROCK
6	350	E	-	210	N	2800	9	8	4	1	5	1	5	1	2	1	ROCK	ROCK
7	350	E	-	215	N	2470	8	9	4	1	4	1	7	1	ROCK	ROCK	ROCK	ROCK
8	350	E	-	220	N	2560	8	8	6	1	6	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
9	350	E	-	225	N	ROADWAY												
10	350	E	-	230	N	ROADWAY												
11	350	E	-	235	N	ROADWAY												
12	350	E	-	240	N	ROADWAY												
13	350	E	-	245	N	ROADWAY												
14	350	E	-	250	N	ROADWAY												
15	350	E	-	255	N	ROADWAY												
16	350	E	-	260	N	ROADWAY												
17	350	E	-	265	N	ROADWAY												
18	350	E	-	270	N	ROADWAY												
19	350	E	-	275	N	ROADWAY												
20	350	E	-	280	N	ROADWAY												

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	350	E	-	285	N	ROADWAY												
2	350	E	-	290	N	ROADWAY												
3	350	E	-	295	N	ROADWAY												
4	350	E	-	300	N	ROADWAY												
5	350	E	-	305	N	ROADWAY												
6	350	E	-	310	N	ROADWAY												
7	350	E	-	315	N	ROADWAY												
8	350	E	-	320	N	ROADWAY												
9	350	E	-	325	N	ROADWAY												
10	350	E	-	330	N	ROADWAY												
11	350	E	-	335	N	ROADWAY												
12	350	E	-	340	N	ROADWAY												
13	350	E	-	345	N	ROADWAY												
14	350	E	-	350	N	ROADWAY												
15	350	E	-	355	N	ROADWAY												
16	350	E	-	360	N	ROADWAY												
17	350	E	-	365	N	ROADWAY												
18	350	E	-	370	N	ROADWAY												
19	350	E	-	375	N	ROADWAY												
20	350	E	-	380	N	2730	10	9	6	1	9	1	8	1	7	1	5	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	350	E	-	385	N	3970	9	10	7	1	7	1	6	1	6	1	6	1
2	350	E	-	390	N	4060	10	11	4	1	6	1	8	1	6	1	7	1
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	355	E	-	95	N	3830	10	9	9	1	8	1	7	1	5	1	21	1
2	355	E	-	100	N	3380	7	7	24	3	25	2	5	2	12	1	5	2
3	355	E	-	105	N	3750	6	7	26	1	15	2	7	1	4	1	11	1
4	355	E	-	110	N	2900	6	6	7	1	8	2	6	2	7	1	5	1
5	355	E	-	115	N	3410	6	8	7	1	9	1	9	1	7	2	5	1
6	355	E	-	120	N	2680	6	6	7	1	11	1	6	1	5	1	6	1
7	355	E	-	125	N	2670	6	7	5	1	8	1	7	2	7	1	7	1
8	355	E	-	130	N	3420	7	7	7	2	8	2	10	2	8	1	ROCK	ROCK
9	355	E	-	135	N	4160	7	6	10	1	6	2	8	2	9	2	ROCK	ROCK
10	355	E	-	140	N	2280	8	8	5	1	4	1	4	1	3	1	2	1
11	355	E	-	145	N	2570	8	8	5	1	5	1	3	1	ROCK	ROCK	ROCK	ROCK
12	355	E	-	150	N	2470	9	9	5	1	7	1	7	1	5	1	4	1
13	355	E	-	155	N	2630	8	8	9	1	7	1	6	1	4	1	ROCK	ROCK
14	355	E	-	160	N	2750	9	7	6	1	3	1	9	1	6	1	ROCK	ROCK
15	355	E	-	165	N	2660	9	9	6	1	5	1	9	1	6	1	ROCK	ROCK
16	355	E	-	170	N	ROADWAY												
17	355	E	-	175	N	ROADWAY												
18	355	E	-	180	N	ROADWAY												
19	355	E	-	185	N	ROADWAY												
20	355	E	-	190	N	ROADWAY												

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	355	E	-	195	N	ROADWAY												
2	355	E	-	200	N	ROADWAY												
3	355	E	-	205	N	ROADWAY												
4	355	E	-	210	N	ROADWAY												
5	355	E	-	215	N	ROADWAY												
6	355	E	-	220	N	2100	8	8	4	1	5	1	6	1	6	1	ROCK	ROCK
7	355	E	-	225	N	2410	7	7	6	1	5	1	4	1	4	1	3	1
8	355	E	-	230	N	2360	7	7	6	1	2	1	1	1	2	1	2	1
9	355	E	-	235	N	2310	7	7	3	1	3	1	9	1	7	1	4	1
10	355	E	-	240	N	2130	8	8	1	1	3	1	8	1	5	1	3	1
11	355	E	-	245	N	2300	8	8	10	1	1	1	2	1	8	1	5	1
12	355	E	-	250	N	2820	9	9	4	1	3	1	5	1	5	1	5	1
13	355	E	-	255	N	2830	9	9	6	1	4	1	5	1	7	1	2	1
14	355	E	-	260	N	2890	9	9	1	1	1	1	2	1	5	1	6	1
15	355	E	-	265	N	2910	10	10	5	1	7	1	7	1	5	1	4	1
16	355	E	-	270	N	3870	9	9	6	1	9	1	6	1	8	1	6	1
17	355	E	-	275	N	3000	9	9	3	1	2	1	6	1	5	1	6	1
18	355	E	-	280	N	2800	9	9	7	1	7	1	12	1	16	1	ROCK	ROCK
19	355	E	-	285	N	3520	8	8	14	1	13	1	7	1	27	1	17	1
20	355	E	-	290	N	3660	9	9	7	1	8	1	7	1	7	1	8	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. O. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	355	E	-	295	N	3680	10	10	4	1	5	1	4	1	5	1	5	1
2	355	E	-	300	N	3680	11	11	5	1	6	1	5	1	6	1	5	1
3	355	E	-	305	N	4010	11	11	7	1	8	1	8	1	8	1	6	1
4	355	E	-	310	N	3720	10	10	11	1	6	1	9	1	7	1	4	1
5	355	E	-	315	N	3820	10	10	8	1	7	1	9	1	5	1	5	1
6	355	E	-	320	N	3720	12	11	6	1	4	1	7	1	6	1	7	1
7	355	E	-	325	N	3680	12	12	8	1	5	1	7	1	5	1	5	1
8	355	E	-	330	N	3610	12	12	6	1	7	1	6	1	5	1	6	1
9	355	E	-	335	N	3790	12	12	8	1	6	1	9	1	7	1	8	2
10	355	E	-	340	N	3650	11	11	7	2	5	1	5	1	6	2	5	2
11	355	E	-	345	N	4000	11	11	12	1	6	1	7	1	8	2	9	2
12	355	E	-	350	N	3890	10	10	11	1	6	1	6	1	6	2	6	1
13	355	E	-	355	N	3390	11	11	6	1	7	1	8	1	6	1	7	1
14	355	E	-	360	N	3650	12	12	12	1	6	1	6	1	7	1	8	1
15	355	E	-	365	9	3980	11	11	9	1	5	1	8	1	6	1	8	1
16	355	E	-	370	N	3040	10	10	6	1	9	1	7	1	9	1	6	1
17	355	E	-	375	N	3780	11	11	6	1	7	2	4	2	5	1	4	1
18	355	E	-	380	N	ROADWAY												
19	355	E	-	385	N	3280	10	10	8	1	5	1	6	1	7	1	3	1
20	355	E	-	390	N	3930	11	11	5	1	8	1	7	1	3	1	3	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Bryan DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	360	E	-	105	N	2790	9	9	6	1	7	1	5	1	6	1	7	1
2	360	E	-	110	N	2670	9	9	9	1	8	1	7	1	7	1	7	1
3	360	E	-	115	N	2640	8	8	8	1	7	1	8	1	8	1	7	1
4	360	E	-	120	N	3090	9	9	4	1	6	1	5	1	7	1	5	1
5	360	E	-	125	N	2840	8	8	7	1	7	1	7	1	8	1	6	1
6	360	E	-	130	N	3000	10	10	14	1	22	1	16	1	14	1	9	1
7	360	E	-	135	N	2550	10	10	9	1	9	1	13	1	6	1	4	1
8	360	E	-	140	N	2650	8	8	5	1	7	1	8	1	6	1	5	1
9	360	E	-	145	N	2740	8	8	9	1	8	1	11	1	33	1	16	1
10	360	E	-	150	N	2870	8	8	8	1	5	1	6	1	4	1	4	1
11	360	E	-	155	N	2570	8	8	5	1	5	1	6	1	5	1	8	1
12	360	E	-	160	N	2700	9	9	6	1	5	1	24	1	11	1	9	1
13	360	E	-	165	N	2730	8	8	7	1	5	1	5	1	5	1	4	1
14	360	E	-	170	N	2180	8	8	4	1	5	1	8	1	6	1	4	1
15	360	E	-	175	N	2470	8	8	4	1	6	1	4	1	6	1	4	1
16	360	E	-	180	N	2190	8	8	5	1	5	1	6	1	8	1	7	1
17	360	E	-	185	N	2310	7	7	10	1	12	1	14	1	10	1	11	1
18	360	E	-	190	N	2270	9	7	9	1	16	1	9	1	6	1	8	1
19	360	E	-	195	N	2660	7	7	26	1	5	1	16	1	13	1	30	1
20	360	E	-	200	N	1970	8	8	5	1	5	1	10	1	7	1	4	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER	3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	360 E - 205 N	2360	7	7	7	1	8	1	5	1	5	1	5	1
2	360 E - 210 N	2220	8	8	8	1	5	1	5	1	5	1	6	1
3	360 E - 215 N	2420	8	8	7	1	7	1	7	1	7	1	5	1
4	360 E - 220 N	2440	7	7	8	1	5	1	4	1	5	1	4	1
5	360 E - 225 N	2030	8	8	5	1	5	1	4	1	3	1	3	1
6	360 E - 230 N	2110	8	8	6	1	5	1	2	1	3	1	4	1
7	360 E - 235 N	1890	7	7	5	1	11	1	8	1	7	1	7	1
8	360 E - 240 N	2140	7	7	6	1	7	1	9	1	6	1	8	2
9	360 E - 245 N	2320	8	8	5	1	4	1	4	1	6	1	5	1
10	360 E - 250 N	2310	8	8	3	1	5	1	5	1	6	1	6	1
11	360 E - 255 N	2520	8	8	7	1	6	1	5	1	6	1	8	1
12	360 E - 260 N	3020	9	9	8	1	12	1	7	1	7	1	4	1
13	360 E - 265 N	2670	9	9	8	1	8	1	8	1	7	1	7	1
14	360 E - 270 N	3160	9	9	9	1	8	1	6	1	6	1	8	1
15	360 E - 275 N	2900	9	9	6	1	6	1	7	1	4	1	5	1
16	360 E - 280 N	3130	8	8	7	1	7	1	6	1	7	1	10	1
17	360 E - 285 N	3360	10	10	7	1	6	1	4	1	5	1	5	1
18	360 E - 290 N	3270	9	9	11	1	8	1	9	1	8	1	7	1
19	360 E - 295 N	3970	10	10	8	1	7	1	5	1	8	1	9	1
20	360 E - 300 N	3510	11	11	9	1	8	1	9	1	10	1	9	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

CIMARRO, ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	360	E	-	305	N	3620	10	10	6	1	9	1	7	1	8	1	7	1
2	360	E	-	310	N	3540	12	12	9	1	10	1	8	1	7	1	6	1
3	360	E	-	315	N	3730	11	11	8	1	7	1	8	1	8	1	9	1
4	360	E	-	320	N	3650	11	11	6	1	8	1	8	1	7	1	7	1
5	360	E	-	325	N	3530	11	11	11	1	7	1	4	1	6	1	7	1
6	360	E	-	330	N	3750	11	11	7	1	6	1	8	1	6	1	10	1
7	360	E	-	335	N	3240	12	12	6	1	9	1	4	1	7	1	7	1
8	360	E	-	340	N	4050	13	12	27	1	40	1	6	1	7	1	6	1
9	360	E	-	345	N	3990	12	12	12	2	3	1	6	1	7	1	6	2
10	360	E	-	350	N	3110	11	11	22	1	6	1	6	1	9	1	8	1
11	360	E	-	355	N	3970	12	12	14	1	7	1	6	1	7	1	8	1
12	360	E	-	360	N	4010	12	12	24	1	10	1	6	1	6	1	7	1
13	360	E	-	365	N	3730	10	11	6	1	8	1	8	1	8	1	8	1
14	360	E	-	370	N	3380	11	11	7	1	7	1	5	1	7	1	8	1
15	360	E	-	375	N	2860	9	10	7	1	8	1	8	1	8	1	7	1
16	360	E	-	380	N	2640	10	10	2	1	7	1	7	1	6	1	7	1
17	360	E	-	385	N	ROADWAY												
18	360	E	-	390	N	3770	10	10	4	1	5	1	8	1	6	1	3	1
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	365	E	-	115	N	3440	7	7	5	2	7	2	6	1	7	1	5	1
2	365	E	-	120	N	3620	8	8	9	2	8	2	6	1	9	2	7	2
3	365	E	-	125	N	3620	6	6	10	2	6	2	9	1	8	1	6	1
4	365	E	-	130	N	3680	6	6	11	2	8	2	9	2	5	2	5	2
5	365	E	-	135	N	4150	7	7	9	1	10	2	6	2	7	2	9	2
6	365	E	-	140	N	3660	8	7	6	2	11	2	2	2	6	1	9	2
7	365	E	-	145	N	3470	8	7	9	1	11	2	8	3	8	2	7	2
8	365	E	-	150	N	3080	8	8	6	2	7	2	6	2	9	2	7	2
9	365	E	-	155	N	3310	8	8	10	2	6	2	10	2	8	2	12	2
10	365	E	-	160	N	3670	9	8	7	2	8	1	4	1	1	1	2	1
11	365	E	-	165	N	3280	7	7	5	1	11	1	5	2	8	1	2	2
12	365	E	-	170	N	2770	8	8	7	2	8	1	11	2	8	2	5	2
13	365	E	-	175	N	2840	7	8	7	1	8	2	9	2	6	1	6	2
14	365	E	-	180	N	2960	6	6	8	1	12	1	12	1	8	1	7	2
15	365	E	-	185	N	2730	6	6	13	1	12	1	14	2	11	2	8	2
16	365	E	-	190	N	3290	7	7	13	1	7	2	11	1	7	2	8	2
17	365	E	-	195	N	2530	7	7	7	2	5	1	8	2	9	2	9	2
18	365	E	-	200	N	2470	6	7	4	1	10	1	9	1	11	2	15	1
19	365	E	-	205	N	2400	6	6	8	1	5	1	7	1	5	1	6	1
20	365	E	-	210	N	2330	6	6	7	1	8	2	7	1	7	2	8	2

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO\ ,ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g									
									0 - 6"		6" - 1'		1' - 2'		2' - 3'		3' - 4'	
									Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)
1	365	E	-	215	N	2900	8	7	4	2	5	2	1	2	4	2	3	1
2	365	E	-	220	N	2330	6	6	8	1	7	1	6	1	6	1	7	1
3	365	E	-	225	N	2790	6	6	6	1	6	1	5	1	6	1	8	2
4	365	E	-	230	N	2210	6	6	8	1	6	1	5	1	7	1	8	1
5	365	E	-	235	N	2030	8	8	12	1	7	1	4	1	4	2	5	2
6	365	E	-	240	N	3080	7	7	16	1	25	1	29	1	16	1	12	1
7	365	E	-	245	N	2470	7	7	5	1	9	2	9	1	8	2	7	2
8	365	E	-	250	N	2860	7	6	7	1	6	1	6	1	7	1	8	1
9	365	E	-	255	N	3180	8	7	5	1	6	2	10	2	18	2	15	2
10	365	E	-	260	N	3150	7	7	10	1	10	1	9	2	9	2	11	2
11	365	E	-	265	N	3160	8	8	8	2	9	2	4	3	6	2	7	2
12	365	E	-	270	N	4240	8	8	13	2	11	1	12	2	18	2	13	2
13	365	E	-	275	N	3810	7	7	7	2	9	3	6	1	6	2	5	2
14	365	E	-	280	N	3900	8	8	8	2	9	2	7	2	8	2	9	2
15	365	E	-	285	N	4330	8	8	7	2	7	3	8	2	6	3	8	2
16	365	E	-	290	N	4610	10	10	5	2	9	2	12	2	11	3	4	2
17	365	E	-	295	N	4230	8	8	8	2	7	2	5	2	12	2	11	2
18	365	E	-	300	N	4280	9	9	10	2	7	2	10	2	7	2	9	3
19	365	E	-	305	N	2730	9	9	5	2	2	2	7	2	4	2	6	2
20	365	E	-	310	N	3090	11	9	4	2	3	2	5	2	7	2	9	2

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Bryan DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	365	E	-	315	N	2900	11	11	8	1	9	1	9	1	6	1	8	1
2	365	E	-	320	N	3490	11	11	8	1	9	1	6	1	7	1	7	1
3	365	E	-	325	N	2990	8	8	8	1	8	1	7	1	8	1	5	1
4	365	E	-	330	N	3540	11	11	13	1	6	1	7	1	5	1	6	1
5	365	E	-	335	N	3510	11	11	12	1	7	1	7	1	8	1	7	1
6	365	E	-	340	N	3630	12	12	14	1	8	1	8	1	5	1	7	1
7	365	E	-	345	N	3930	11	11	17	1	7	1	7	1	8	1	7	1
8	365	E	-	350	N	3910	11	10	25	2	10	1	7	1	7	1	6	1
9	365	E	-	355	N	4530	11	11	14	1	9	1	9	1	6	1	6	1
10	365	E	-	360	N	3640	10	10	8	1	8	1	9	1	8	1	6	1
11	365	E	-	365	N	3670	12	11	5	1	7	1	7	1	6	1	8	1
12	365	E	-	370	N	3580	11	11	7	1	9	1	6	1	8	1	7	1
13	365	E	-	375	N	3790	12	12	7	1	8	1	7	1	6	1	6	1
14	365	E	-	380	N	3320	10	10	6	1	7	1	7	1	7	1	8	1
15	365	E	-	385	N	ROADWAY												
16	365	E	-	390	N	3380	11	11	8	1	9	1	6	1	7	1	4	1
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	370	E	-	320	N	3440	10	10	8	1	8	1	10	1	7	1	9	1
2	370	E	-	325	N	3610	10	10	7	1	6	1	6	1	6	1	4	1
3	370	E	-	330	N	3680	11	11	7	1	9	1	8	1	8	1	8	1
4	370	E	-	335	N	3700	11	11	7	1	9	1	7	1	8	1	5	1
5	370	E	-	340	N	3590	11	11	5	1	8	1	8	1	9	1	8	1
6	370	E	-	345	N	4170	10	10	9	1	9	1	9	1	8	1	8	1
7	370	E	-	350	N	3510	11	11	13	1	11	1	8	1	14	1	8	1
8	370	E	-	355	N	2930	10	10	19	1	8	1	8	1	6	1	7	1
9	370	E	-	360	N	3810	10	10	11	1	8	1	9	1	8	1	7	1
10	370	E	-	365	N	4180	11	11	8	1	9	1	9	1	7	1	8	1
11	370	E	-	370	N	3570	11	11	7	1	7	1	6	1	4	1	7	1
12	370	E	-	375	N	3660	9	9	8	1	6	1	7	1	6	1	5	1
13	370	E	-	380	N	3380	10	10	6	1	9	1	8	1	6	1	7	1
14	370	E	-	385	N	ROADWAY												
15	370	E	-	390	N	3540	9	9	8	1	8	1	7	1	7	1	5	1
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRO ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	375	E	-	320	N	2590	8	8	7	2	6	2	9	2	5	2	5	2
2	375	E	-	325	N	3410	10	10	5	1	9	1	5	1	5	1	6	1
3	375	E	-	330	N	3470	10	10	7	1	3	1	3	1	7	1	8	1
4	375	E	-	335	N	3400	11	11	4	1	6	1	7	1	8	1	4	1
5	375	E	-	340	N	3620	11	11	9	1	9	1	5	1	7	1	5	1
6	375	E	-	345	N	3740	11	11	7	1	6	1	5	1	6	1	7	1
7	375	E	-	350	N	3800	11	11	12	1	7	1	5	1	7	1	5	1
8	375	E	-	355	N	3590	10	10	11	2	8	2	9	2	7	2	7	2
9	375	E	-	360	N	3820	11	11	14	1	11	1	8	1	9	1	8	1
10	375	E	-	365	N	3730	10	10	8	1	5	1	8	1	6	1	9	1
11	375	E	-	370	N	3750	11	11	5	1	6	1	7	1	9	1	7	1
12	375	E	-	375	N	3940	11	11	7	1	6	1	10	1	6	1	7	1
13	375	E	-	380	N	3690	10	10	7	1	6	1	9	1	7	1	4	1
14	375	E	-	385	N	3000	9	9	6	1	6	1	6	1	2	1	3	1
15	375	E	-	390	N	ROADWAY												
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	380	E	-	325	N	3100	11	11	4	1	4	1	7	1	7	1	8	1
2	380	E	-	330	N	2670	9	9	8	1	8	1	6	1	7	1	6	1
3	380	E	-	335	N	3110	9	9	7	1	7	1	7	1	7	1	6	1
4	380	E	-	340	N	3410	10	10	9	1	6	1	8	1	4	1	6	2
5	380	E	-	345	N	3720	10	10	19	1	6	2	6	1	8	1	3	1
6	380	E	-	350	N	3520	11	11	8	2	6	2	5	1	5	2	6	1
7	380	E	-	355	N	3360	11	11	9	1	8	1	6	1	7	1	12	2
8	380	E	-	360	N	3410	10	10	17	1	11	1	7	1	4	2	8	2
9	380	E	-	365	N	3440	12	12	12	1	4	1	9	2	4	2	4	1
10	380	E	-	370	N	3380	11	11	4	2	11	2	5	1	7	2	5	2
11	380	E	-	375	N	3940	12	12	6	1	8	2	5	2	7	2	5	1
12	380	E	-	380	N	3900	10	10	9	1	7	2	6	1	7	1	6	1
13	380	E	-	385	N	3250	9	10	6	1	7	1	3	1	7	1	3	1
14	380	E	-	390	N	ROADWAY												
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRO. ,ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPEN LAND AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	385	E	-	330	N	2990	8	8	6	1	8	1	6	2	7	2	7	2
2	385	E	-	335	N	2720	9	9	5	1	6	1	7	1	4	2	1	2
3	385	E	-	340	N	2690	9	9	1	1	6	1	3	1	2	2	3	2
4	385	E	-	345	N	3000	10	10	3	1	6	1	4	1	5	1	1	1
5	385	E	-	350	N	3020	10	10	4	1	6	1	5	1	4	1	3	1
6	385	E	-	355	N	4040	11	11	3	2	9	1	6	1	7	1	2	2
7	385	E	-	360	N	3600	9	9	5	1	12	1	4	1	6	2	8	1
8	385	E	-	365	N	3940	11	11	8	2	6	2	7	1	7	1	5	1
9	385	E	-	370	N	3670	9	9	4	1	7	2	4	2	11	1	5	1
10	385	E	-	375	N	4080	9	9	5	2	6	2	6	1	8	1	10	1
11	385	E	-	380	N	3440	10	10	7	1	6	1	4	2	8	1	10	1
12	385	E	-	385	N	3590	10	10	8	1	4	1	6	1	3	1	ROCK	ROCK
13	385	E	-	390	N	ROADWAY												
14	385	E	-	395	N	3520	9	9	8	1	4	1	2	2	3	1	3	1
15																		
16																		
17																		
18																		
19																		
20																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	115	E	-	180	N	4680	11	9	18	1
2	115	E	-	185	N	3310	9	8	7	1
3	115	E	-	190	N	4730	10	11	14	1
4	115	E	-	195	N	5170	10	10	17	1
5	115	E	-	200	N	4520	11	12	27	1
6	120	E	-	180	N	4450	9	10	14	1
7	120	E	-	185	N	5290	9	9	9	1
8	120	E	-	190	N	5180	9	9	15	1
9	120	E	-	195	N	4870	12	10	15	1
10	120	E	-	200	N	4210	9	8	9	1
11	125	E	-	180	N	4880	12	12	16	1
12	125	E	-	185	N	3650	10	9	11	1
13	125	E	-	190	N	4750	10	11	20	1
14	125	E	-	195	N	5040	11	9	15	1
15	125	E	-	200	N	4100	9	9	7	1
16	130	E	-	180	N	4450	10	10	14	1
17	130	E	-	185	N	3840	9	10	11	1
18	130	E	-	190	N	4520	10	9	25	1
19	130	E	-	195	N	4090	9	9	8	1
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	135	E	-	180	N	4580	10	10	10	1
2	135	E	-	185	N	4220	9	8	14	1
3	135	E	-	190	N	4610	9	8	15	1
4	135	E	-	195	N	4230	10	9	15	1
5	140	E	-	180	N	4370	10	11	16	1
6	140	E	-	185	N	3250	9	9	11	1
7	140	E	-	190	N	5000	11	12	24	1
8	145	E	-	180	N	4830	10	9	18	1
9	145	E	-	185	N	3110	11	8	12	1
10	145	E	-	190	N	4560	11	11	15	1
11	150	E	-	180	N	4130	10	9	15	1
12	150	E	-	185	N	3710	8	8	12	1
13	150	E	-	190	N	4620	9	9	12	1
14	155	E	-	180	N	4460	9	10	13	1
15	155	E	-	185	N	4930	9	9	17	1
16	160	E	-	180	N	4860	10	11	14	1
17	160	E	-	185	N	4450	9	10	15	1
18	165	E	-	180	N	4930	11	10	15	1
19										
20										

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	170	E	-	170	N	5210	11	11	15	1
2	170	E	-	175	N	3210	9	9	14	1
3	170	E	-	180	N	4380	10	9	27	1
4	175	E	-	165	N	5140	12	12	7	1
5	175	E	-	170	N	3970	9	9	11	1
6	180	E	-	160	N	6000	13	11	8	1
7	180	E	-	165	N	5020	12	10	16	1
8	180	E	-	170	N	5250	11	10	22	1
9	185	E	-	155	N	5330	10	11	10	1
10	185	E	-	160	N	3900	9	9	17	1
11	185	E	-	165	N	4160	9	9	17	1
12	185	E	-	170	N	5440	12	10	15	1
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	190	E	-	80	N	2870	7	9	7	1
2	190	E	-	85	N	3080	8	7	10	1
3	190	E	-	90	N	3770	8	8	7	1
4	190	E	-	95	N	3350	7	8	11	1
5	190	E	-	100	N	4440	8	8	7	1
6	190	E	-	105	N	3860	8	9	7	1
7	190	E	-	110	N	5170	11	10	26	1
8	190	E	-	115	N	4480	10	10	6	1
9	190	E	-	120	N	4210	8	9	12	1
10	190	E	-	125	N	3170	7	8	18	1
11	190	E	-	130	N	4290	10	10	11	1
12	190	E	-	135	N	5060	11	10	28	1
13	190	E	-	140	N	5310	12	11	18	1
14	190	E	-	145	N	5240	12	11	18	1
15	190	E	-	150	N	5450	13	10	18	1
16	190	E	-	155	N	ROADWAY				
17	190	E	-	160	N	4060	11	9	13	1
18	190	E	-	165	N	5310	11	11	14	1
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	195	E	-	85	N	3720	9	7	7	1
2	195	E	-	90	N	3150	6	7	5	1
3	195	E	-	95	N	3410	8	9	5	1
4	195	E	-	100	N	3520	7	9	5	1
5	195	E	-	105	N	3750	9	8	8	1
6	195	E	-	110	N	4270	9	10	7	1
7	195	E	-	115	N	4400	12	11	22	1
8	195	E	-	120	N	5830	10	10	13	1
9	195	E	-	125	N	4660	10	12	16	1
10	195	E	-	130	N	4380	10	12	23	1
11	195	E	-	135	N	4590	10	9	18	1
12	195	E	-	140	N	3410	8	9	24	1
13	195	E	-	145	N	1970	7	8	8	1
14	195	E	-	150	N	5200	7	10	12	1
15	195	E	-	155	N	2380	7	7	21	1
16	195	E	-	160	N	4230	9	11	9	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	200	E	-	85	N	3890	8	9	25	1
2	200	E	-	90	N	3870	9	8	10	1
3	200	E	-	95	N	4350	11	9	7	1
4	200	E	-	100	N	3980	10	8	6	1
5	200	E	-	105	N	3850	9	8	5	1
6	200	E	-	110	N	4170	9	9	9	1
7	200	E	-	115	N	4710	9	9	19	1
8	200	E	-	120	N	5030	10	11	20	1
9	200	E	-	125	N	2900	10	9	11	1
10	200	E	-	130	N	4270	9	10	22	1
11	200	E	-	135	N	4480	9	10	22	1
12	200	E	-	140	N	2300	7	8	6	1
13	200	E	-	145	N	2360	8	8	28	1
14	200	E	-	150	N	4710	10	11	27	1
15	200	E	-	155	N	4730	12	11	14	1
16	200	E	-	160	N	2970	9	7	16	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	205	E	-	85	N	3760	8	9	13	1
2	205	E	-	90	N	5410	12	10	22	1
3	205	E	-	95	N	ELECTRICAL SUB-STATION				
4	205	E	-	100	N	ELECTRICAL SUB-STATION				
5	205	E	-	105	N	ELECTRICAL SUB-STATION				
6	205	E	-	110	N	ELECTRICAL SUB-STATION				
7	205	E	-	115	N	ELECTRICAL SUB-STATION				
8	205	E	-	120	N	4960	11	10	17	1
9	205	E	-	125	N	3820	9	8	15	1
10	205	E	-	130	N	3470	9	8	9	1
11	205	E	-	135	N	3840	8	10	16	1
12	205	E	-	140	N	2730	9	9	13	1
13	205	E	-	145	N	2260	9	9	13	2
14	205	E	-	150	N	5140	9	11	15	1
15	205	E	-	155	N	4560	10	11	14	1
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	210	E	-	85	N	3840	8	9	12	1
2	210	E	-	90	N	3360	8	9	5	1
3	210	E	-	95	N	ELECTRICAL SUB-STATION				
4	210	E	-	100	N	ELECTRICAL SUB-STATION				
5	210	E	-	105	N	ELECTRICAL SUB-STATION				
6	210	E	-	110	N	ELECTRICAL SUB-STATION				
7	210	E	-	115	N	ELECTRICAL SUB-STATION				
8	210	E	-	120	N	4610	9	10	11	1
9	210	E	-	125	N	3510	9	10	13	1
10	210	E	-	130	N	3940	9	9	7	1
11	210	E	-	135	N	3750	9	9	13	1
12	210	E	-	140	N	4210	11	10	16	1
13	210	E	-	145	N	4720	11	9	19	1
14	210	E	-	150	N	4360	9	10	15	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	215	E	-	85	N	4420	10	9	15	1
2	215	E	-	90	N	3550	8	9	10	1
3	215	E	-	95	N	ELECTRICAL SUB-STATION				
4	215	E	-	100	N	ELECTRICAL SUB-STATION				
5	215	E	-	105	N	ELECTRICAL SUB-STATION				
6	215	E	-	110	N	ELECTRICAL SUB-STATION				
7	215	E	-	115	N	ELECTRICAL SUB-STATION				
8	215	E	-	120	N	3680	10	10	11	1
9	215	E	-	125	N	3970	9	10	11	1
10	215	E	-	130	N	3800	8	8	10	1
11	215	E	-	135	N	4260	9	9	14	1
12	215	E	-	140	N	4480	9	10	14	1
13	215	E	-	145	N	4660	9	10	17	1
14	215	E	-	150	N	2510	9	8	18	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	220	E	-	85	N	2710	10	10	13	1
2	220	E	-	90	N	2950	9	8	4	1
3	220	E	-	95	N	ELECTRICAL SUB-STATION				
4	220	E	-	100	N	ELECTRICAL SUB-STATION				
5	220	E	-	105	N	ELECTRICAL SUB-STATION				
6	220	E	-	110	N	ELECTRICAL SUB-STATION				
7	220	E	-	115	N	ELECTRICAL SUB-STATION				
8	220	E	-	120	N	4080	9	10	8	1
9	220	E	-	125	N	3390	9	9	7	1
10	220	E	-	130	N	3710	8	9	5	1
11	220	E	-	135	N	4310	10	9	10	1
12	220	E	-	140	N	4090	10	10	10	1
13	220	E	-	145	N	2250	6	7	18	1
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	225	E	-	85	N	3990	9	10	14	1
2	225	E	-	90	N	3440	9	9	5	1
3	225	E	-	95	N	3150	9	9	5	1
4	225	E	-	100	N	4800	11	10	9	2
5	225	E	-	105	N	3940	10	10	5	1
6	225	E	-	110	N	4510	10	9	10	1
7	225	E	-	115	N	4380	11	9	14	1
8	225	E	-	120	N	3900	10	10	7	1
9	225	E	-	125	N	3550	9	8	10	1
10	225	E	-	130	N	4850	10	9	5	2
11	225	E	-	135	N	4270	11	10	21	1
12	225	E	-	140	N	2610	7	8	12	1
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6", Sample Total-U	0-6", Sample Th (Nat)
1	230	E	-	85	N	3830	6	6	6	2
2	230	E	-	90	N	3920	7	7	22	2
3	230	E	-	95	N	4310	8	7	19	1
4	230	E	-	100	N	4390	5	5	22	3
5	230	E	-	105	N	3520	8	7	18	2
6	230	E	-	110	N	4150	6	6	10	2
7	230	E	-	115	N	3850	8	8	10	2
8	230	E	-	120	N	4340	8	7	14	1
9	230	E	-	125	N	3240	5	6	14	1
10	230	E	-	130	N	3640	6	6	7	2
11	230	E	-	135	N	4190	7	7	7	2
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	235	E	-	85	N	4520	5	5	17	2
2	235	E	-	90	N	4380	8	7	22	2
3	235	E	-	95	N	4670	7	6	6	2
4	235	E	-	100	N	3690	6	5	10	2
5	235	E	-	105	N	3420	8	8	8	1
6	235	E	-	110	N	3970	7	6	14	2
7	235	E	-	115	N	3870	8	7	12	2
8	235	E	-	120	N	2910	6	6	9	1
9	235	E	-	125	N	4120	7	6	6	2
10	235	E	-	130	N	4740	7	7	23	2
11	235	E	-	135	N	3860	7	6	7	1
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	240	E	-	85	N	5240	6	6	15	2
2	240	E	-	90	N	4210	7	8	18	2
3	240	E	-	95	N	3410	6	6	9	2
4	240	E	-	100	N	3150	5	6	22	2
5	240	E	-	105	N	3680	7	7	7	1
6	240	E	-	110	N	4040	6	6	5	2
7	240	E	-	115	N	3990	7	7	16	1
8	240	E	-	120	N	3180	7	6	12	1
9	240	E	-	125	N	3280	7	9	23	2
10	240	E	-	130	N	3090	6	7	7	1
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	245	E	-	85	N	5260	8	7	12	3
2	245	E	-	90	N	4410	6	7	6	2
3	245	E	-	95	N	3990	6	7	10	2
4	245	E	-	100	N	2970	9	8	10	1
5	245	E	-	105	N	3450	8	8	9	1
6	245	E	-	110	N	4200	7	6	10	1
7	245	E	-	115	N	3310	7	6	14	2
8	245	E	-	120	N	3630	6	6	11	1
9	245	E	-	125	N	3460	6	6	11	2
10	250	E	-	85	N	4920	6	6	12	3
11	250	E	-	90	N	4590	8	6	12	2
12	250	E	-	95	N	3890	7	7	9	2
13	250	E	-	100	N	3270	7	6	6	1
14	250	E	-	105	N	2840	9	9	8	2
15	250	E	-	110	N	3620	5	6	13	1
16	250	E	-	115	N	3320	9	9	19	1
17	250	E	-	120	N	3660	6	6	15	1
18	250	E	-	125	N	3090	7	6	14	1
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6", Sample Total-U	0-6", Sample Th (Nat)
1	255	E	-	85	N	3840	6	7	9	2
2	255	E	-	90	N	3430	7	7	5	2
3	255	E	-	95	N	4180	7	7	10	2
4	255	E	-	100	N	3350	6	6	27	2
5	255	E	-	105	N	2180	8	8	7	1
6	255	E	-	110	N	3140	6	5	18	1
7	255	E	-	115	N	4000	7	8	26	1
8	255	E	-	120	N	3160	6	6	5	1
9	260	E	-	85	N	4480	6	6	7	3
10	260	E	-	90	N	3310	6	6	7	1
11	260	E	-	95	N	3740	6	6	11	2
12	260	E	-	100	N	3560	6	5	8	1
13	260	E	-	105	N	3090	7	7	9	1
14	260	E	-	110	N	3350	5	6	13	1
15	260	E	-	115	N	4050	9	7	24	2
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	265	E	-	85	N	4380	6	6	10	3
2	265	E	-	90	N	3390	6	6	11	2
3	265	E	-	95	N	3450	8	7	10	2
4	265	E	-	100	N	3390	6	6	12	1
5	265	E	-	105	N	3480	7	7	5	2
6	265	E	-	110	N	3460	10	9	16	1
7	265	E	-	115	N	4110	7	6	14	1
8	270	E	-	85	N	4350	6	6	10	3
9	270	E	-	90	N	4060	7	6	10	2
10	270	E	-	95	N	3870	6	7	9	2
11	270	E	-	100	N	2270	7	9	6	1
12	270	E	-	105	N	3460	7	8	7	1
13	270	E	-	110	N	3470	9	11	31	1
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3000	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	275	E	-	85	N	4240	7	6	13	2
2	275	E	-	90	N	4120	6	7	9	2
3	275	E	-	95	N	3490	9	7	10	2
4	275	E	-	100	N	2490	7	8	10	1
5	275	E	-	105	N	2820	7	6	6	1
6	275	E	-	110	N	3600	7	6	9	1
7	280	E	-	85	N	4390	7	7	14	1
8	280	E	-	90	N	4270	7	6	8	2
9	280	E	-	95	N	3530	6	6	9	2
10	280	E	-	100	N	3520	7	6	24	3
11	280	E	-	105	N	2620	6	6	6	1
12	280	E	-	110	N	3150	7	6	14	2
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	285	E	-	85	N	2390	7	7	10	1
2	285	E	-	90	N	4300	7	7	6	2
3	285	E	-	95	N	2900	7	7	6	2
4	285	E	-	100	N	4100	8	7	5	2
5	285	E	-	105	N	3000	6	6	7	2
6	285	E	-	110	N	2960	6	5	6	1
7	285	E	-	115	N	2650	6	6	9	1
8	290	E	-	85	N	4350	7	6	8	2
9	290	E	-	90	N	3810	6	7	9	2
10	290	E	-	95	N	3830	8	7	9	1
11	290	E	-	100	N	3220	9	9	23	1
12	290	E	-	105	N	4370	6	7	10	1
13	290	E	-	110	N	2940	6	6	15	2
14	290	E	-	115	N	3710	8	7	9	1
15	290	E	-	120	N	3200	8	7	5	1
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	295	E	-	85	N	4150	8	6	7	1
2	295	E	-	90	N	3290	8	7	9	2
3	295	E	-	95	N	5150	8	7	12	2
4	295	E	-	100	N	4470	7	7	13	1
5	295	E	-	105	N	2760	9	9	3	1
6	295	E	-	110	N	3480	6	7	12	2
7	295	E	-	115	N	3260	7	6	16	2
8	295	E	-	120	N	2810	6	6	5	1
9	295	E	-	125	N	3280	5	6	12	2
10	300	E	-	85	N	3720	7	7	9	2
11	300	E	-	90	N	3740	6	6	8	2
12	300	E	-	95	N	4230	7	6	7	2
13	300	E	-	100	N	2640	10	9	6	1
14	300	E	-	105	N	2810	8	7	4	1
15	300	E	-	110	N	2780	9	9	10	2
16	300	E	-	115	N	3020	7	7	8	1
17	300	E	-	120	N	3650	8	7	8	1
18	300	E	-	125	N	3270	7	6	4	2
19	300	E	-	130	N	3110	6	7	7	1
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6", Sample Total-U	0-6", Sample Th (Nat)
1	305	E	-	85	N	4510	6	6	12	2
2	305	E	-	90	N	3860	7	6	11	1
3	305	E	-	95	N	4470	6	6	6	2
4	305	E	-	100	N	3280	9	8	2	2
5	305	E	-	105	N	4420	7	7	12	1
6	305	E	-	110	N	3130	8	8	12	1
7	305	E	-	115	N	3690	7	7	11	2
8	305	E	-	120	N	2530	5	5	7	1
9	305	E	-	125	N	3160	6	6	10	3
10	305	E	-	130	N	3520	8	7	5	2
11	305	E	-	135	N	3210	6	6	6	1
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	310	E	-	85	N	3770	6	7	10	2
2	310	E	-	90	N	4270	5	7	6	2
3	310	E	-	95	N	4200	7	6	7	2
4	310	E	-	100	N	3540	6	6	16	2
5	310	E	-	105	N	2880	7	7	8	1
6	310	E	-	110	N	2990	8	8	9	2
7	310	E	-	115	N	3280	7	8	12	2
8	310	E	-	120	N	2620	5	6	6	1
9	310	E	-	125	N	2680	7	6	4	2
10	310	E	-	130	N	2770	6	7	7	2
11	310	E	-	135	N	3750	5	6	6	1
12	310	E	-	140	N	3250	6	7	7	2
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. O. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	315	E	-	85	N	3660	7	7	7	2
2	315	E	-	90	N	3790	6	6	8	1
3	315	E	-	95	N	3750	7	7	9	2
4	315	E	-	100	N	4300	7	6	11	2
5	315	E	-	105	N	3540	8	7	20	2
6	315	E	-	110	N	3740	8	7	6	2
7	315	E	-	115	N	3750	7	7	6	1
8	315	E	-	120	N	3080	6	6	7	1
9	315	E	-	125	N	3130	7	6	5	2
10	315	E	-	130	N	2240	8	8	6	1
11	315	E	-	135	N	3330	6	6	4	2
12	315	E	-	140	N	3120	6	6	6	2
13	315	E	-	145	N	2390	8	8	5	1
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6", Sample Total-U	0-6", Sample Th (Nat)
1	320	E	-	85	N	3880	6	6	10	1
2	320	E	-	90	N	4140	7	7	6	3
3	320	E	-	95	N	3680	6	6	6	1
4	320	E	-	100	N	3710	6	6	25	3
5	320	E	-	105	N	4100	7	6	17	2
6	320	E	-	110	N	3400	8	7	7	2
7	320	E	-	115	N	3850	7	7	7	2
8	320	E	-	120	N	2980	6	7	9	1
9	320	E	-	125	N	3070	6	6	8	2
10	320	E	-	130	N	3820	8	7	7	2
11	320	E	-	135	N	2950	6	6	10	1
12	320	E	-	140	N	3600	6	7	7	2
13	320	E	-	145	N	2360	9	9	9	1
14	320	E	-	150	N	2710	8	8	4	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

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CIMARRON FACILITY
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Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	325	E	-	85	N	4040	6	7	7	2
2	325	E	-	90	N	4300	7	7	13	2
3	325	E	-	95	N	3250	6	7	23	1
4	325	E	-	100	N	2920	6	6	8	2
5	325	E	-	105	N	3640	6	7	8	1
6	325	E	-	110	N	4320	8	8	11	2
7	325	E	-	115	N	3370	8	7	9	1
8	325	E	-	120	N	3790	7	7	5	2
9	325	E	-	125	N	4640	8	8	8	3
10	325	E	-	130	N	3660	7	6	7	2
11	325	E	-	135	N	3570	7	7	6	2
12	325	E	-	140	N	3090	7	6	6	2
13	325	E	-	145	N	2780	8	8	2	1
14	325	E	-	150	N	2710	8	8	5	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Boyce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	330	E	-	85	N	4330	7	7	18	2
2	330	E	-	90	N	4230	7	7	11	1
3	330	E	-	95	N	4200	8	8	9	1
4	330	E	-	100	N	3540	8	8	6	1
5	330	E	-	105	N	3570	8	7	11	2
6	330	E	-	110	N	3720	8	7	11	1
7	330	E	-	115	N	4640	8	8	9	2
8	330	E	-	120	N	4190	8	7	12	2
9	330	E	-	125	N	3600	8	7	11	2
10	330	E	-	130	N	4200	8	8	9	2
11	330	E	-	135	N	3570	7	7	9	2
12	330	E	-	140	N	2980	6	7	7	2
13	330	E	-	145	N	1860	7	7	6	1
14	330	E	-	150	N	2540	8	8	1	1
15	330	E	-	155	N	2070	8	8	5	1
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Boyer DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	335	E	-	85	N	2750	7	6	10	2
2	335	E	-	90	N	4390	6	7	12	2
3	335	E	-	95	N	3140	9	9	14	1
4	335	E	-	100	N	3720	8	7	11	1
5	335	E	-	105	N	3970	7	7	8	2
6	335	E	-	110	N	4060	8	8	9	2
7	335	E	-	115	N	3850	8	7	11	2
8	335	E	-	120	N	4690	7	7	15	1
9	335	E	-	125	N	4760	8	8	12	2
10	335	E	-	130	N	4060	7	7	6	2
11	335	E	-	135	N	3570	9	8	6	2
12	335	E	-	140	N	3550	7	7	7	2
13	335	E	-	145	N	1760	8	8	**CONCRETE COLVERT**	
14	335	E	-	150	N	2430	8	8	7	1
15	335	E	-	155	N	2220	8	8	5	1
16	335	E	-	160	N	2680	9	8	9	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. Q. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	Th (Nat)
1	340	E	-	85	N	4560	8	7	6	2
2	340	E	-	90	N	4400	6	6	7	2
3	340	E	-	95	N	4070	6	6	12	1
4	340	E	-	100	N	4050	6	7	10	1
5	340	E	-	105	N	3190	7	8	12	1
6	340	E	-	110	N	4570	7	8	27	2
7	340	E	-	115	N	3770	6	7	18	2
8	340	E	-	120	N	3920	8	6	16	2
9	340	E	-	125	N	3560	7	8	15	1
10	340	E	-	130	N	4410	7	8	11	2
11	340	E	-	135	N	4350	8	7	7	2
12	340	E	-	140	N	4460	6	7	7	2
13	340	E	-	145	N	2080	7	7	**CONCRETE COLVERT**	
14	340	E	-	150	N	2070	8	8	4	1
15	340	E	-	155	N	2300	8	8	7	1
16	340	E	-	160	N	2710	8	8	4	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	345	E	-	85	N	3780	8	6	6	2
2	345	E	-	90	N	3670	7	6	8	2
3	345	E	-	95	N	2870	7	8	10	1
4	345	E	-	100	N	2620	8	8	11	1
5	345	E	-	105	N	2970	7	8	9	1
6	345	E	-	110	N	3660	6	6	12	1
7	345	E	-	115	N	3300	6	6	11	2
8	345	E	-	120	N	3290	7	7	11	1
9	345	E	-	125	N	3630	7	6	4	2
10	345	E	-	130	N	2790	5	6	7	1
11	345	E	-	135	N	3670	7	6	15	1
12	345	E	-	140	N	2730	6	7	9	2
13	345	E	-	145	N	1616	8	8	6	1
14	345	E	-	150	N	2340	8	8	9	1
15	345	E	-	155	N	2640	8	8	6	1
16	345	E	-	160	N	2490	8	8	4	1
17	345	E	-	165	N	2760	8	8	7	1
18	345	E	-	290	N	3250	9	9	7	1
19	345	E	-	295	N	2310	7	8	6	1
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	345	E	-	300	N	2350	7	7	7	1
2	345	E	-	305	N	3850	9	9	9	1
3	345	E	-	310	N	4210	9	8	9	1
4	345	E	-	315	N	4400	9	9	18	2
5	345	E	-	320	N	4300	11	10	9	2
6	345	E	-	325	N	3730	9	9	6	1
7	345	E	-	330	N	4150	10	10	8	2
8	345	E	-	335	N	4390	9	9	5	1
9	345	E	-	340	N	4300	9	11	4	1
10	345	E	-	345	N	4640	11	11	11	1
11	345	E	-	350	N	5030	9	10	6	1
12	345	E	-	355	N	3850	9	9	8	1
13	345	E	-	360	N	3640	10	11	8	1
14	345	E	-	365	N	3070	8	8	8	1
15	345	E	-	370	N	2900	9	9	9	1
16	345	E	-	375	N	2610	11	10	3	1
17	345	E	-	380	N	2790	10	11	5	1
18	345	E	-	385	N	3820	11	11	10	1
19	345	E	-	390	N	3640	10	10	6	2
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 12S S/N 9081	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	3570	N/A
		Total U - 4.0	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	350	E	-	85	N	3970	6	6	11	2
2	350	E	-	90	N	3840	7	7	6	2
3	350	E	-	95	N	3560	5	6	8	2
4	350	E	-	100	N	3130	9	9	13	1
5	350	E	-	105	N	3400	7	7	20	2
6	350	E	-	110	N	3030	6	7	7	2
7	350	E	-	115	N	3390	6	6	11	1
8	350	E	-	120	N	3230	7	7	6	1
9	350	E	-	125	N	3940	6	7	8	1
10	350	E	-	130	N	3320	6	6	9	1
11	350	E	-	135	N	3720	8	9	7	2
12	350	E	-	140	N	2580	9	8	4	1
13	350	E	-	145	N	2590	8	8	5	1
14	350	E	-	150	N	2450	8	8	4	1
15	350	E	-	155	N	2650	8	7	4	1
16	350	E	-	160	N	2450	9	9	2	1
17	350	E	-	165	N	2720	8	8	2	1
18	350	E	-	170	N	2610	8	8	8	1
19	350	E	-	175	N	2630	8	9	8	1
20	350	E	-	180	N	2240	7	8	7	1
21		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	350	E	-	185	N	2200	8	9	11	1
2	350	E	-	190	N	2610	9	8	6	1
3	350	E	-	195	N	2570	8	8	6	1
4	350	E	-	200	N	2730	8	7	5	1
5	350	E	-	205	N	2540	8	7	6	1
6	350	E	-	210	N	2800	9	8	4	1
7	350	E	-	215	N	2470	8	9	4	1
8	350	E	-	220	N	2560	8	8	6	1
9	350	E	-	225	N	2580	8	9	6	1
10	350	E	-	230	N	1940	8	9	4	1
11	350	E	-	235	N	2300	8	9	5	1
12	350	E	-	240	N	2140	8	8	5	1
13	350	E	-	245	N	2130	7	7	6	1
14	350	E	-	250	N	2380	8	8	9	1
15	350	E	-	255	N	2710	8	8	8	1
16	350	E	-	260	N	2690	9	8	6	1
17	350	E	-	265	N	2840	10	8	7	1
18	350	E	-	270	N	2920	10	10	6	1
19	350	E	-	275	N	2800	10	9	7	1
20	350	E	-	280	N	3010	11	11	10	1
21	350	E	-	285	N	2230	9	9	8	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. R. Bogue DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	350	E	-	290	N	2700	9	9	6	1
2	350	E	-	295	N	3730	10	9	2	1
3	350	E	-	300	N	3460	11	10	3	1
4	350	E	-	305	N	3710	9	10	4	1
5	350	E	-	310	N	3720	9	9	9	1
6	350	E	-	315	N	3240	9	10	7	1
7	350	E	-	320	N	3040	8	9	8	1
8	350	E	-	325	N	2250	8	7	6	1
9	350	E	-	330	N	2370	8	9	4	1
10	350	E	-	335	N	3020	10	9	5	1
11	350	E	-	340	N	2460	8	9	5	1
12	350	E	-	345	N	2200	8	7	6	1
13	350	E	-	350	N	2190	9	8	6	1
14	350	E	-	355	N	2260	7	8	6	1
15	350	E	-	360	N	2290	8	9	7	1
16	350	E	-	365	N	2990	9	10	7	1
17	350	E	-	370	N	2670	9	9	9	1
18	350	E	-	375	N	2270	8	9	3	1
19	350	E	-	380	N	2730	10	9	6	1
20	350	E	-	385	N	3970	9	10	7	1
21	350	E	-	390	N	4060	10	11	4	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	355	E	-	95	N	3830	10	9	9	1
2	355	E	-	100	N	3380	7	7	24	3
3	355	E	-	105	N	3750	6	7	26	1
4	355	E	-	110	N	2900	6	6	7	1
5	355	E	-	115	N	3410	6	8	7	1
6	355	E	-	120	N	2680	6	6	7	1
7	355	E	-	125	N	2670	6	7	5	1
8	355	E	-	130	N	3420	7	7	7	2
9	355	E	-	135	N	4160	7	6	10	1
10	355	E	-	140	N	2280	8	8	5	1
11	355	E	-	145	N	2570	8	8	5	1
12	355	E	-	150	N	2470	9	9	5	1
13	355	E	-	155	N	2630	8	8	9	1
14	355	E	-	160	N	2750	9	7	6	1
15	355	E	-	165	N	2660	9	9	6	1
16	355	E	-	170	N	2390	8	8	7	1
17	355	E	-	175	N	2280	8	8	4	1
18	355	E	-	180	N	2360	9	9	8	1
19	355	E	-	185	N	2430	9	9	7	1
20	355	E	-	190	N	3150	8	7	8	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	355	E	-	195	N	2490	9	9	8	1
2	355	E	-	200	N	2780	10	10	5	1
3	355	E	-	205	N	2910	8	8	4	1
4	355	E	-	210	N	2480	8	8	6	1
5	355	E	-	215	N	2160	8	8	3	1
6	355	E	-	220	N	2100	8	8	4	1
7	355	E	-	225	N	2410	7	7	6	1
8	355	E	-	230	N	2360	7	7	6	1
9	355	E	-	235	N	2310	7	7	3	1
10	355	E	-	240	N	2130	8	8	1	1
11	355	E	-	245	N	2300	8	8	10	1
12	355	E	-	250	N	2820	9	9	4	1
13	355	E	-	255	N	2830	9	9	6	1
14	355	E	-	260	N	2890	9	9	1	1
15	355	E	-	265	N	2910	10	10	5	1
16	355	E	-	270	N	3870	9	9	6	1
17	355	E	-	275	N	3000	9	9	3	1
18	355	E	-	280	N	2500	9	9	7	1
19	355	E	-	285	N	3520	8	8	14	1
20	355	E	-	290	N	3660	9	9	7	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	355	E	-	295	N	3680	10	10	4	1
2	355	E	-	300	N	3680	11	11	5	1
3	355	E	-	305	N	4010	11	11	7	1
4	355	E	-	310	N	3720	10	10	11	1
5	355	E	-	315	N	3820	10	10	8	1
6	355	E	-	320	N	3720	12	11	6	1
7	355	E	-	325	N	3680	12	12	8	1
8	355	E	-	330	N	3610	12	12	6	1
9	355	E	-	335	N	3790	12	12	8	1
10	355	E	-	340	N	3650	11	11	7	2
11	355	E	-	345	N	4000	11	11	12	1
12	355	E	-	350	N	3890	10	10	11	1
13	355	E	-	355	N	3390	11	11	6	1
14	355	E	-	360	N	3650	12	12	12	1
15	355	E	-	365	N	3980	11	11	9	1
16	355	E	-	370	N	3040	10	10	6	1
17	355	E	-	375	N	3780	11	11	6	1
18	355	E	-	380	N	3010	9	9	5	1
19	355	E	-	385	N	3280	10	10	8	1
20	355	E	-	390	N	3930	11	11	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. R. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	360	E	-	105	N	2790	9	9	6	1
2	360	E	-	110	N	2670	9	9	9	1
3	360	E	-	115	N	2640	8	8	8	1
4	360	E	-	120	N	3090	9	9	4	1
5	360	E	-	125	N	2840	8	8	7	1
6	360	E	-	130	N	3000	10	10	14	1
7	360	E	-	135	N	2550	10	10	9	1
8	360	E	-	140	N	2650	8	8	5	1
9	360	E	-	145	N	2740	8	8	9	1
10	360	E	-	150	N	2870	8	8	8	1
11	360	E	-	155	N	2570	8	8	5	1
12	360	E	-	160	N	2700	9	9	6	1
13	360	E	-	165	N	2730	8	8	7	1
14	360	E	-	170	N	2180	8	8	4	1
15	360	E	-	175	N	2410	8	8	4	1
16	360	E	-	180	N	2190	8	8	5	1
17	360	E	-	185	N	2310	7	7	10	1
18	360	E	-	190	N	2270	9	7	9	1
19	360	E	-	195	N	2660	7	7	26	1
20	360	E	-	200	N	1970	8	8	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	360	E	-	205	N	2360	7	7	7	1
2	360	E	-	210	N	2220	8	8	8	1
3	360	E	-	215	N	2420	8	8	7	1
4	360	E	-	220	N	2440	7	7	8	1
5	360	E	-	225	N	2030	8	8	5	1
6	360	E	-	230	N	2110	8	8	6	1
7	360	E	-	235	N	1890	7	7	5	1
8	360	E	-	240	N	2140	7	7	6	1
9	360	E	-	245	N	2320	8	8	5	1
10	360	E	-	250	N	2310	8	8	3	1
11	360	E	-	255	N	2520	8	8	7	1
12	360	E	-	260	N	3020	9	9	8	1
13	360	E	-	265	N	2670	9	9	8	1
14	360	E	-	270	N	3160	9	9	9	1
15	360	E	-	275	N	2900	9	9	6	1
16	360	E	-	280	N	3130	8	8	7	1
17	360	E	-	285	N	3360	10	10	7	1
18	360	E	-	290	N	3270	9	9	11	1
19	360	E	-	295	N	3970	10	10	8	1
20	360	E	-	300	N	3510	11	11	9	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. Q. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	360	E	-	305	N	3620	10	10	6	1
2	360	E	-	310	N	3540	12	12	9	1
3	360	E	-	315	N	3730	11	11	8	1
4	360	E	-	320	N	3650	11	11	6	1
5	360	E	-	325	N	3530	11	11	11	1
6	360	E	-	330	N	3750	11	11	7	1
7	360	E	-	335	N	3240	12	12	6	1
8	360	E	-	340	N	4050	13	12	27	1
9	360	E	-	345	N	3990	12	12	12	2
10	360	E	-	350	N	3110	11	11	22	1
11	360	E	-	355	N	3970	12	12	14	1
12	360	E	-	360	N	4010	12	12	24	1
13	360	E	-	365	N	3730	10	11	6	1
14	360	E	-	370	N	3380	11	11	7	1
15	360	E	-	375	N	2860	9	10	7	1
16	360	E	-	380	N	2640	10	10	2	1
17	360	E	-	385	N	2820	10	10	5	1
18	360	E	-	390	N	3770	10	10	4	1
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	365	E	-	115	N	3440	7	7	5	2
2	365	E	-	120	N	3620	8	8	9	2
3	365	E	-	125	N	3620	6	6	10	2
4	365	E	-	130	N	3680	6	6	11	2
5	365	E	-	135	N	4150	7	7	9	1
6	365	E	-	140	N	3660	8	7	6	2
7	365	E	-	145	N	3470	8	7	9	1
8	365	E	-	150	N	3080	8	8	6	2
9	365	E	-	155	N	3310	8	8	10	2
10	365	E	-	160	N	3670	9	8	7	2
11	365	E	-	165	N	3280	7	7	5	1
12	365	E	-	170	N	2770	8	8	7	2
13	365	E	-	175	N	2840	7	8	7	1
14	365	E	-	180	N	2960	6	6	8	1
15	365	E	-	185	N	2730	6	6	13	1
16	365	E	-	190	N	3290	7	7	13	1
17	365	E	-	195	N	2530	7	7	7	2
18	365	E	-	200	N	2470	6	7	4	1
19	365	E	-	205	N	2400	6	6	8	1
20	365	E	-	210	N	2330	6	6	7	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	365	E	-	215	N	2900	8	7	4	2
2	365	E	-	220	N	2330	6	6	8	1
3	365	E	-	225	N	2790	6	6	6	1
4	365	E	-	230	N	2210	6	6	8	1
5	365	E	-	235	N	2030	8	8	12	1
6	365	E	-	240	N	3080	7	7	16	1
7	365	E	-	245	N	2470	7	7	5	1
8	365	E	-	250	N	2860	7	6	7	1
9	365	E	-	255	N	3180	8	7	5	1
10	365	E	-	260	N	3150	7	7	10	1
11	365	E	-	265	N	3160	8	8	8	2
12	365	E	-	270	N	4240	8	8	13	2
13	365	E	-	275	N	3810	7	7	7	2
14	365	E	-	280	N	3900	8	8	8	2
15	365	E	-	285	N	4330	8	8	7	2
16	365	E	-	290	N	4610	10	10	5	2
17	365	E	-	295	N	4230	8	8	8	2
18	365	E	-	300	N	4280	9	9	10	2
19	365	E	-	305	N	2730	9	9	5	2
20	365	E	-	310	N	3090	11	9	4	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	365	E	-	315	N	2900	11	11	8	1
2	365	E	-	320	N	3490	11	11	8	1
3	365	E	-	325	N	2990	8	8	8	1
4	365	E	-	330	N	3540	11	11	13	1
5	365	E	-	335	N	3510	11	11	12	1
6	365	E	-	340	N	3630	12	12	14	1
7	365	E	-	345	N	3930	11	11	17	1
8	365	E	-	350	N	3910	11	10	25	2
9	365	E	-	355	N	4530	11	11	14	1
10	365	E	-	360	N	3640	10	10	8	1
11	365	E	-	365	N	3670	12	11	5	1
12	365	E	-	370	N	3580	11	11	7	1
13	365	E	-	375	N	3790	12	12	7	1
14	365	E	-	380	N	3320	10	10	6	1
15	365	E	-	385	N	ROADWAY				
16	365	E	-	390	N	3380	11	11	8	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	370	E	-	320	N	3440	10	10	8	1
2	370	E	-	325	N	3610	10	10	7	1
3	370	E	-	330	N	3680	11	11	7	1
4	370	E	-	335	N	3700	11	11	7	1
5	370	E	-	340	N	3590	11	11	5	1
6	370	E	-	345	N	4170	10	10	9	1
7	370	E	-	350	N	3510	11	11	13	1
8	370	E	-	355	N	2930	10	10	19	1
9	370	E	-	360	N	3810	10	10	11	1
10	370	E	-	365	N	4180	11	11	8	1
11	370	E	-	370	N	3570	11	11	7	1
12	370	E	-	375	N	3660	9	9	8	1
13	370	E	-	380	N	3380	10	10	6	1
14	370	E	-	385	N	2630	10	10	6	1
15	370	E	-	390	N	3540	9	9	8	1
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	375	E	-	320	N	2590	8	8	7	2
2	375	E	-	325	N	3410	10	10	5	1
3	375	E	-	330	N	3470	10	10	7	1
4	375	E	-	335	N	3400	11	11	4	1
5	375	E	-	340	N	3620	11	11	9	1
6	375	E	-	345	N	3740	11	11	7	1
7	375	E	-	350	N	3800	11	11	12	1
8	375	E	-	355	N	3590	10	10	11	2
9	375	E	-	360	N	3820	11	11	14	1
10	375	E	-	365	N	3730	10	10	8	1
11	375	E	-	370	N	3750	11	11	5	1
12	375	E	-	375	N	3940	11	11	7	1
13	375	E	-	380	N	3690	10	10	7	1
14	375	E	-	385	N	3000	9	9	6	1
15	375	E	-	390	N	2030	9	9	5	1
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	380	E	-	325	N	3100	11	11	4	1
2	380	E	-	330	N	2670	9	9	8	1
3	380	E	-	335	N	3110	9	9	7	1
4	380	E	-	340	N	3410	10	10	9	1
5	380	E	-	345	N	3720	10	10	19	1
6	380	E	-	350	N	3520	11	11	8	2
7	380	E	-	355	N	3360	11	11	9	1
8	380	E	-	360	N	3410	10	10	17	1
9	380	E	-	365	N	3440	12	12	12	1
10	380	E	-	370	N	3380	11	11	4	2
11	380	E	-	375	N	3940	12	12	6	1
12	380	E	-	380	N	3900	10	10	9	1
13	380	E	-	385	N	3250	9	10	6	1
14	380	E	-	390	N	1980	9	9	6	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Royce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Open Land Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	385	E	-	330	N	2990	8	8	6	1
2	385	E	-	335	N	2720	9	9	5	1
3	385	E	-	340	N	2690	9	9	1	1
4	385	E	-	345	N	3000	10	10	3	1
5	385	E	-	350	N	3020	10	10	4	1
6	385	E	-	355	N	4040	11	11	3	2
7	385	E	-	360	N	3600	9	9	5	1
8	385	E	-	365	N	3940	11	11	8	2
9	385	E	-	370	N	3670	9	9	4	1
10	385	E	-	375	N	4080	9	9	5	2
11	385	E	-	380	N	3440	10	10	7	1
12	385	E	-	385	N	3590	10	10	8	1
13	385	E	-	390	N	2510	8	8	4	1
14	385	E	-	395	N	3520	9	9	8	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

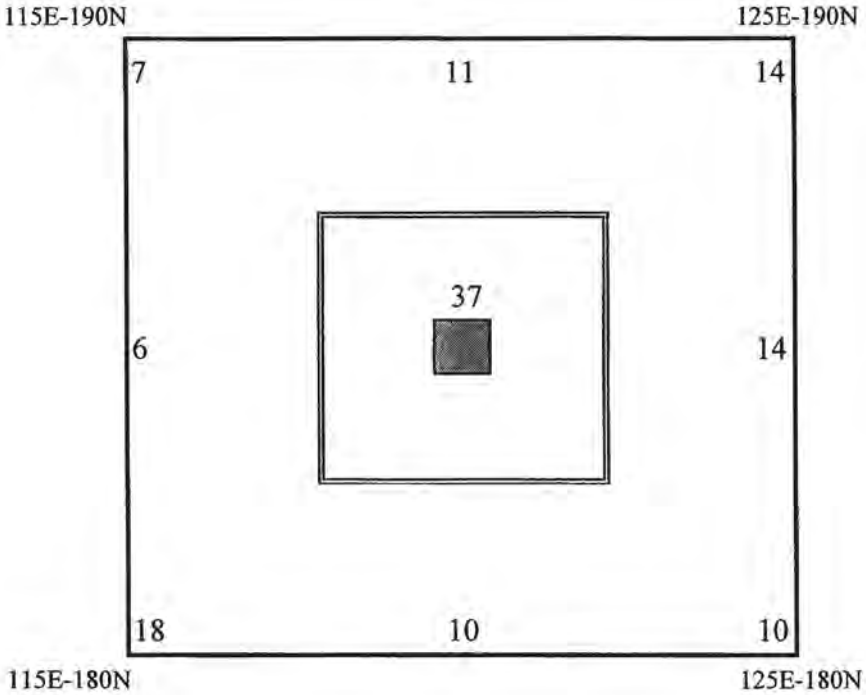
INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB - AREA " N "
OPEN LAND AREA
HOT SPOT EVALUATION

HOT SPOT LOCATION : 120E - 185N (6" - 1') (37 pCi / g U)



LOCATION	pCi / gU
115E - 180N	18
115E - 185N	6
115E - 190N	7
120E - 180N	10
120E - 190N	11
125E - 180N	10
125E - 185N	14
125E - 190N	14
TOTAL :	90
AVERAGE :	11.25

ELEVATED AREA (120E - 185N) REPRESENTS 25 % OF THE GRIDDED AREA

SQRT (100 / A) = SQRT (100 / 25) = 2

2 TIMES THE GUIDELINE VALUE (ie. 30 pCi / g U) = 60 pCi / g U

MAXIMIUM : 60 pCi / g U

37 pCi / g U < 60 pCi / g U CRITERIA SATISIFIED

Xw = 11.25 pCi / g U [1 - 25/100] + 37 pCi / g U [25/100]

Xw = 8.4375 pCi / g U + 9.25 pCi / g U

Xw = 17.7 pCi / g U (BACKGROUND NOT SUBTRACTED)

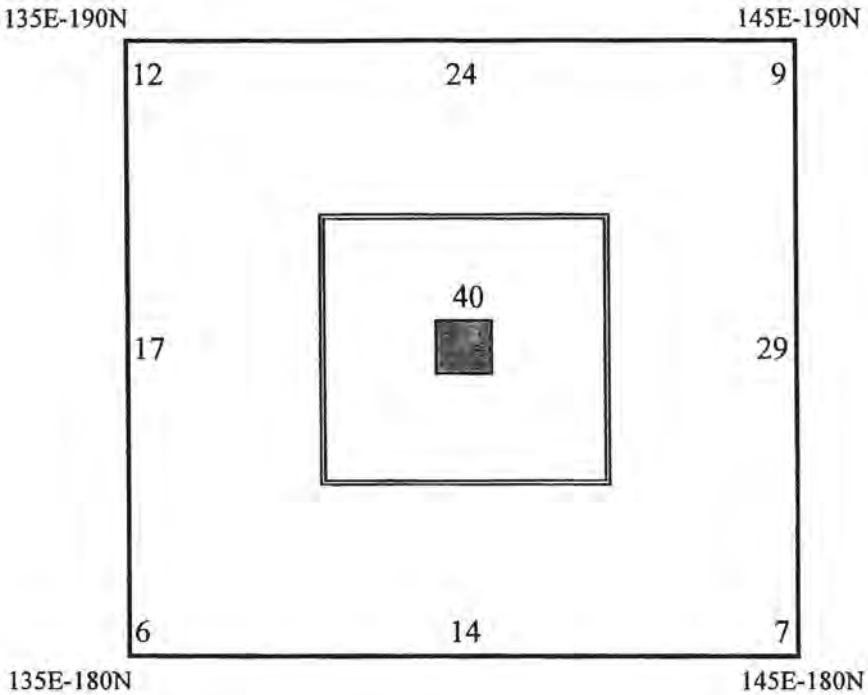
PERFORMED BY : SUSAN KEGIN DATE : 12-13-01

REVIEWED BY : W.O. Rogers DATE : 12-18-01

C:\OFFICE\QPW\AREA-N\OPENLAND\HOTSPOT1.WB2

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB - AREA " N "
OPEN LAND AREA
HOT SPOT EVALUATION

HOT SPOT LOCATION : 140E - 185N (6" - 1') (40 pCi / g U)



LOCATION	pCi / gU
135E - 180N	6
135E - 185N	17
135E - 190N	12
140E - 180N	14
140E - 190N	24
145E - 180N	7
145E - 185N	29
145E - 190N	9
TOTAL :	118
AVERAGE :	14.75

ELEVATED AREA (140E - 185N) REPRESENTS 25 % OF THE GRIDDED AREA

SQRT (100 / A) = SQRT (100 / 25) = 2

2 TIMES THE GUIDELINE VALUE (ie. 30 pCi / g U) = 60 pCi / g U

MAXIMIUM : 60 pCi / g U

40 pCi / g U < 60 pCi / g U CRITERIA SATISIFIED

Xw = 14.75 pCi / g U [1 - 25/100] + 40 pCi / g U [25/100]

Xw = 11.06 pCi / g U + 10 pCi / g U

Xw = 21.1 pCi / g U (BACKGROUND NOT SUBTRACTED)

PERFORMED BY : SUSAN KEGIN DATE : 12-13-01

REVIEWED BY : W. A. Rogers DATE : 12-18-01

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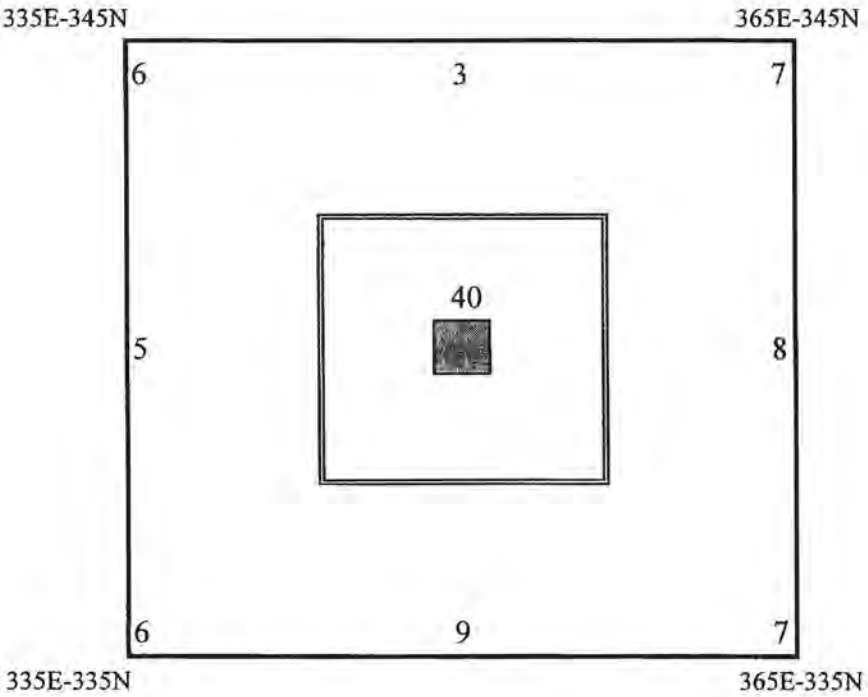
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB - AREA " N "
OPEN LAND AREA
HOT SPOT EVALUATION

HOT SPOT LOCATION : 260E - 340N (6" - 1') (40 pCi / g U)



LOCATION	pCi / gU
335E - 335N	6
355E - 340N	5
355E - 345N	6
360E - 335N	9
360E - 345N	3
365E - 335N	7
365E - 340N	8
365E - 345N	7
TOTAL :	51
AVERAGE :	6.38

ELEVATED AREA (360E - 340N) REPRESENTS 25 % OF THE GRIDDED AREA

SQRT (100 / A) = SQRT (100 / 25) = 2

2 TIMES THE GUIDELINE VALUE (ie. 30 pCi / g U) = 60 pCi / g U

MAXIMIUM : 60 pCi / g U

40 pCi / g U < 60 pCi / g U CRITERIA SATISIFIED

Xw = 6.38 pCi / g U [1 - 25/100] + 40 pCi / g U [25/100]

Xw = 4.86 pCi / g U + 10 pCi / g U

Xw = 14.76 pCi / g U (BACKGROUND NOT SUBTRACTED)

PERFORMED BY : SUSAN KEGIN DATE : 12-13-01

REVIEWED BY : W.A. Rogers DATE : 12-18-01

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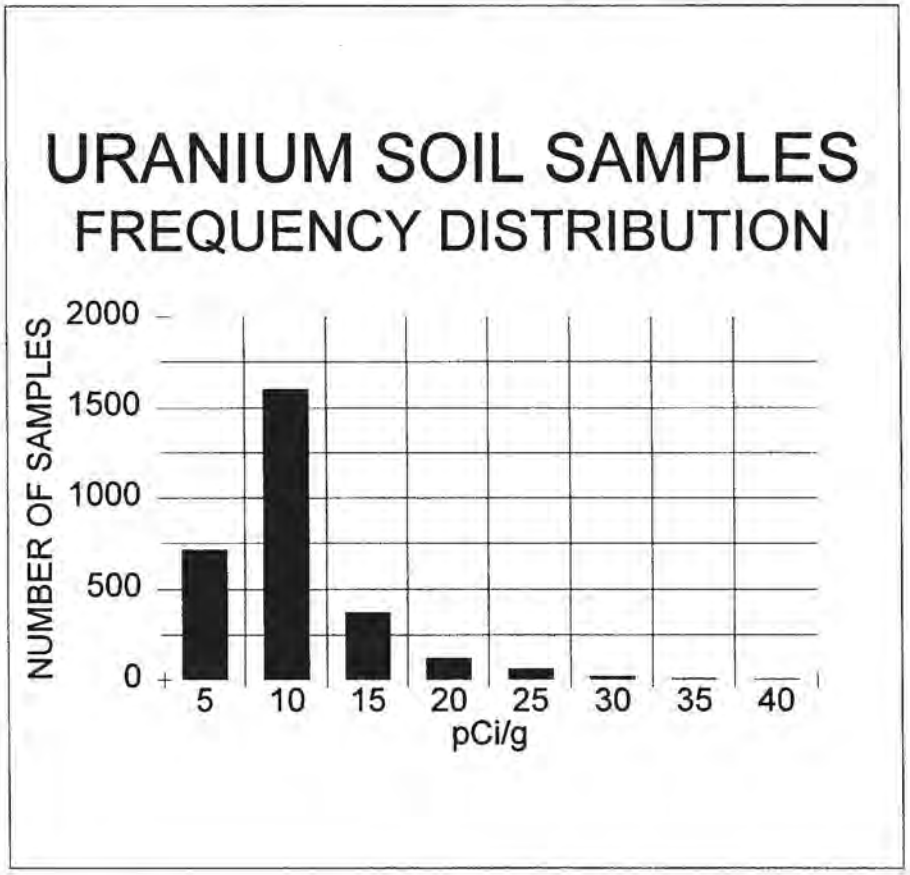
PHASE III, SUB-AREA "N" - OPEN LAND AREA
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

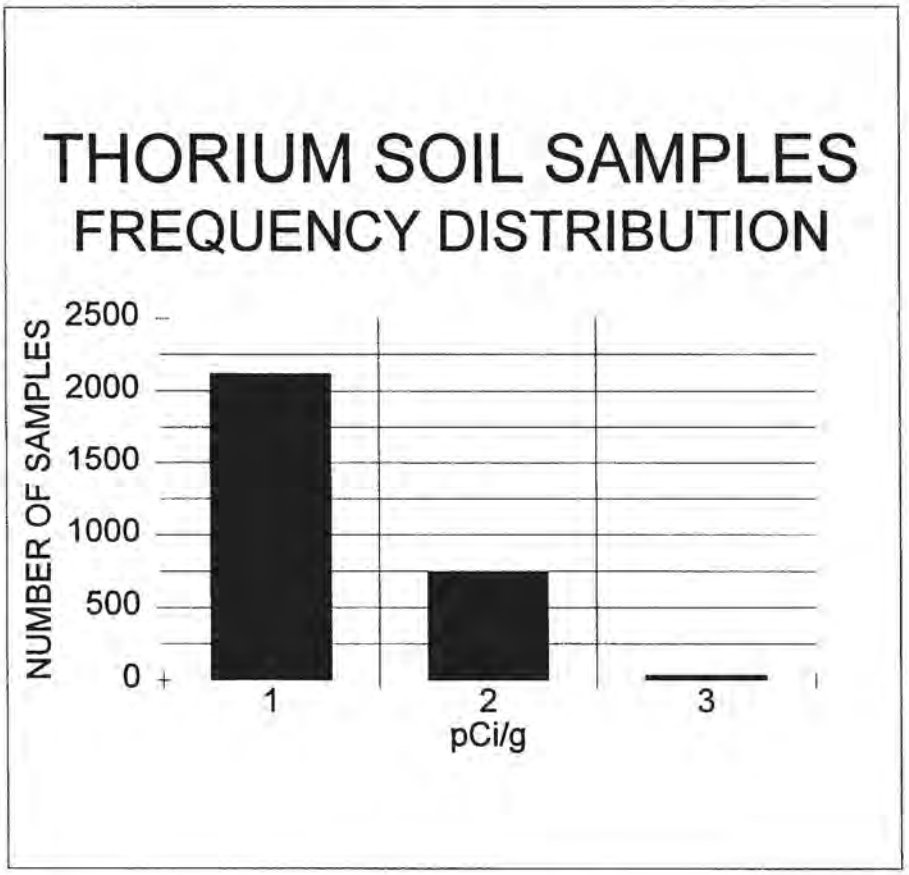
DECEMBER 17, 2001



NUMBER OF READINGS	2905
AVERAGE READING	8
MINIMUM READING	1
MAXIMUM READING	40
STANDARD DEVIATION	5

PHASE III, SUB-AREA "N" - OPEN LAND AREA
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

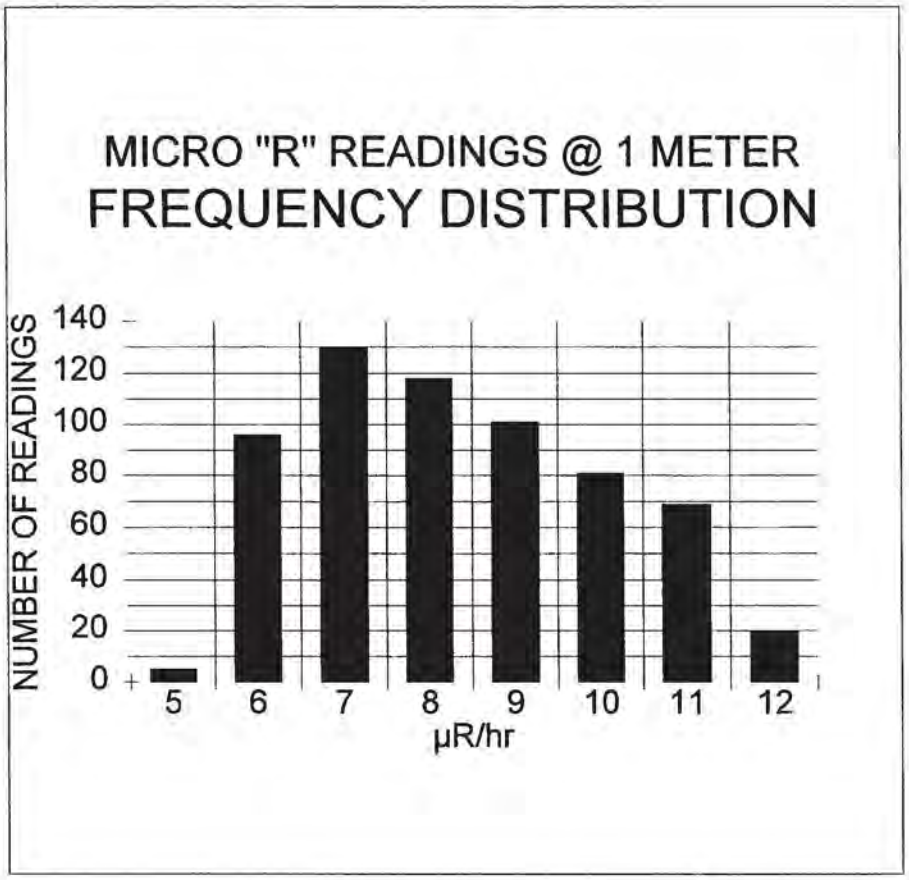
DECEMBER 17, 2001



NUMBER OF READINGS	2905
AVERAGE READING	1.3
MINIMUM READING	1
MAXIMUM READING	3
STANDARD DEVIATION	0.5

PHASE III, SUB-AREA "N" - OPEN LAND AREA
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

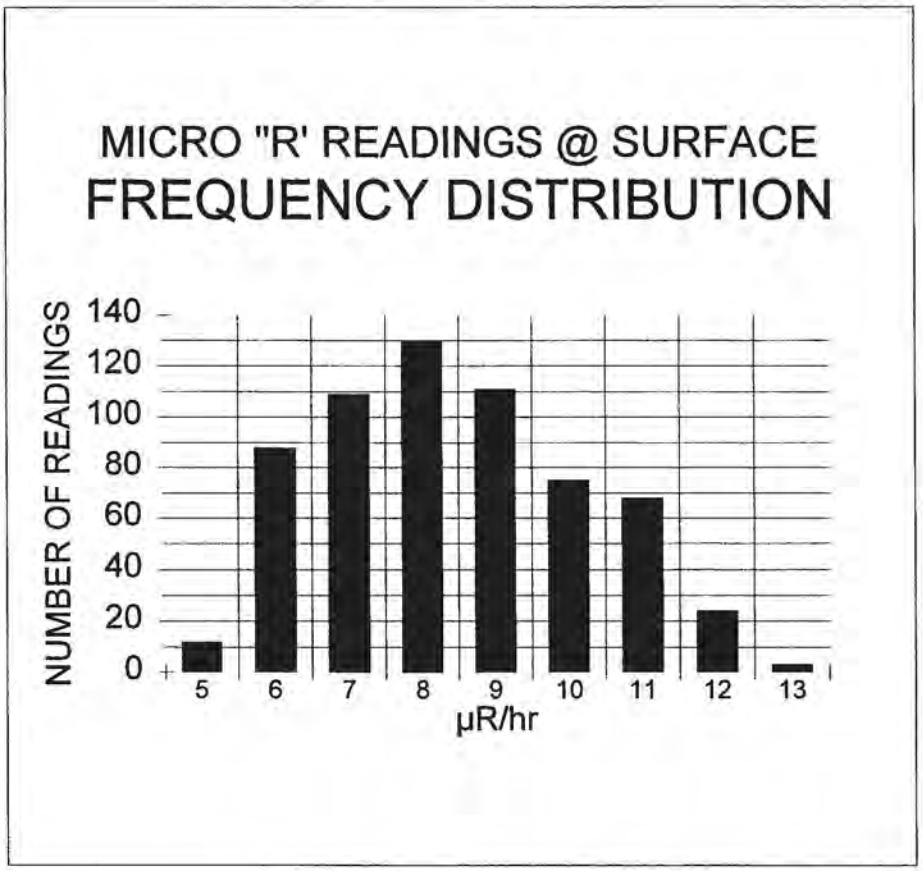
DECEMBER 17, 2001



NUMBER OF READINGS	**620**
AVERAGE READING	**8**
MINIMUM READING	**5**
MAXIMUM READING	**12**
STANDARD DEVIATION	**2**

PHASE III, SUB-AREA "N" - OPEN LAND AREA
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

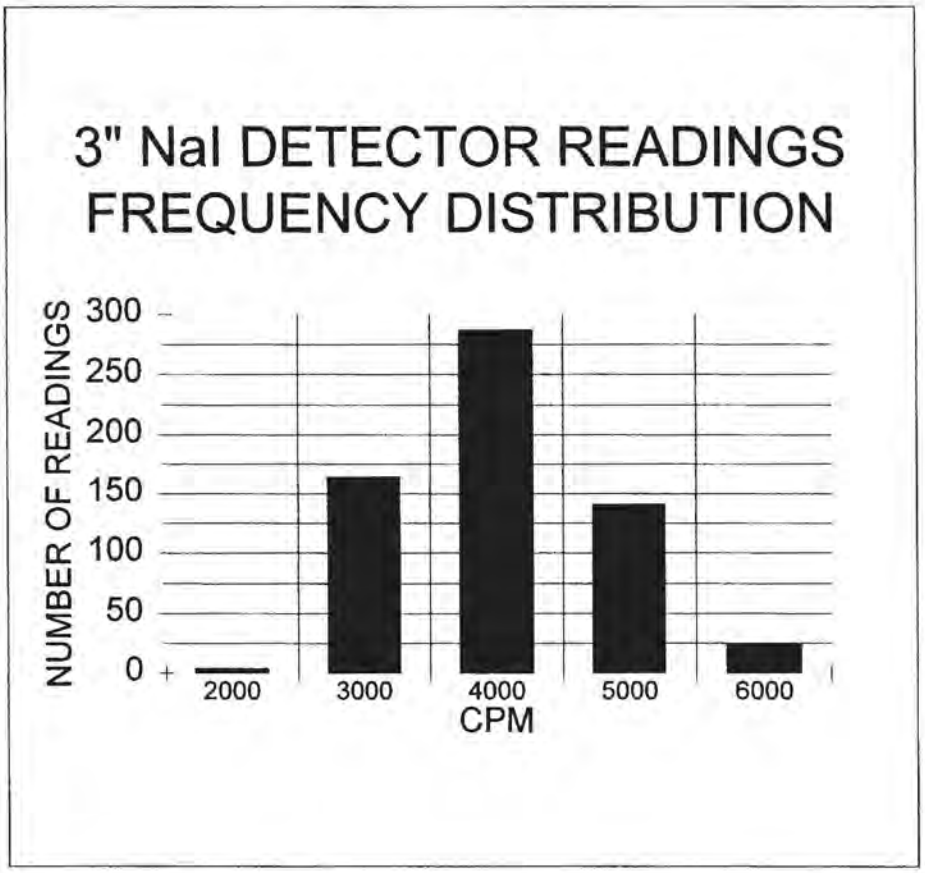
DECEMBER 17, 2001



NUMBER OF READINGS	620
AVERAGE READING	8
MINIMUM READING	5
MAXIMUM READING	13
STANDARD DEVIATION	2

PHASE III, SUB-AREA "N" - OPEN LAND AREA
DEPTH SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220, S/N 48395
BACKGROUND AVERAGES: 3000

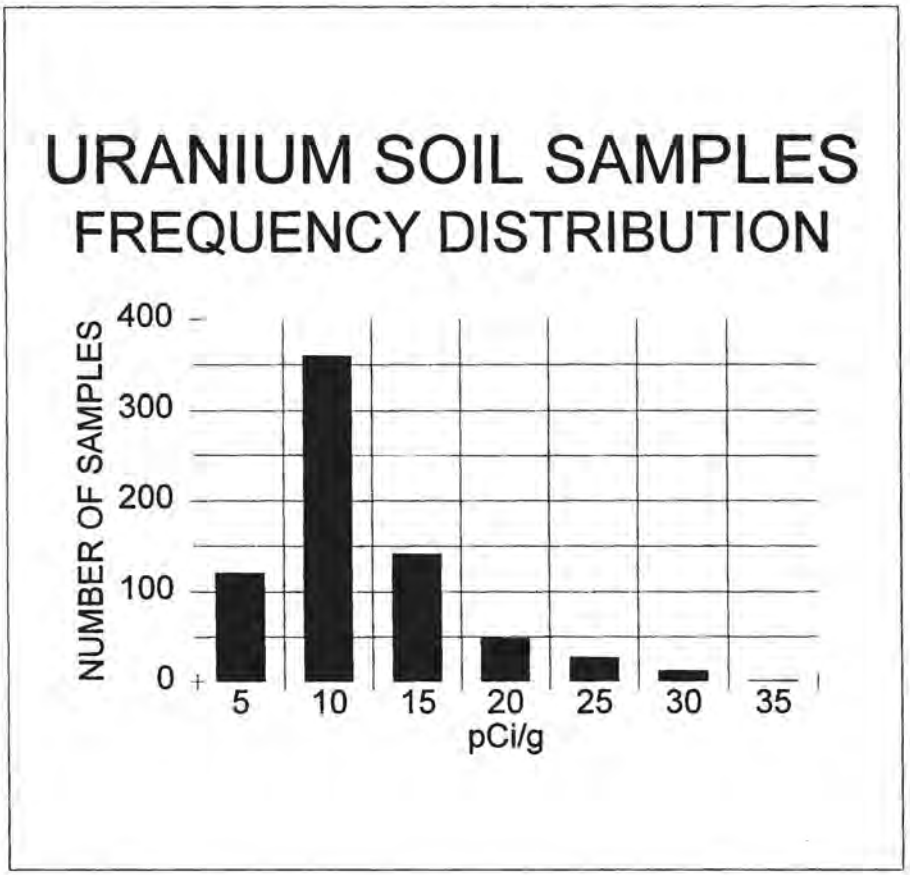
DECEMBER 17, 2001



NUMBER OF READINGS	620
AVERAGE READING	3551
MINIMUM READING	1616
MAXIMUM READING	6000
STANDARD DEVIATION	765

PHASE III, SUB-AREA "N" - OPEN LAND AREA
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

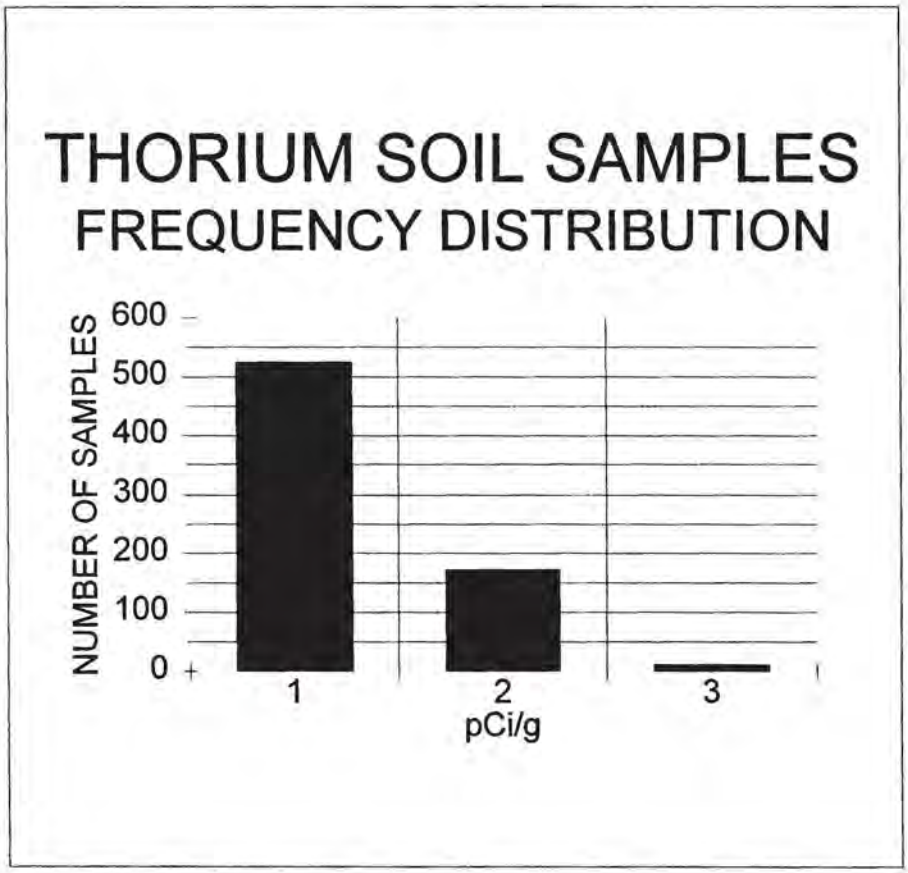
DECEMBER 18, 2001



NUMBER OF READINGS	710
AVERAGE READING	10
MINIMUM READING	1
MAXIMUM READING	31
STANDARD DEVIATION	5

PHASE III, SUB-AREA "N" - OPEN LAND AREA
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

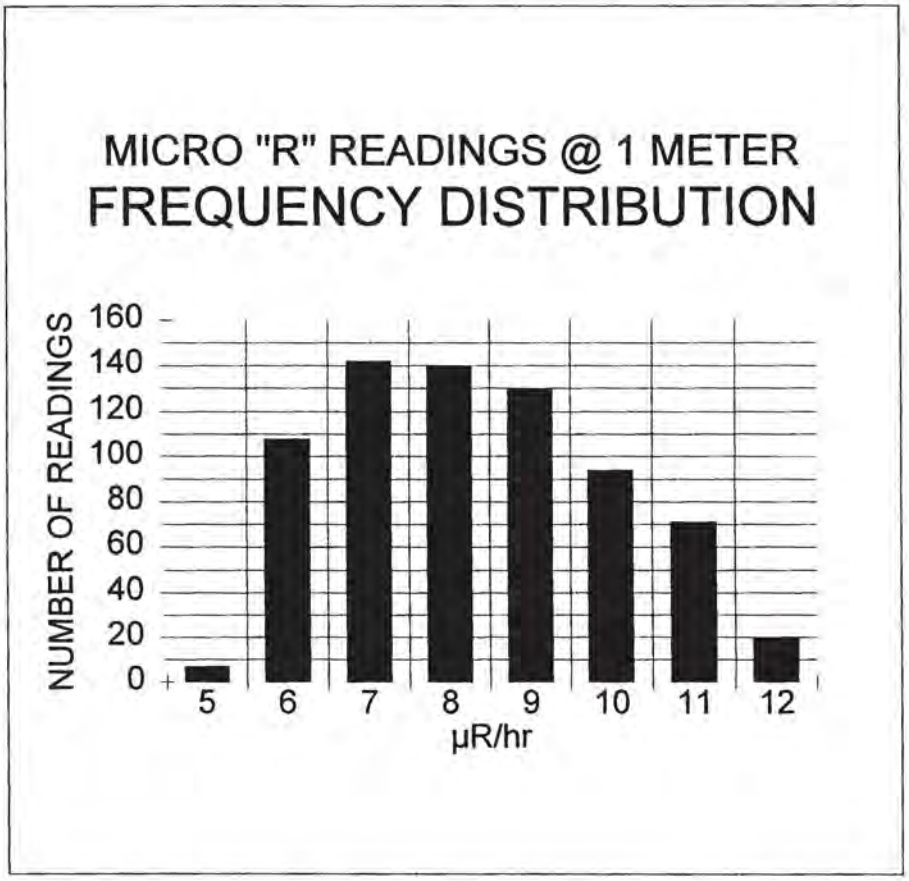
DECEMBER 18, 2001



NUMBER OF READINGS	**710**
AVERAGE READING	**1**
MINIMUM READING	**1**
MAXIMUM READING	**3**
STANDARD DEVIATION	**0.5**

PHASE III, SUB-AREA "N" - OPEN LAND AREA
SURFACE SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

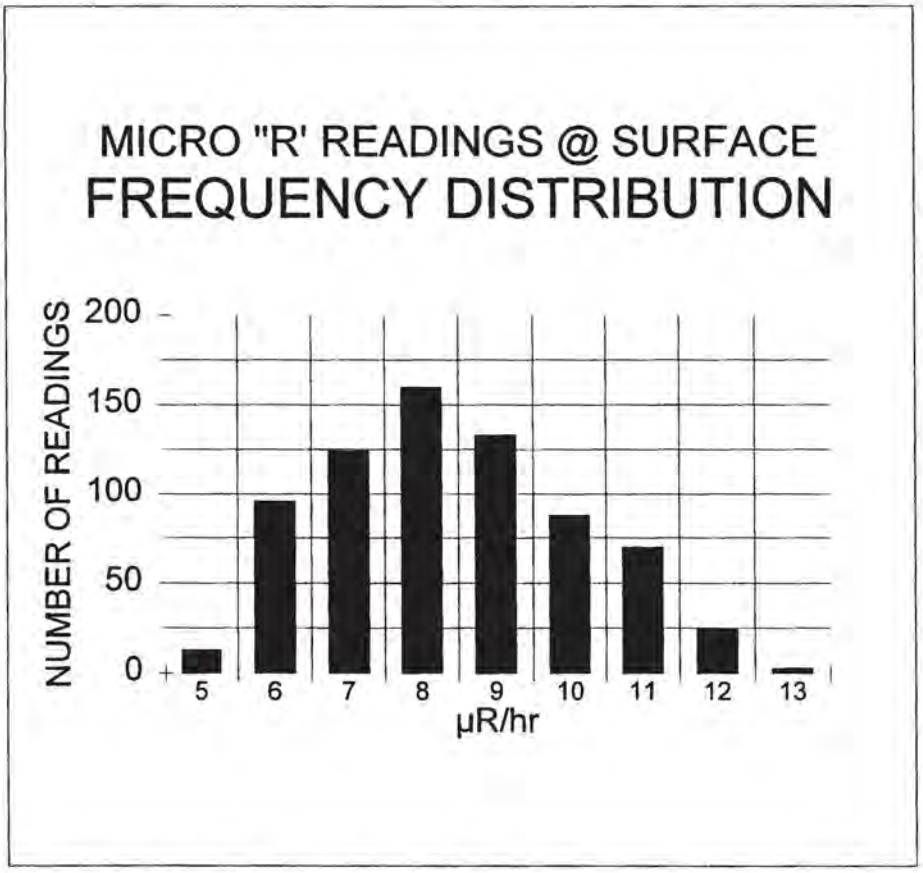
DECEMBER 18, 2001



NUMBER OF READINGS	**712**
AVERAGE READING	**8**
MINIMUM READING	**5**
MAXIMUM READING	**12**
STANDARD DEVIATION	**2**

PHASE III, SUB-AREA "N" - OPEN LAND AREA
SURFACE SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

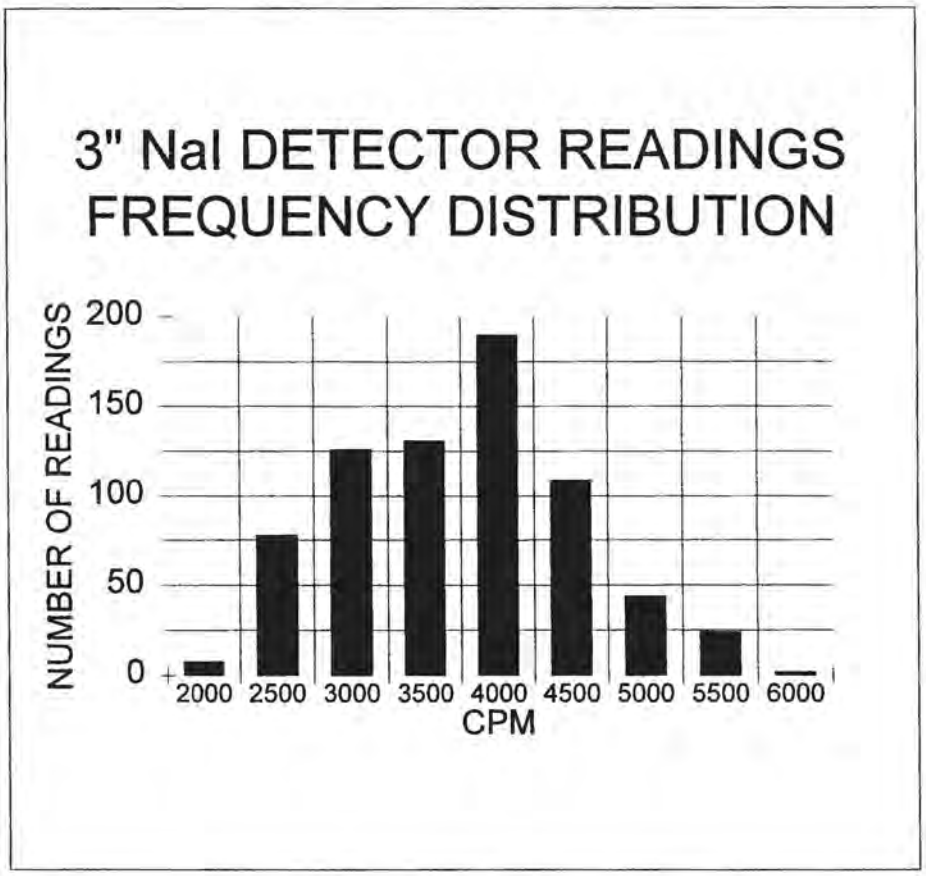
DECEMBER 18, 2001



NUMBER OF READINGS	**712**
AVERAGE READING	**8**
MINIMUM READING	**5**
MAXIMUM READING	**13**
STANDARD DEVIATION	**2**

PHASE III, SUB-AREA "N" - OPEN LAND AREA
SURFACE SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220, S/N 48395
BACKGROUND AVERAGES: 3000

DECEMBER 18, 2001



NUMBER OF READINGS	712
AVERAGE READING	3494
MINIMUM READING	1616
MAXIMUM READING	6000
STANDARD DEVIATION	786

12/18/2001

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
1	1	-8.7	75.3
2	1	-8.7	75.3
3	1	-8.7	75.3
4	1	-8.7	75.3
5	2	-7.7	59.0
6	2	-7.7	59.0
7	2	-7.7	59.0
8	2	-7.7	59.0
9	2	-7.7	59.0
10	2	-7.7	59.0
11	3	-6.7	44.6
12	3	-6.7	44.6
13	3	-6.7	44.6
14	3	-6.7	44.6
15	3	-6.7	44.6
16	3	-6.7	44.6
17	3	-6.7	44.6
18	3	-6.7	44.6
19	3	-6.7	44.6
20	3	-6.7	44.6
21	4	-5.7	32.2
22	4	-5.7	32.2
23	4	-5.7	32.2
24	4	-5.7	32.2
25	4	-5.7	32.2
26	4	-5.7	32.2
27	4	-5.7	32.2
28	4	-5.7	32.2
29	4	-5.7	32.2
30	4	-5.7	32.2
31	4	-5.7	32.2
32	4	-5.7	32.2
33	4	-5.7	32.2
34	4	-5.7	32.2
35	4	-5.7	32.2
36	4	-5.7	32.2
37	4	-5.7	32.2
38	4	-5.7	32.2
39	4	-5.7	32.2
40	4	-5.7	32.2
41	4	-5.7	32.2
42	4	-5.7	32.2
43	4	-5.7	32.2
44	4	-5.7	32.2
45	4	-5.7	32.2
46	4	-5.7	32.2
47	4	-5.7	32.2
48	4	-5.7	32.2
49	4	-5.7	32.2
50	4	-5.7	32.2
	242.0		1177.5
	279.0		852.2
	300.0		676.7
	341.0		416.0
	350.0		358.8
	392.0		175.8
	423.0		83.9
	461.0		19.1
	519.0		36.4
	580.0		196.5
	674.0		740.9
	797.0		2014.9
	1073.0		7270.2
	275.0		3192.4
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
total	6872		19280.0
	Sum(n)		Sum(n-N)²

No. of Samples (x) : 710

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : 9.68

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: 5.21

2 Std Deviations: 10.43

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = 1.645

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = 10.00 pCi/gU TOTAL U

GUIDELINE VALUE: 30 pCi/gU TOTAL U

Acceptable Level: 34.0 pCi/gU TOTAL U

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	709	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	709	1.645	95%

PERFORMED BY: Susan Hogin DATE: 12/18/01

REVIEWED BY: W.O. Ryan DATE: 12-19-01

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CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
51	4	-5.68	32.25
52	4	-5.68	32.25
53	4	-5.68	32.25
54	4	-5.68	32.25
55	4	-5.68	32.25
56	4	-5.68	32.25
57	4	-5.68	32.25
58	4	-5.68	32.25
59	5	-4.68	21.89
60	5	-4.68	21.89
61	5	-4.68	21.89
62	5	-4.68	21.89
63	5	-4.68	21.89
64	5	-4.68	21.89
65	5	-4.68	21.89
66	5	-4.68	21.89
67	5	-4.68	21.89
68	5	-4.68	21.89
69	5	-4.68	21.89
70	5	-4.68	21.89
71	5	-4.68	21.89
72	5	-4.68	21.89
73	5	-4.68	21.89
74	5	-4.68	21.89
75	5	-4.68	21.89
76	5	-4.68	21.89
77	5	-4.68	21.89
78	5	-4.68	21.89
79	5	-4.68	21.89
80	5	-4.68	21.89
81	5	-4.68	21.89
82	5	-4.68	21.89
83	5	-4.68	21.89
84	5	-4.68	21.89
85	5	-4.68	21.89
86	5	-4.68	21.89
87	5	-4.68	21.89
88	5	-4.68	21.89
89	5	-4.68	21.89
90	5	-4.68	21.89
91	5	-4.68	21.89
92	5	-4.68	21.89
93	5	-4.68	21.89
94	5	-4.68	21.89
95	5	-4.68	21.89
96	5	-4.68	21.89
97	5	-4.68	21.89
98	5	-4.68	21.89
99	5	-4.68	21.89
100	5	-4.68	21.89
	242.0		1177.5
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
101	5	-4.68	21.89
102	5	-4.68	21.89
103	5	-4.68	21.89
104	5	-4.68	21.89
105	5	-4.68	21.89
106	5	-4.68	21.89
107	5	-4.68	21.89
108	5	-4.68	21.89
109	5	-4.68	21.89
110	5	-4.68	21.89
111	5	-4.68	21.89
112	5	-4.68	21.89
113	5	-4.68	21.89
114	5	-4.68	21.89
115	5	-4.68	21.89
116	5	-4.68	21.89
117	5	-4.68	21.89
118	5	-4.68	21.89
119	5	-4.68	21.89
120	5	-4.68	21.89
121	5	-4.68	21.89
122	6	-3.68	13.53
123	6	-3.68	13.53
124	6	-3.68	13.53
125	6	-3.68	13.53
126	6	-3.68	13.53
127	6	-3.68	13.53
128	6	-3.68	13.53
129	6	-3.68	13.53
130	6	-3.68	13.53
131	6	-3.68	13.53
132	6	-3.68	13.53
133	6	-3.68	13.53
134	6	-3.68	13.53
135	6	-3.68	13.53
136	6	-3.68	13.53
137	6	-3.68	13.53
138	6	-3.68	13.53
139	6	-3.68	13.53
140	6	-3.68	13.53
141	6	-3.68	13.53
142	6	-3.68	13.53
143	6	-3.68	13.53
144	6	-3.68	13.53
145	6	-3.68	13.53
146	6	-3.68	13.53
147	6	-3.68	13.53
148	6	-3.68	13.53
149	6	-3.68	13.53
150	6	-3.68	13.53
	279.0		852.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
151	6	-3.68	13.53
152	6	-3.68	13.53
153	6	-3.68	13.53
154	6	-3.68	13.53
155	6	-3.68	13.53
156	6	-3.68	13.53
157	6	-3.68	13.53
158	6	-3.68	13.53
159	6	-3.68	13.53
160	6	-3.68	13.53
161	6	-3.68	13.53
162	6	-3.68	13.53
163	6	-3.68	13.53
164	6	-3.68	13.53
165	6	-3.68	13.53
166	6	-3.68	13.53
167	6	-3.68	13.53
168	6	-3.68	13.53
169	6	-3.68	13.53
170	6	-3.68	13.53
171	6	-3.68	13.53
172	6	-3.68	13.53
173	6	-3.68	13.53
174	6	-3.68	13.53
175	6	-3.68	13.53
176	6	-3.68	13.53
177	6	-3.68	13.53
178	6	-3.68	13.53
179	6	-3.68	13.53
180	6	-3.68	13.53
181	6	-3.68	13.53
182	6	-3.68	13.53
183	6	-3.68	13.53
184	6	-3.68	13.53
185	6	-3.68	13.53
186	6	-3.68	13.53
187	6	-3.68	13.53
188	6	-3.68	13.53
189	6	-3.68	13.53
190	6	-3.68	13.53
191	6	-3.68	13.53
192	6	-3.68	13.53
193	6	-3.68	13.53
194	6	-3.68	13.53
195	6	-3.68	13.53
196	6	-3.68	13.53
197	6	-3.68	13.53
198	6	-3.68	13.53
199	6	-3.68	13.53
200	6	-3.68	13.53
	300.0		676.7
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
201	6	-3.68	13.53
202	6	-3.68	13.53
203	6	-3.68	13.53
204	6	-3.68	13.53
205	6	-3.68	13.53
206	6	-3.68	13.53
207	6	-3.68	13.53
208	6	-3.68	13.53
209	6	-3.68	13.53
210	7	-2.68	7.18
211	7	-2.68	7.18
212	7	-2.68	7.18
213	7	-2.68	7.18
214	7	-2.68	7.18
215	7	-2.68	7.18
216	7	-2.68	7.18
217	7	-2.68	7.18
218	7	-2.68	7.18
219	7	-2.68	7.18
220	7	-2.68	7.18
221	7	-2.68	7.18
222	7	-2.68	7.18
223	7	-2.68	7.18
224	7	-2.68	7.18
225	7	-2.68	7.18
226	7	-2.68	7.18
227	7	-2.68	7.18
228	7	-2.68	7.18
229	7	-2.68	7.18
230	7	-2.68	7.18
231	7	-2.68	7.18
232	7	-2.68	7.18
233	7	-2.68	7.18
234	7	-2.68	7.18
235	7	-2.68	7.18
236	7	-2.68	7.18
237	7	-2.68	7.18
238	7	-2.68	7.18
239	7	-2.68	7.18
240	7	-2.68	7.18
241	7	-2.68	7.18
242	7	-2.68	7.18
243	7	-2.68	7.18
244	7	-2.68	7.18
245	7	-2.68	7.18
246	7	-2.68	7.18
247	7	-2.68	7.18
248	7	-2.68	7.18
249	7	-2.68	7.18
250	7	-2.68	7.18
	341.0		416.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
251	7	-2.68	7.18
252	7	-2.68	7.18
253	7	-2.68	7.18
254	7	-2.68	7.18
255	7	-2.68	7.18
256	7	-2.68	7.18
257	7	-2.68	7.18
258	7	-2.68	7.18
259	7	-2.68	7.18
260	7	-2.68	7.18
261	7	-2.68	7.18
262	7	-2.68	7.18
263	7	-2.68	7.18
264	7	-2.68	7.18
265	7	-2.68	7.18
266	7	-2.68	7.18
267	7	-2.68	7.18
268	7	-2.68	7.18
269	7	-2.68	7.18
270	7	-2.68	7.18
271	7	-2.68	7.18
272	7	-2.68	7.18
273	7	-2.68	7.18
274	7	-2.68	7.18
275	7	-2.68	7.18
276	7	-2.68	7.18
277	7	-2.68	7.18
278	7	-2.68	7.18
279	7	-2.68	7.18
280	7	-2.68	7.18
281	7	-2.68	7.18
282	7	-2.68	7.18
283	7	-2.68	7.18
284	7	-2.68	7.18
285	7	-2.68	7.18
286	7	-2.68	7.18
287	7	-2.68	7.18
288	7	-2.68	7.18
289	7	-2.68	7.18
290	7	-2.68	7.18
291	7	-2.68	7.18
292	7	-2.68	7.18
293	7	-2.68	7.18
294	7	-2.68	7.18
295	7	-2.68	7.18
296	7	-2.68	7.18
297	7	-2.68	7.18
298	7	-2.68	7.18
299	7	-2.68	7.18
300	7	-2.68	7.18
	350.0		358.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
301	7	-2.68	7.18
302	7	-2.68	7.18
303	7	-2.68	7.18
304	7	-2.68	7.18
305	7	-2.68	7.18
306	7	-2.68	7.18
307	7	-2.68	7.18
308	7	-2.68	7.18
309	8	-1.68	2.82
310	8	-1.68	2.82
311	8	-1.68	2.82
312	8	-1.68	2.82
313	8	-1.68	2.82
314	8	-1.68	2.82
315	8	-1.68	2.82
316	8	-1.68	2.82
317	8	-1.68	2.82
318	8	-1.68	2.82
319	8	-1.68	2.82
320	8	-1.68	2.82
321	8	-1.68	2.82
322	8	-1.68	2.82
323	8	-1.68	2.82
324	8	-1.68	2.82
325	8	-1.68	2.82
326	8	-1.68	2.82
327	8	-1.68	2.82
328	8	-1.68	2.82
329	8	-1.68	2.82
330	8	-1.68	2.82
331	8	-1.68	2.82
332	8	-1.68	2.82
333	8	-1.68	2.82
334	8	-1.68	2.82
335	8	-1.68	2.82
336	8	-1.68	2.82
337	8	-1.68	2.82
338	8	-1.68	2.82
339	8	-1.68	2.82
340	8	-1.68	2.82
341	8	-1.68	2.82
342	8	-1.68	2.82
343	8	-1.68	2.82
344	8	-1.68	2.82
345	8	-1.68	2.82
346	8	-1.68	2.82
347	8	-1.68	2.82
348	8	-1.68	2.82
349	8	-1.68	2.82
350	8	-1.68	2.82
	392.0		175.8
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
351	8	0.00	0.00
352	8	-1.68	2.82
353	8	-1.68	2.82
354	8	-1.68	2.82
355	8	-1.68	2.82
356	8	-1.68	2.82
357	8	-1.68	2.82
358	8	-1.68	2.82
359	8	-1.68	2.82
360	8	-1.68	2.82
361	8	-1.68	2.82
362	8	-1.68	2.82
363	8	-1.68	2.82
364	8	-1.68	2.82
365	8	-1.68	2.82
366	8	-1.68	2.82
367	8	-1.68	2.82
368	8	-1.68	2.82
369	8	-1.68	2.82
370	8	-1.68	2.82
371	8	-1.68	2.82
372	8	-1.68	2.82
373	8	-1.68	2.82
374	8	-1.68	2.82
375	8	-1.68	2.82
376	8	-1.68	2.82
377	8	-1.68	2.82
378	9	-0.68	0.46
379	9	-0.68	0.46
380	9	-0.68	0.46
381	9	-0.68	0.46
382	9	-0.68	0.46
383	9	-0.68	0.46
384	9	-0.68	0.46
385	9	-0.68	0.46
386	9	-0.68	0.46
387	9	-0.68	0.46
388	9	-0.68	0.46
389	9	-0.68	0.46
390	9	-0.68	0.46
391	9	-0.68	0.46
392	9	-0.68	0.46
393	9	-0.68	0.46
394	9	-0.68	0.46
395	9	-0.68	0.46
396	9	-0.68	0.46
397	9	-0.68	0.46
398	9	-0.68	0.46
399	9	-0.68	0.46
400	9	-0.68	0.46
	423.0		83.9
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
401	9	-0.68	0.46
402	9	-0.68	0.46
403	9	-0.68	0.46
404	9	-0.68	0.46
405	9	-0.68	0.46
406	9	-0.68	0.46
407	9	-0.68	0.46
408	9	-0.68	0.46
409	9	-0.68	0.46
410	9	-0.68	0.46
411	9	-0.68	0.46
412	9	-0.68	0.46
413	9	-0.68	0.46
414	9	-0.68	0.46
415	9	-0.68	0.46
416	9	-0.68	0.46
417	9	-0.68	0.46
418	9	-0.68	0.46
419	9	-0.68	0.46
420	9	-0.68	0.46
421	9	-0.68	0.46
422	9	-0.68	0.46
423	9	-0.68	0.46
424	9	-0.68	0.46
425	9	-0.68	0.46
426	9	-0.68	0.46
427	9	-0.68	0.46
428	9	-0.68	0.46
429	9	-0.68	0.46
430	9	-0.68	0.46
431	9	-0.68	0.46
432	9	-0.68	0.46
433	9	-0.68	0.46
434	9	-0.68	0.46
435	9	-0.68	0.46
436	9	-0.68	0.46
437	9	-0.68	0.46
438	9	-0.68	0.46
439	9	-0.68	0.46
440	10	0.32	0.10
441	10	0.32	0.10
442	10	0.32	0.10
443	10	0.32	0.10
444	10	0.32	0.10
445	10	0.32	0.10
446	10	0.32	0.10
447	10	0.32	0.10
448	10	0.32	0.10
449	10	0.32	0.10
450	10	0.32	0.10
	461.0		19.1
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
451	10	0.32	0.10
452	10	0.32	0.10
453	10	0.32	0.10
454	10	0.32	0.10
455	10	0.32	0.10
456	10	0.32	0.10
457	10	0.32	0.10
458	10	0.32	0.10
459	10	0.32	0.10
460	10	0.32	0.10
461	10	0.32	0.10
462	10	0.32	0.10
463	10	0.32	0.10
464	10	0.32	0.10
465	10	0.32	0.10
466	10	0.32	0.10
467	10	0.32	0.10
468	10	0.32	0.10
469	10	0.32	0.10
470	10	0.32	0.10
471	10	0.32	0.10
472	10	0.32	0.10
473	10	0.32	0.10
474	10	0.32	0.10
475	10	0.32	0.10
476	10	0.32	0.10
477	10	0.32	0.10
478	10	0.32	0.10
479	10	0.32	0.10
480	10	0.32	0.10
481	10	0.32	0.10
482	11	1.32	1.75
483	11	1.32	1.75
484	11	1.32	1.75
485	11	1.32	1.75
486	11	1.32	1.75
487	11	1.32	1.75
488	11	1.32	1.75
489	11	1.32	1.75
490	11	1.32	1.75
491	11	1.32	1.75
492	11	1.32	1.75
493	11	1.32	1.75
494	11	1.32	1.75
495	11	1.32	1.75
496	11	1.32	1.75
497	11	1.32	1.75
498	11	1.32	1.75
499	11	1.32	1.75
500	11	1.32	1.75
	519.0		36.4
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
501	11	1.32	1.75
502	11	1.32	1.75
503	11	1.32	1.75
504	11	1.32	1.75
505	11	1.32	1.75
506	11	1.32	1.75
507	11	1.32	1.75
508	11	1.32	1.75
509	11	1.32	1.75
510	11	1.32	1.75
511	11	1.32	1.75
512	11	1.32	1.75
513	11	1.32	1.75
514	11	1.32	1.75
515	11	1.32	1.75
516	11	1.32	1.75
517	11	1.32	1.75
518	11	1.32	1.75
519	11	1.32	1.75
520	11	1.32	1.75
521	12	2.32	5.39
522	12	2.32	5.39
523	12	2.32	5.39
524	12	2.32	5.39
525	12	2.32	5.39
526	12	2.32	5.39
527	12	2.32	5.39
528	12	2.32	5.39
529	12	2.32	5.39
530	12	2.32	5.39
531	12	2.32	5.39
532	12	2.32	5.39
533	12	2.32	5.39
534	12	2.32	5.39
535	12	2.32	5.39
536	12	2.32	5.39
537	12	2.32	5.39
538	12	2.32	5.39
539	12	2.32	5.39
540	12	2.32	5.39
541	12	2.32	5.39
542	12	2.32	5.39
543	12	2.32	5.39
544	12	2.32	5.39
545	12	2.32	5.39
546	12	2.32	5.39
547	12	2.32	5.39
548	12	2.32	5.39
549	12	2.32	5.39
550	12	2.32	5.39
	580.0		196.5
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
551	12	2.32	5.39
552	12	2.32	5.39
553	12	2.32	5.39
554	13	3.32	11.03
555	13	3.32	11.03
556	13	3.32	11.03
557	13	3.32	11.03
558	13	3.32	11.03
559	13	3.32	11.03
560	13	3.32	11.03
561	13	3.32	11.03
562	13	3.32	11.03
563	13	3.32	11.03
564	13	3.32	11.03
565	13	3.32	11.03
566	13	3.32	11.03
567	13	3.32	11.03
568	13	3.32	11.03
569	13	3.32	11.03
570	13	3.32	11.03
571	13	3.32	11.03
572	13	3.32	11.03
573	13	3.32	11.03
574	14	4.32	18.67
575	14	4.32	18.67
576	14	4.32	18.67
577	14	4.32	18.67
578	14	4.32	18.67
579	14	4.32	18.67
580	14	4.32	18.67
581	14	4.32	18.67
582	14	4.32	18.67
583	14	4.32	18.67
584	14	4.32	18.67
585	14	4.32	18.67
586	14	4.32	18.67
587	14	4.32	18.67
588	14	4.32	18.67
589	14	4.32	18.67
590	14	4.32	18.67
591	14	4.32	18.67
592	14	4.32	18.67
593	14	4.32	18.67
594	14	4.32	18.67
595	14	4.32	18.67
596	14	4.32	18.67
597	14	4.32	18.67
598	14	4.32	18.67
599	14	4.32	18.67
600	14	4.32	18.67
	674.0		740.9
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
601	14	4.32	18.67
602	15	5.32	28.31
603	15	5.32	28.31
604	15	5.32	28.31
605	15	5.32	28.31
606	15	5.32	28.31
607	15	5.32	28.31
608	15	5.32	28.31
609	15	5.32	28.31
610	15	5.32	28.31
611	15	5.32	28.31
612	15	5.32	28.31
613	15	5.32	28.31
614	15	5.32	28.31
615	15	5.32	28.31
616	15	5.32	28.31
617	15	5.32	28.31
618	15	5.32	28.31
619	15	5.32	28.31
620	15	5.32	28.31
621	15	5.32	28.31
622	15	5.32	28.31
623	16	6.32	39.96
624	16	6.32	39.96
625	16	6.32	39.96
626	16	6.32	39.96
627	16	6.32	39.96
628	16	6.32	39.96
629	16	6.32	39.96
630	16	6.32	39.96
631	16	6.32	39.96
632	16	6.32	39.96
633	16	6.32	39.96
634	16	6.32	39.96
635	16	6.32	39.96
636	17	7.32	53.60
637	17	7.32	53.60
638	17	7.32	53.60
639	17	7.32	53.60
640	17	7.32	53.60
641	17	7.32	53.60
642	17	7.32	53.60
643	17	7.32	53.60
644	17	7.32	53.60
645	17	7.32	53.60
646	18	8.32	69.24
647	18	8.32	69.24
648	18	8.32	69.24
649	18	8.32	69.24
650	18	8.32	69.24
	797.0		2014.9
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
651	18	8.32	69.24
652	18	8.32	69.24
653	18	8.32	69.24
654	18	8.32	69.24
655	18	8.32	69.24
656	18	8.32	69.24
657	18	8.32	69.24
658	18	8.32	69.24
659	18	8.32	69.24
660	18	8.32	69.24
661	19	9.32	86.88
662	19	9.32	86.88
663	19	9.32	86.88
664	19	9.32	86.88
665	19	9.32	86.88
666	19	9.32	86.88
667	20	10.32	106.53
668	20	10.32	106.53
669	20	10.32	106.53
670	20	10.32	106.53
671	21	11.32	128.17
672	21	11.32	128.17
673	22	12.32	151.81
674	22	12.32	151.81
675	22	12.32	151.81
676	22	12.32	151.81
677	22	12.32	151.81
678	22	12.32	151.81
679	22	12.32	151.81
680	22	12.32	151.81
681	22	12.32	151.81
682	22	12.32	151.81
683	23	13.32	177.45
684	23	13.32	177.45
685	23	13.32	177.45
686	23	13.32	177.45
687	23	13.32	177.45
688	24	14.32	205.09
689	24	14.32	205.09
690	24	14.32	205.09
691	24	14.32	205.09
692	24	14.32	205.09
693	24	14.32	205.09
694	25	15.32	234.74
695	25	15.32	234.74
696	25	15.32	234.74
697	25	15.32	234.74
698	26	16.32	266.38
699	26	16.32	266.38
700	26	16.32	266.38
	1073.0		7270.2
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
701	26	16.32	266.38
702	27	17.32	300.02
703	27	17.32	300.02
704	27	17.32	300.02
705	27	17.32	300.02
706	27	17.32	300.02
707	27	17.32	300.02
708	28	18.32	335.66
709	28	18.32	335.66
710	31	21.32	454.59
711	0.0	0.00	0.00
712	0.0	0.00	0.00
713	0.0	0.00	0.00
714	0.0	0.00	0.00
715	0.0	0.00	0.00
716	0.0	0.00	0.00
717	0.0	0.00	0.00
718	0.0	0.00	0.00
719	0.0	0.00	0.00
720	0.0	0.00	0.00
721	0.0	0.00	0.00
722	0.0	0.00	0.00
723	0.0	0.00	0.00
724	0.0	0.00	0.00
725	0.0	0.00	0.00
726	0.0	0.00	0.00
727	0.0	0.00	0.00
728	0.0	0.00	0.00
729	0.0	0.00	0.00
730	0.0	0.00	0.00
731	0.0	0.00	0.00
732	0.0	0.00	0.00
733	0.0	0.00	0.00
734	0.0	0.00	0.00
735	0.0	0.00	0.00
736	0.0	0.00	0.00
737	0.0	0.00	0.00
738	0.0	0.00	0.00
739	0.0	0.00	0.00
740	0.0	0.00	0.00
741	0.0	0.00	0.00
742	0.0	0.00	0.00
743	0.0	0.00	0.00
744	0.0	0.00	0.00
745	0.0	0.00	0.00
746	0.0	0.00	0.00
747	0.0	0.00	0.00
748	0.0	0.00	0.00
749	0.0	0.00	0.00
750	0.0	0.00	0.00
	275.0		3192.4
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
1	1	-0.3	0.1
2	1	-0.3	0.1
3	1	-0.3	0.1
4	1	-0.3	0.1
5	1	-0.3	0.1
6	1	-0.3	0.1
7	1	-0.3	0.1
8	1	-0.3	0.1
9	1	-0.3	0.1
10	1	-0.3	0.1
11	1	-0.3	0.1
12	1	-0.3	0.1
13	1	-0.3	0.1
14	1	-0.3	0.1
15	1	-0.3	0.1
16	1	-0.3	0.1
17	1	-0.3	0.1
18	1	-0.3	0.1
19	1	-0.3	0.1
20	1	-0.3	0.1
21	1	-0.3	0.1
22	1	-0.3	0.1
23	1	-0.3	0.1
24	1	-0.3	0.1
25	1	-0.3	0.1
26	1	-0.3	0.1
27	1	-0.3	0.1
28	1	-0.3	0.1
29	1	-0.3	0.1
30	1	-0.3	0.1
31	1	-0.3	0.1
32	1	-0.3	0.1
33	1	-0.3	0.1
34	1	-0.3	0.1
35	1	-0.3	0.1
36	1	-0.3	0.1
37	1	-0.3	0.1
38	1	-0.3	0.1
39	1	-0.3	0.1
40	1	-0.3	0.1
41	1	-0.3	0.1
42	1	-0.3	0.1
43	1	-0.3	0.1
44	1	-0.3	0.1
45	1	-0.3	0.1
46	1	-0.3	0.1
47	1	-0.3	0.1
48	1	-0.3	0.1
49	1	-0.3	0.1
50	1	-0.3	0.1
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	50.0		3.8
	75.0		15.0
	100.0		26.1
	100.0		26.1
	102.0		31.0
	30.0		29.7
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
total	907		166.3
	Sum(n)		Sum(n-N)²

No. of Samples (x) : 710

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)
Sample Mean (N) : 1.28

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: 0.48
2 Std Deviations: 0.97
Degree of Freedom(df).= (x) - 1 Data listed on Table B-1
(df) = 1.645

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = 1.31 pCi/gTh (NAT)
GUIDELINE VALUE: 10 pCi/gTh (NAT)
Acceptable Level: 4.0 pCi/gTh (NAT)

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	709	is calculated as follow:		
EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]				
The (df) value for (X)	709	1.645	95%	

PERFORMED BY: [signature] DATE: 12-18-01

REVIEWED BY: W.A. Rogers DATE: 12-18-01

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
51	1	-0.28	0.08
52	1	-0.28	0.08
53	1	-0.28	0.08
54	1	-0.28	0.08
55	1	-0.28	0.08
56	1	-0.28	0.08
57	1	-0.28	0.08
58	1	-0.28	0.08
59	1	-0.28	0.08
60	1	-0.28	0.08
61	1	-0.28	0.08
62	1	-0.28	0.08
63	1	-0.28	0.08
64	1	-0.28	0.08
65	1	-0.28	0.08
66	1	-0.28	0.08
67	1	-0.28	0.08
68	1	-0.28	0.08
69	1	-0.28	0.08
70	1	-0.28	0.08
71	1	-0.28	0.08
72	1	-0.28	0.08
73	1	-0.28	0.08
74	1	-0.28	0.08
75	1	-0.28	0.08
76	1	-0.28	0.08
77	1	-0.28	0.08
78	1	-0.28	0.08
79	1	-0.28	0.08
80	1	-0.28	0.08
81	1	-0.28	0.08
82	1	-0.28	0.08
83	1	-0.28	0.08
84	1	-0.28	0.08
85	1	-0.28	0.08
86	1	-0.28	0.08
87	1	-0.28	0.08
88	1	-0.28	0.08
89	1	-0.28	0.08
90	1	-0.28	0.08
91	1	-0.28	0.08
92	1	-0.28	0.08
93	1	-0.28	0.08
94	1	-0.28	0.08
95	1	-0.28	0.08
96	1	-0.28	0.08
97	1	-0.28	0.08
98	1	-0.28	0.08
99	1	-0.28	0.08
100	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
101	1	-0.28	0.08
102	1	-0.28	0.08
103	1	-0.28	0.08
104	1	-0.28	0.08
105	1	-0.28	0.08
106	1	-0.28	0.08
107	1	-0.28	0.08
108	1	-0.28	0.08
109	1	-0.28	0.08
110	1	-0.28	0.08
111	1	-0.28	0.08
112	1	-0.28	0.08
113	1	-0.28	0.08
114	1	-0.28	0.08
115	1	-0.28	0.08
116	1	-0.28	0.08
117	1	-0.28	0.08
118	1	-0.28	0.08
119	1	-0.28	0.08
120	1	-0.28	0.08
121	1	-0.28	0.08
122	1	-0.28	0.08
123	1	-0.28	0.08
124	1	-0.28	0.08
125	1	-0.28	0.08
126	1	-0.28	0.08
127	1	-0.28	0.08
128	1	-0.28	0.08
129	1	-0.28	0.08
130	1	-0.28	0.08
131	1	-0.28	0.08
132	1	-0.28	0.08
133	1	-0.28	0.08
134	1	-0.28	0.08
135	1	-0.28	0.08
136	1	-0.28	0.08
137	1	-0.28	0.08
138	1	-0.28	0.08
139	1	-0.28	0.08
140	1	-0.28	0.08
141	1	-0.28	0.08
142	1	-0.28	0.08
143	1	-0.28	0.08
144	1	-0.28	0.08
145	1	-0.28	0.08
146	1	-0.28	0.08
147	1	-0.28	0.08
148	1	-0.28	0.08
149	1	-0.28	0.08
150	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

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TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
151	1	-0.28	0.08
152	1	-0.28	0.08
153	1	-0.28	0.08
154	1	-0.28	0.08
155	1	-0.28	0.08
156	1	-0.28	0.08
157	1	-0.28	0.08
158	1	-0.28	0.08
159	1	-0.28	0.08
160	1	-0.28	0.08
161	1	-0.28	0.08
162	1	-0.28	0.08
163	1	-0.28	0.08
164	1	-0.28	0.08
165	1	-0.28	0.08
166	1	-0.28	0.08
167	1	-0.28	0.08
168	1	-0.28	0.08
169	1	-0.28	0.08
170	1	-0.28	0.08
171	1	-0.28	0.08
172	1	-0.28	0.08
173	1	-0.28	0.08
174	1	-0.28	0.08
175	1	-0.28	0.08
176	1	-0.28	0.08
177	1	-0.28	0.08
178	1	-0.28	0.08
179	1	-0.28	0.08
180	1	-0.28	0.08
181	1	-0.28	0.08
182	1	-0.28	0.08
183	1	-0.28	0.08
184	1	-0.28	0.08
185	1	-0.28	0.08
186	1	-0.28	0.08
187	1	-0.28	0.08
188	1	-0.28	0.08
189	1	-0.28	0.08
190	1	-0.28	0.08
191	1	-0.28	0.08
192	1	-0.28	0.08
193	1	-0.28	0.08
194	1	-0.28	0.08
195	1	-0.28	0.08
196	1	-0.28	0.08
197	1	-0.28	0.08
198	1	-0.28	0.08
199	1	-0.28	0.08
200	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
201	1	-0.28	0.08
202	1	-0.28	0.08
203	1	-0.28	0.08
204	1	-0.28	0.08
205	1	-0.28	0.08
206	1	-0.28	0.08
207	1	-0.28	0.08
208	1	-0.28	0.08
209	1	-0.28	0.08
210	1	-0.28	0.08
211	1	-0.28	0.08
212	1	-0.28	0.08
213	1	-0.28	0.08
214	1	-0.28	0.08
215	1	-0.28	0.08
216	1	-0.28	0.08
217	1	-0.28	0.08
218	1	-0.28	0.08
219	1	-0.28	0.08
220	1	-0.28	0.08
221	1	-0.28	0.08
222	1	-0.28	0.08
223	1	-0.28	0.08
224	1	-0.28	0.08
225	1	-0.28	0.08
226	1	-0.28	0.08
227	1	-0.28	0.08
228	1	-0.28	0.08
229	1	-0.28	0.08
230	1	-0.28	0.08
231	1	-0.28	0.08
232	1	-0.28	0.08
233	1	-0.28	0.08
234	1	-0.28	0.08
235	1	-0.28	0.08
236	1	-0.28	0.08
237	1	-0.28	0.08
238	1	-0.28	0.08
239	1	-0.28	0.08
240	1	-0.28	0.08
241	1	-0.28	0.08
242	1	-0.28	0.08
243	1	-0.28	0.08
244	1	-0.28	0.08
245	1	-0.28	0.08
246	1	-0.28	0.08
247	1	-0.28	0.08
248	1	-0.28	0.08
249	1	-0.28	0.08
250	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

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PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
251	1	-0.28	0.08
252	1	-0.28	0.08
253	1	-0.28	0.08
254	1	-0.28	0.08
255	1	-0.28	0.08
256	1	-0.28	0.08
257	1	-0.28	0.08
258	1	-0.28	0.08
259	1	-0.28	0.08
260	1	-0.28	0.08
261	1	-0.28	0.08
262	1	-0.28	0.08
263	1	-0.28	0.08
264	1	-0.28	0.08
265	1	-0.28	0.08
266	1	-0.28	0.08
267	1	-0.28	0.08
268	1	-0.28	0.08
269	1	-0.28	0.08
270	1	-0.28	0.08
271	1	-0.28	0.08
272	1	-0.28	0.08
273	1	-0.28	0.08
274	1	-0.28	0.08
275	1	-0.28	0.08
276	1	-0.28	0.08
277	1	-0.28	0.08
278	1	-0.28	0.08
279	1	-0.28	0.08
280	1	-0.28	0.08
281	1	-0.28	0.08
282	1	-0.28	0.08
283	1	-0.28	0.08
284	1	-0.28	0.08
285	1	-0.28	0.08
286	1	-0.28	0.08
287	1	-0.28	0.08
288	1	-0.28	0.08
289	1	-0.28	0.08
290	1	-0.28	0.08
291	1	-0.28	0.08
292	1	-0.28	0.08
293	1	-0.28	0.08
294	1	-0.28	0.08
295	1	-0.28	0.08
296	1	-0.28	0.08
297	1	-0.28	0.08
298	1	-0.28	0.08
299	1	-0.28	0.08
300	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
301	1	-0.28	0.08
302	1	-0.28	0.08
303	1	-0.28	0.08
304	1	-0.28	0.08
305	1	-0.28	0.08
306	1	-0.28	0.08
307	1	-0.28	0.08
308	1	-0.28	0.08
309	1	-0.28	0.08
310	1	-0.28	0.08
311	1	-0.28	0.08
312	1	-0.28	0.08
313	1	-0.28	0.08
314	1	-0.28	0.08
315	1	-0.28	0.08
316	1	-0.28	0.08
317	1	-0.28	0.08
318	1	-0.28	0.08
319	1	-0.28	0.08
320	1	-0.28	0.08
321	1	-0.28	0.08
322	1	-0.28	0.08
323	1	-0.28	0.08
324	1	-0.28	0.08
325	1	-0.28	0.08
326	1	-0.28	0.08
327	1	-0.28	0.08
328	1	-0.28	0.08
329	1	-0.28	0.08
330	1	-0.28	0.08
331	1	-0.28	0.08
332	1	-0.28	0.08
333	1	-0.28	0.08
334	1	-0.28	0.08
335	1	-0.28	0.08
336	1	-0.28	0.08
337	1	-0.28	0.08
338	1	-0.28	0.08
339	1	-0.28	0.08
340	1	-0.28	0.08
341	1	-0.28	0.08
342	1	-0.28	0.08
343	1	-0.28	0.08
344	1	-0.28	0.08
345	1	-0.28	0.08
346	1	-0.28	0.08
347	1	-0.28	0.08
348	1	-0.28	0.08
349	1	-0.28	0.08
350	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

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PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
351	1	0.00	0.00
352	1	-0.28	0.08
353	1	-0.28	0.08
354	1	-0.28	0.08
355	1	-0.28	0.08
356	1	-0.28	0.08
357	1	-0.28	0.08
358	1	-0.28	0.08
359	1	-0.28	0.08
360	1	-0.28	0.08
361	1	-0.28	0.08
362	1	-0.28	0.08
363	1	-0.28	0.08
364	1	-0.28	0.08
365	1	-0.28	0.08
366	1	-0.28	0.08
367	1	-0.28	0.08
368	1	-0.28	0.08
369	1	-0.28	0.08
370	1	-0.28	0.08
371	1	-0.28	0.08
372	1	-0.28	0.08
373	1	-0.28	0.08
374	1	-0.28	0.08
375	1	-0.28	0.08
376	1	-0.28	0.08
377	1	-0.28	0.08
378	1	-0.28	0.08
379	1	-0.28	0.08
380	1	-0.28	0.08
381	1	-0.28	0.08
382	1	-0.28	0.08
383	1	-0.28	0.08
384	1	-0.28	0.08
385	1	-0.28	0.08
386	1	-0.28	0.08
387	1	-0.28	0.08
388	1	-0.28	0.08
389	1	-0.28	0.08
390	1	-0.28	0.08
391	1	-0.28	0.08
392	1	-0.28	0.08
393	1	-0.28	0.08
394	1	-0.28	0.08
395	1	-0.28	0.08
396	1	-0.28	0.08
397	1	-0.28	0.08
398	1	-0.28	0.08
399	1	-0.28	0.08
400	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
401	1	-0.28	0.08
402	1	-0.28	0.08
403	1	-0.28	0.08
404	1	-0.28	0.08
405	1	-0.28	0.08
406	1	-0.28	0.08
407	1	-0.28	0.08
408	1	-0.28	0.08
409	1	-0.28	0.08
410	1	-0.28	0.08
411	1	-0.28	0.08
412	1	-0.28	0.08
413	1	-0.28	0.08
414	1	-0.28	0.08
415	1	-0.28	0.08
416	1	-0.28	0.08
417	1	-0.28	0.08
418	1	-0.28	0.08
419	1	-0.28	0.08
420	1	-0.28	0.08
421	1	-0.28	0.08
422	1	-0.28	0.08
423	1	-0.28	0.08
424	1	-0.28	0.08
425	1	-0.28	0.08
426	1	-0.28	0.08
427	1	-0.28	0.08
428	1	-0.28	0.08
429	1	-0.28	0.08
430	1	-0.28	0.08
431	1	-0.28	0.08
432	1	-0.28	0.08
433	1	-0.28	0.08
434	1	-0.28	0.08
435	1	-0.28	0.08
436	1	-0.28	0.08
437	1	-0.28	0.08
438	1	-0.28	0.08
439	1	-0.28	0.08
440	1	-0.28	0.08
441	1	-0.28	0.08
442	1	-0.28	0.08
443	1	-0.28	0.08
444	1	-0.28	0.08
445	1	-0.28	0.08
446	1	-0.28	0.08
447	1	-0.28	0.08
448	1	-0.28	0.08
449	1	-0.28	0.08
450	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

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TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
451	1	-0.28	0.08
452	1	-0.28	0.08
453	1	-0.28	0.08
454	1	-0.28	0.08
455	1	-0.28	0.08
456	1	-0.28	0.08
457	1	-0.28	0.08
458	1	-0.28	0.08
459	1	-0.28	0.08
460	1	-0.28	0.08
461	1	-0.28	0.08
462	1	-0.28	0.08
463	1	-0.28	0.08
464	1	-0.28	0.08
465	1	-0.28	0.08
466	1	-0.28	0.08
467	1	-0.28	0.08
468	1	-0.28	0.08
469	1	-0.28	0.08
470	1	-0.28	0.08
471	1	-0.28	0.08
472	1	-0.28	0.08
473	1	-0.28	0.08
474	1	-0.28	0.08
475	1	-0.28	0.08
476	1	-0.28	0.08
477	1	-0.28	0.08
478	1	-0.28	0.08
479	1	-0.28	0.08
480	1	-0.28	0.08
481	1	-0.28	0.08
482	1	-0.28	0.08
483	1	-0.28	0.08
484	1	-0.28	0.08
485	1	-0.28	0.08
486	1	-0.28	0.08
487	1	-0.28	0.08
488	1	-0.28	0.08
489	1	-0.28	0.08
490	1	-0.28	0.08
491	1	-0.28	0.08
492	1	-0.28	0.08
493	1	-0.28	0.08
494	1	-0.28	0.08
495	1	-0.28	0.08
496	1	-0.28	0.08
497	1	-0.28	0.08
498	1	-0.28	0.08
499	1	-0.28	0.08
500	1	-0.28	0.08
	50.0		3.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
501	1	-0.28	0.08
502	1	-0.28	0.08
503	1	-0.28	0.08
504	1	-0.28	0.08
505	1	-0.28	0.08
506	1	-0.28	0.08
507	1	-0.28	0.08
508	1	-0.28	0.08
509	1	-0.28	0.08
510	1	-0.28	0.08
511	1	-0.28	0.08
512	1	-0.28	0.08
513	1	-0.28	0.08
514	1	-0.28	0.08
515	1	-0.28	0.08
516	1	-0.28	0.08
517	1	-0.28	0.08
518	1	-0.28	0.08
519	1	-0.28	0.08
520	1	-0.28	0.08
521	1	-0.28	0.08
522	1	-0.28	0.08
523	1	-0.28	0.08
524	1	-0.28	0.08
525	1	-0.28	0.08
526	2	0.72	0.52
527	2	0.72	0.52
528	2	0.72	0.52
529	2	0.72	0.52
530	2	0.72	0.52
531	2	0.72	0.52
532	2	0.72	0.52
533	2	0.72	0.52
534	2	0.72	0.52
535	2	0.72	0.52
536	2	0.72	0.52
537	2	0.72	0.52
538	2	0.72	0.52
539	2	0.72	0.52
540	2	0.72	0.52
541	2	0.72	0.52
542	2	0.72	0.52
543	2	0.72	0.52
544	2	0.72	0.52
545	2	0.72	0.52
546	2	0.72	0.52
547	2	0.72	0.52
548	2	0.72	0.52
549	2	0.72	0.52
550	2	0.72	0.52
	75.0		15.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
551	2	0.72	0.52
552	2	0.72	0.52
553	2	0.72	0.52
554	2	0.72	0.52
555	2	0.72	0.52
556	2	0.72	0.52
557	2	0.72	0.52
558	2	0.72	0.52
559	2	0.72	0.52
560	2	0.72	0.52
561	2	0.72	0.52
562	2	0.72	0.52
563	2	0.72	0.52
564	2	0.72	0.52
565	2	0.72	0.52
566	2	0.72	0.52
567	2	0.72	0.52
568	2	0.72	0.52
569	2	0.72	0.52
570	2	0.72	0.52
571	2	0.72	0.52
572	2	0.72	0.52
573	2	0.72	0.52
574	2	0.72	0.52
575	2	0.72	0.52
576	2	0.72	0.52
577	2	0.72	0.52
578	2	0.72	0.52
579	2	0.72	0.52
580	2	0.72	0.52
581	2	0.72	0.52
582	2	0.72	0.52
583	2	0.72	0.52
584	2	0.72	0.52
585	2	0.72	0.52
586	2	0.72	0.52
587	2	0.72	0.52
588	2	0.72	0.52
589	2	0.72	0.52
590	2	0.72	0.52
591	2	0.72	0.52
592	2	0.72	0.52
593	2	0.72	0.52
594	2	0.72	0.52
595	2	0.72	0.52
596	2	0.72	0.52
597	2	0.72	0.52
598	2	0.72	0.52
599	2	0.72	0.52
600	2	0.72	0.52
	100.0		26.1
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
601	2	0.72	0.52
602	2	0.72	0.52
603	2	0.72	0.52
604	2	0.72	0.52
605	2	0.72	0.52
606	2	0.72	0.52
607	2	0.72	0.52
608	2	0.72	0.52
609	2	0.72	0.52
610	2	0.72	0.52
611	2	0.72	0.52
612	2	0.72	0.52
613	2	0.72	0.52
614	2	0.72	0.52
615	2	0.72	0.52
616	2	0.72	0.52
617	2	0.72	0.52
618	2	0.72	0.52
619	2	0.72	0.52
620	2	0.72	0.52
621	2	0.72	0.52
622	2	0.72	0.52
623	2	0.72	0.52
624	2	0.72	0.52
625	2	0.72	0.52
626	2	0.72	0.52
627	2	0.72	0.52
628	2	0.72	0.52
629	2	0.72	0.52
630	2	0.72	0.52
631	2	0.72	0.52
632	2	0.72	0.52
633	2	0.72	0.52
634	2	0.72	0.52
635	2	0.72	0.52
636	2	0.72	0.52
637	2	0.72	0.52
638	2	0.72	0.52
639	2	0.72	0.52
640	2	0.72	0.52
641	2	0.72	0.52
642	2	0.72	0.52
643	2	0.72	0.52
644	2	0.72	0.52
645	2	0.72	0.52
646	2	0.72	0.52
647	2	0.72	0.52
648	2	0.72	0.52
649	2	0.72	0.52
650	2	0.72	0.52
	100.0		26.1
	Sum(n)		Sum(n-N)²

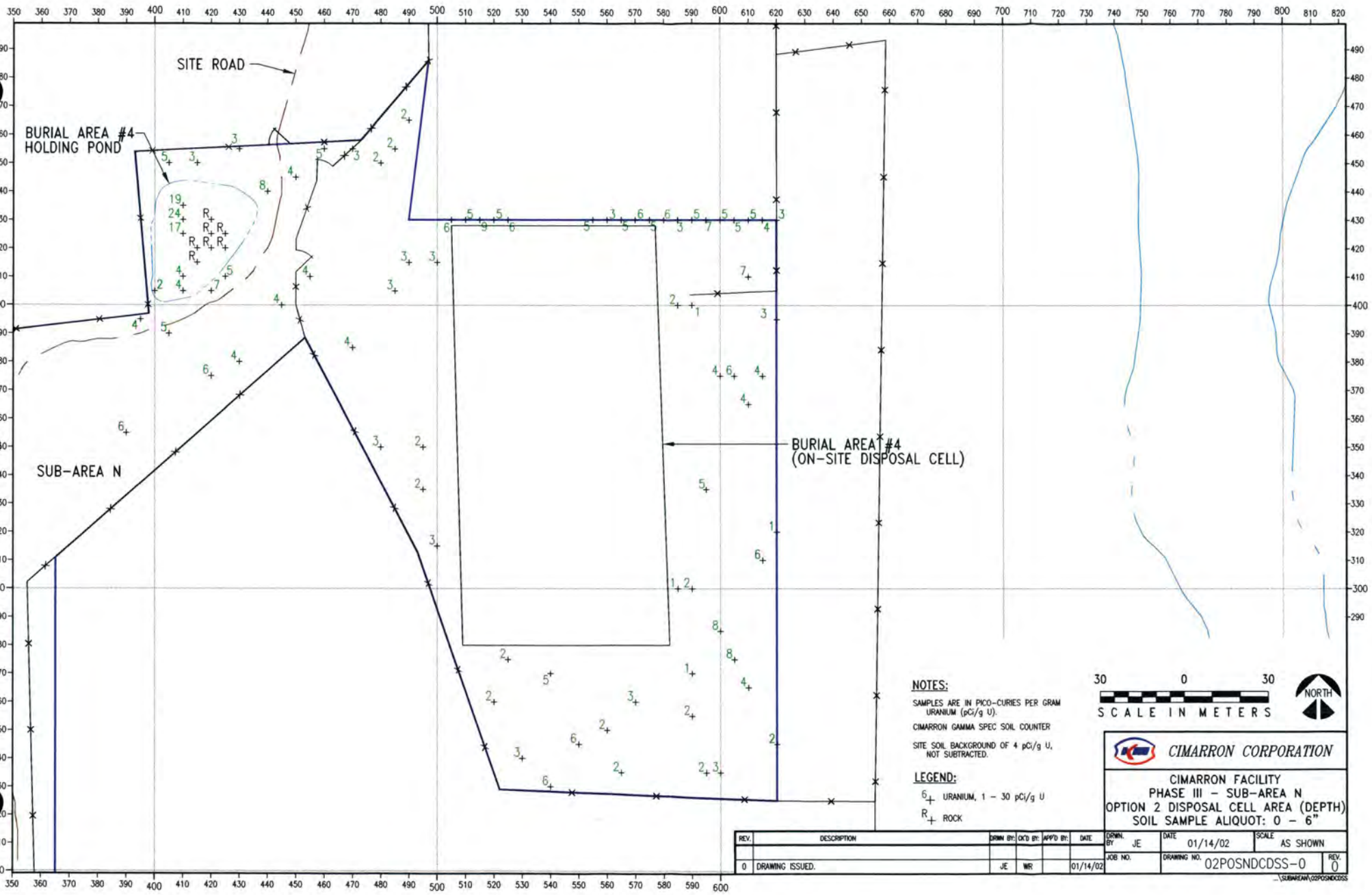
CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPEN LAND AREA

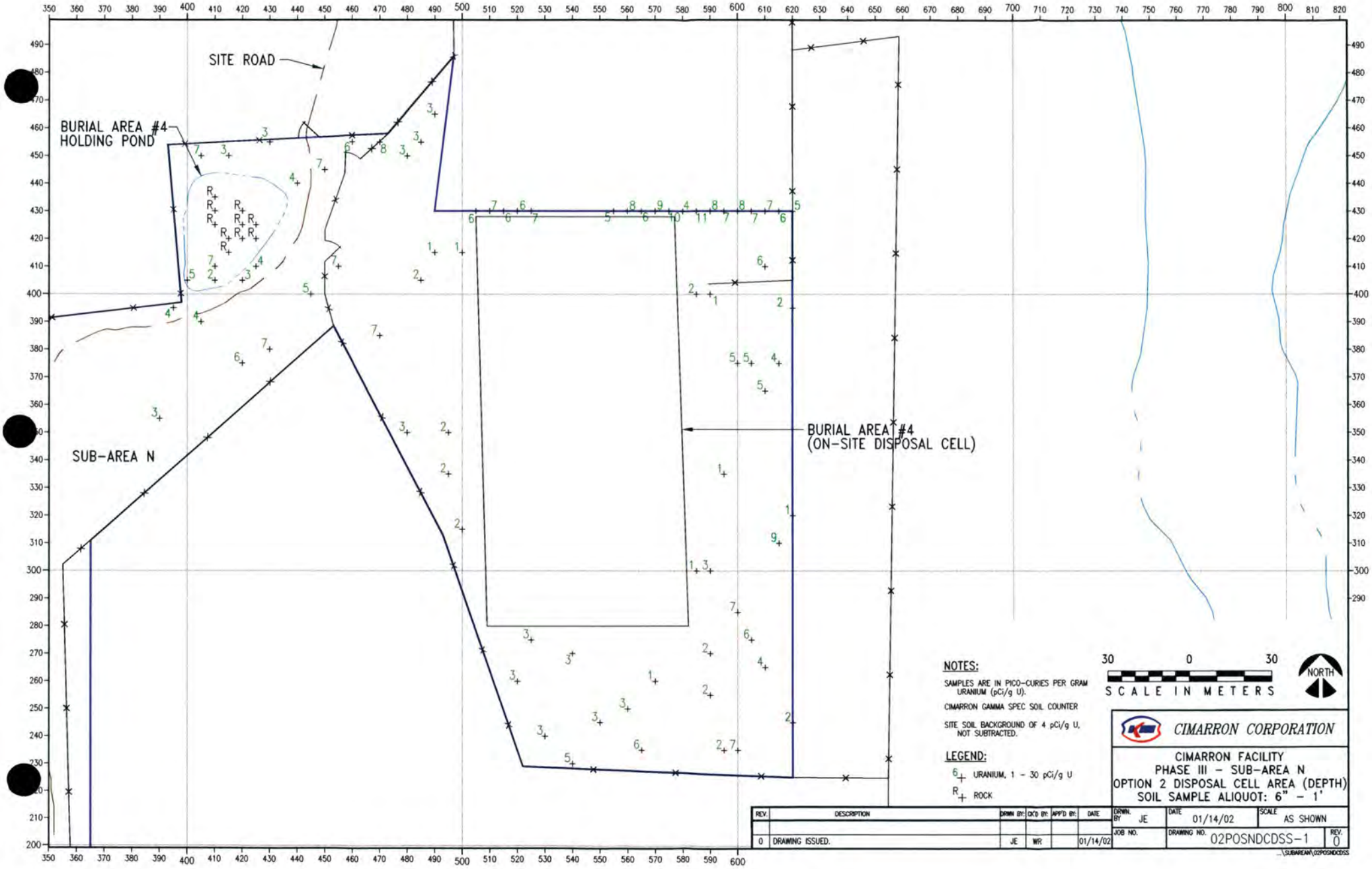
n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
651	2	0.72	0.52
652	2	0.72	0.52
653	2	0.72	0.52
654	2	0.72	0.52
655	2	0.72	0.52
656	2	0.72	0.52
657	2	0.72	0.52
658	2	0.72	0.52
659	2	0.72	0.52
660	2	0.72	0.52
661	2	0.72	0.52
662	2	0.72	0.52
663	2	0.72	0.52
664	2	0.72	0.52
665	2	0.72	0.52
666	2	0.72	0.52
667	2	0.72	0.52
668	2	0.72	0.52
669	2	0.72	0.52
670	2	0.72	0.52
671	2	0.72	0.52
672	2	0.72	0.52
673	2	0.72	0.52
674	2	0.72	0.52
675	2	0.72	0.52
676	2	0.72	0.52
677	2	0.72	0.52
678	2	0.72	0.52
679	2	0.72	0.52
680	2	0.72	0.52
681	2	0.72	0.52
682	2	0.72	0.52
683	2	0.72	0.52
684	2	0.72	0.52
685	2	0.72	0.52
686	2	0.72	0.52
687	2	0.72	0.52
688	2	0.72	0.52
689	2	0.72	0.52
690	2	0.72	0.52
691	2	0.72	0.52
692	2	0.72	0.52
693	2	0.72	0.52
694	2	0.72	0.52
695	2	0.72	0.52
696	2	0.72	0.52
697	2	0.72	0.52
698	2	0.72	0.52
699	3	1.72	2.97
700	3	1.72	2.97
	102.0		31.0
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
701	3	1.72	2.97
702	3	1.72	2.97
703	3	1.72	2.97
704	3	1.72	2.97
705	3	1.72	2.97
706	3	1.72	2.97
707	3	1.72	2.97
708	3	1.72	2.97
709	3	1.72	2.97
710	3	1.72	2.97
711	0.0	0.00	0.00
712	0.0	0.00	0.00
713	0.0	0.00	0.00
714	0.0	0.00	0.00
715	0.0	0.00	0.00
716	0.0	0.00	0.00
717	0.0	0.00	0.00
718	0.0	0.00	0.00
719	0.0	0.00	0.00
720	0.0	0.00	0.00
721	0.0	0.00	0.00
722	0.0	0.00	0.00
723	0.0	0.00	0.00
724	0.0	0.00	0.00
725	0.0	0.00	0.00
726	0.0	0.00	0.00
727	0.0	0.00	0.00
728	0.0	0.00	0.00
729	0.0	0.00	0.00
730	0.0	0.00	0.00
731	0.0	0.00	0.00
732	0.0	0.00	0.00
733	0.0	0.00	0.00
734	0.0	0.00	0.00
735	0.0	0.00	0.00
736	0.0	0.00	0.00
737	0.0	0.00	0.00
738	0.0	0.00	0.00
739	0.0	0.00	0.00
740	0.0	0.00	0.00
741	0.0	0.00	0.00
742	0.0	0.00	0.00
743	0.0	0.00	0.00
744	0.0	0.00	0.00
745	0.0	0.00	0.00
746	0.0	0.00	0.00
747	0.0	0.00	0.00
748	0.0	0.00	0.00
749	0.0	0.00	0.00
750	0.0	0.00	0.00
	30.0		29.7
	Sum(n)		Sum(n-N)²

APPENDIX 3 – OPTION 2 ON-SITE DISPOSAL CELL AREA FSS DATA - DRAWINGS, DATA TABLES, GRAPHS,


SITE ROAD
BURIAL AREA #4
HOLDING POND
SUB-AREA N
BURIAL AREA #4
(ON-SITE DISPOSAL CELL)
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.
LEGEND:
6 URANIUM, 1 - 30 pCi/g U
R ROCK
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 0 - 6"
REV. | DESCRIPTION | DRWN BY: | CK'D BY: | APP'D BY: | DATE
0 | DRAWING ISSUED. | JE | WR | | 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNDCDSS-0
REV. 0
\SUBAREAN\02POSNDCDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6_+ URANIUM, 1 - 30 pCi/g U

R_+ ROCK

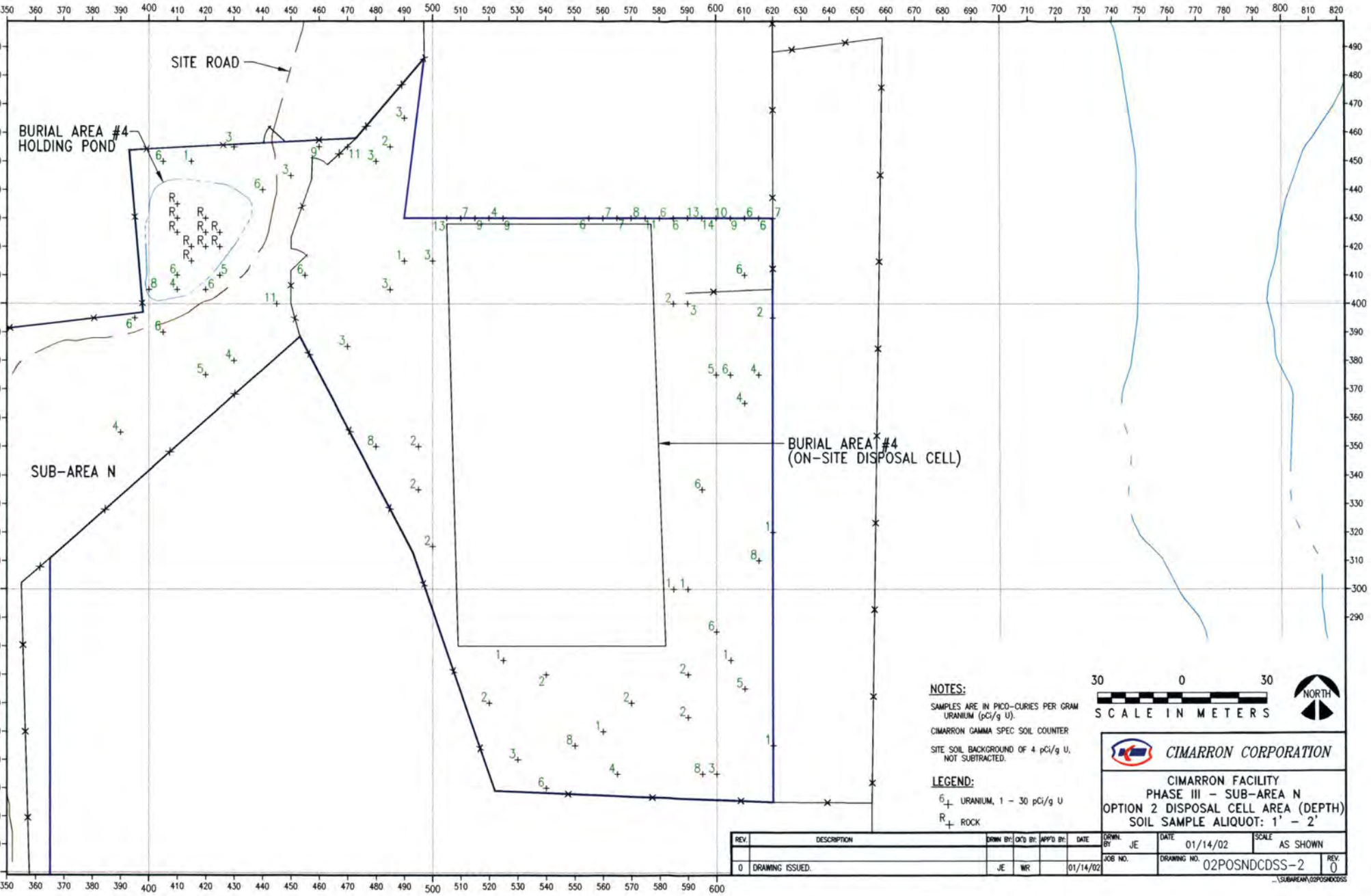
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 6" - 1'

REV.	DESCRIPTION	DRWN BY:	QC'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO. 02POSNDCDSS-1	REV. 0

_\SUBAREAN\02POSNDCDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6_+ URANIUM, 1 - 30 pCi/g U

R_+ ROCK

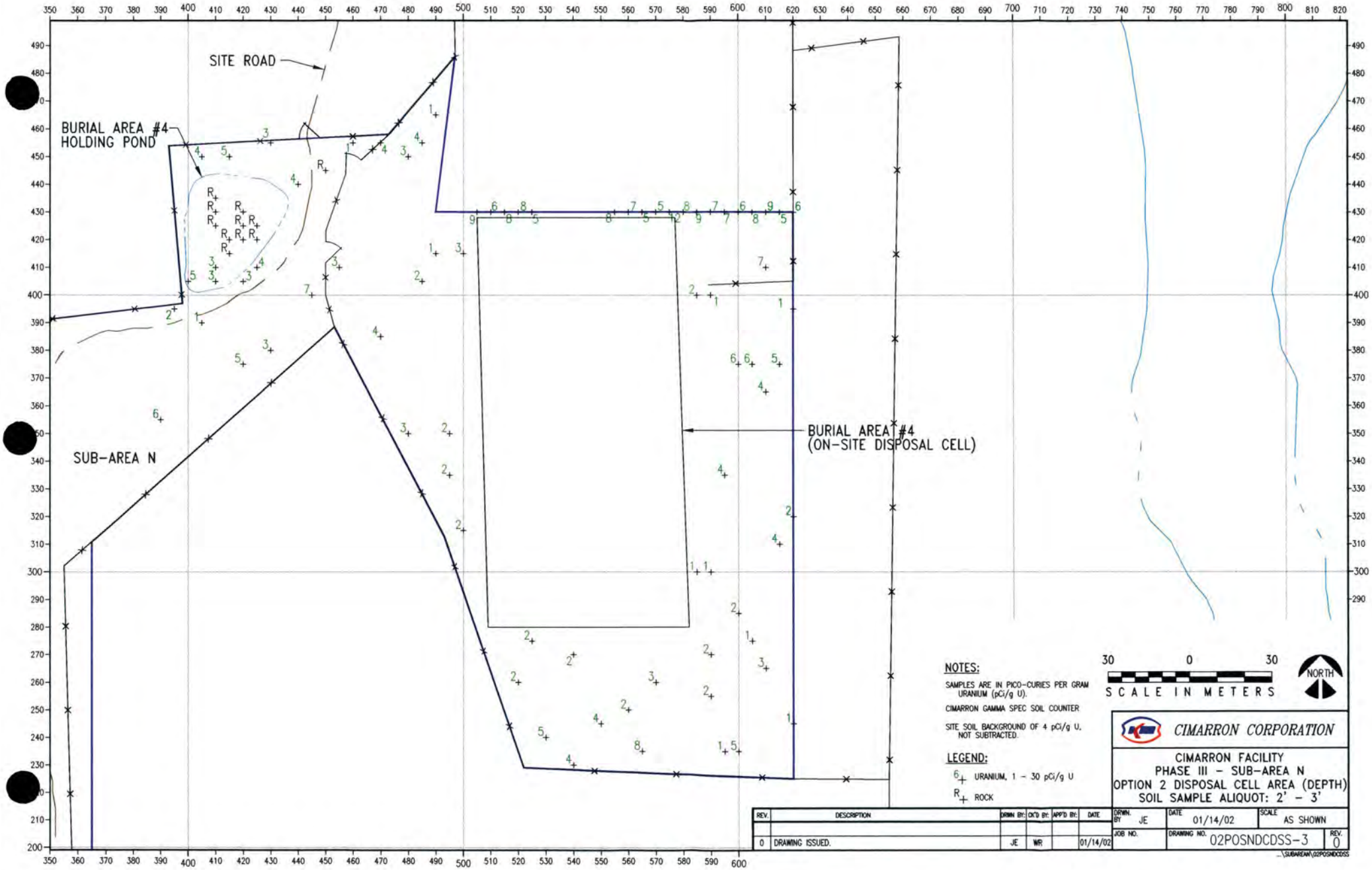
CIMARRON CORPORATION

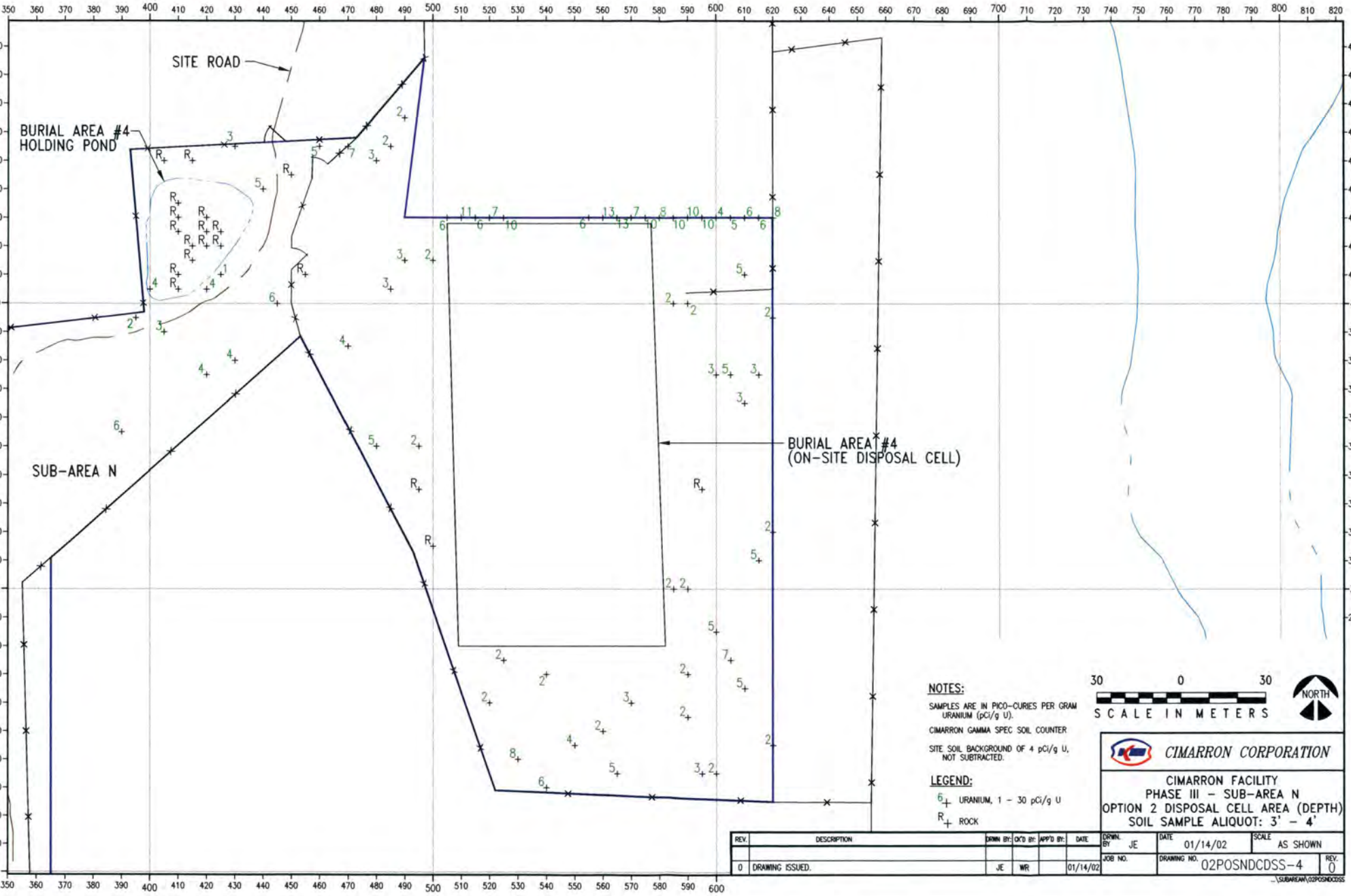
CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 1' - 2'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO. 02POSNDCDSS-2	REV. 0

..\SUBAREAN\02POSNDCDSS


SITE ROAD
BURIAL AREA #4
HOLDING POND
SUB-AREA N
BURIAL AREA #4
(ON-SITE DISPOSAL CELL)
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U. NOT SUBTRACTED.
LEGEND:
6+ URANIUM, 1 - 30 pCi/g U
R+ ROCK
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 2' - 3'
REV. | DESCRIPTION | DRWN BY: | CK'D BY: | APP'D BY: | DATE
0 | DRAWING ISSUED. | JE | WR | | 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNDCDSS-3
REV. 0
...\SUBAREAN\02POSNDCDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

R+ ROCK

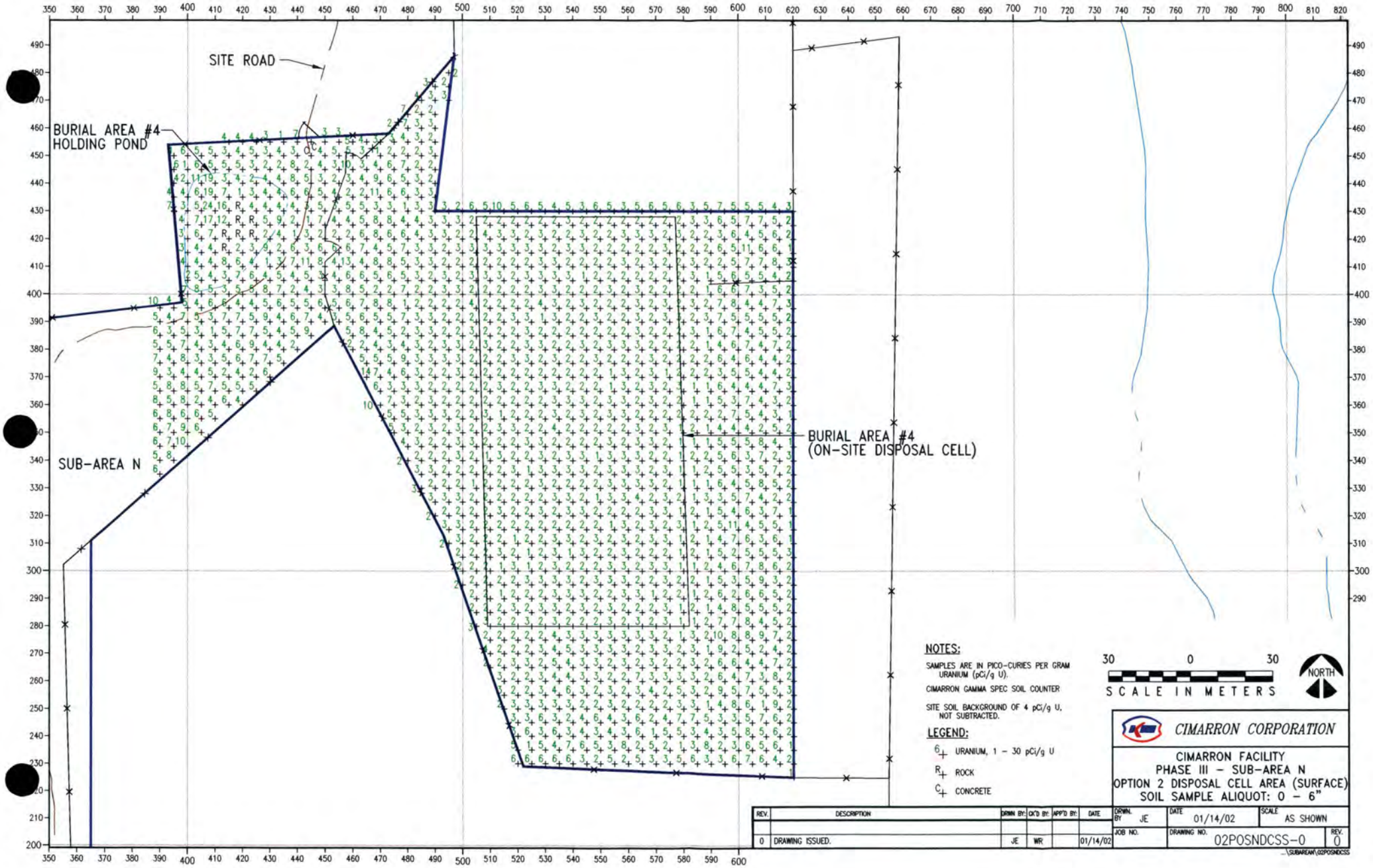
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (DEPTH)
SOIL SAMPLE ALIQUOT: 3' - 4'

REV.	DESCRIPTION	DRWN BY:	QC'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO. 02POSNDCDSS-4	REV. 0

...\SUBAREAN\02POSNDCDSS


SITE ROAD
BURIAL AREA #4
HOLDING POND
SUB-AREA N
BURIAL AREA #4
(ON-SITE DISPOSAL CELL)
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.
LEGEND:
6+ URANIUM, 1 - 30 pCi/g U
R+ ROCK
C+ CONCRETE
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
OPTION 2 DISPOSAL CELL AREA (SURFACE)
SOIL SAMPLE ALIQUOT: 0 - 6"
REV. DESCRIPTION DRWN BY: CK'D BY: APP'D BY: DATE
0 DRAWING ISSUED. JE WR 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNDCSS-0
REV. 0
...\SUBAREAN\02POSNDCSS

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g									
									0 - 6"		6" - 1'		1' - 2'		2' - 3'		3' - 4'	
									Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)
1	390	E	-	355	N	3340	10	10	6	1	3	2	4	2	6	1	6	1
2	395	E	-	395	N	2990	10	10	4	1	4	1	6	2	2	1	2	1
3	400	E	-	405	N	2240	9	9	2	1	5	2	8	2	5	1	4	1
4	405	E	-	390	N	3610	10	9	5	2	4	1	6	2	1	1	3	1
5	405	E	-	450	N	2100	7	8	5	2	7	1	6	2	4	1	ROCK	ROCK
6	410	E	-	405	N	2200	10	9	4	1	2	2	4	1	3	1	ROCK	ROCK
7	410	E	-	410	N	1710	5	6	4	2	7	1	6	1	3	1	ROCK	ROCK
8	410	E	-	425	N	3820	10	11	17	3	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
9	410	E	-	430	N	3800	11	11	24	2	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
10	410	E	-	435	N	4360	12	11	19	3	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
11	415	E	-	415	N	2710	6	6	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
12	415	E	-	420	N	2320	6	6	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
13	415	E	-	450	N	3100	7	7	3	1	3	1	1	1	5	1	ROCK	ROCK
14	420	E	-	375	N	3400	9	9	6	2	6	1	5	1	5	1	4	1
15	420	E	-	405	N	2270	10	9	7	1	3	1	6	1	3	1	4	1
16	420	E	-	420	N	2270	6	5	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
17	420	E	-	425	N	2430	6	6	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
18	420	E	-	430	N	2920	8	7	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
19	425	E	-	410	N	2560	10	8	5	1	4	2	5	2	4	1	1	1
20	425	E	-	420	N	2790	6	6	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: William A. Rogers DATE: 12-18-01

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	425	E	-	425	N	2350	6	7	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
2	430	E	-	380	N	3390	8	10	4	1	7	2	4	1	3	1	4	1
3	430	E	-	455	N	2970	9	10	3	2	3	1	3	2	3	2	3	1
4	440	E	-	440	N	3040	9	8	8	2	4	2	6	1	4	1	5	1
5	445	E	-	400	N	3720	10	9	4	2	5	1	11	1	7	2	6	2
6	450	E	-	445	N	3130	10	10	4	2	7	1	3	1	ROCK	ROCK	ROCK	ROCK
7	455	E	-	410	N	2530	9	10	4	2	7	1	6	1	3	1	ROCK	ROCK
8	460	E	-	455	N	3260	9	10	5	1	6	1	9	1	1	2	5	1
9	470	E	-	385	N	3230	11	9	4	1	7	1	3	1	4	2	4	2
10	470	E	-	455	N	3710	9	10	3	1	8	1	11	1	4	1	7	1
11	480	E	-	350	N	3300	10	10	3	2	3	1	8	1	3	2	5	2
12	480	E	-	450	N	2920	9	9	2	1	3	2	3	2	3	2	3	1
13	485	E	-	405	N	3190	12	10	3	2	2	1	3	2	2	2	3	2
14	485	E	-	455	N	3580	12	11	2	2	3	2	2	2	4	2	2	2
15	490	E	-	415	N	3140	12	9	3	2	1	1	1	1	1	1	3	2
16	490	E	-	465	N	2820	11	10	2	2	3	2	3	2	1	2	2	2
17	495	E	-	335	N	2890	10	9	2	2	2	1	2	2	2	1	ROCK	ROCK
18	495	E	-	350	N	2590	10	9	2	2	2	2	2	2	2	2	2	2
19	500	E	-	315	N	3310	10	10	3	2	2	2	2	2	2	1	ROCK	ROCK
20	500	E	-	415	N	2960	12	10	3	2	1	2	3	2	3	2	2	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: William A. Rogers DATE: 12-18-01

CIMARRO. ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	505	E	-	430	N	3790	11	11	6	1	6	2	13	3	9	2	6	2
2	510	E	-	430	N	3630	10	10	5	1	7	2	7	2	6	1	11	1
3	515	E	-	430	N	3330	12	11	9	1	6	2	9	1	8	2	6	1
4	520	E	-	260	N	2800	11	11	2	2	3	2	2	2	2	1	2	2
5	520	E	-	430	N	3680	12	10	5	1	6	1	4	2	8	2	7	1
6	525	E	-	275	N	2910	11	11	2	2	3	2	1	1	2	1	2	1
7	525	E	-	430	N	3530	12	12	6	1	7	2	9	1	5	2	10	2
8	530	E	-	240	N	2840	8	10	3	1	3	1	3	2	5	2	8	2
9	540	E	-	230	N	2700	9	8	6	1	5	1	6	1	4	1	6	1
10	540	E	-	270	N	3240	13	11	5	2	3	2	2	2	2	2	2	1
11	550	E	-	245	N	2920	9	9	6	2	3	2	8	2	4	1	4	2
12	555	E	-	430	N	3510	12	10	5	1	5	2	6	1	8	2	6	1
13	560	E	-	250	N	3110	12	11	2	2	3	2	1	2	2	2	2	2
14	560	E	-	430	N	2860	10	9	3	1	8	1	7	2	7	1	13	2
15	565	E	-	235	N	2920	9	9	2	2	6	2	4	2	8	1	5	1
16	565	E	-	430	N	3190	10	10	5	1	6	1	7	1	5	1	13	1
17	570	E	-	260	N	3320	12	10	3	2	1	2	2	2	3	2	3	2
18	570	E	-	430	N	3840	12	11	6	1	9	1	8	1	5	2	7	2
19	575	E	-	430	N	3760	12	11	5	1	10	1	11	2	12	1	10	1
20	580	E	-	430	N	3290	10	10	6	1	4	1	6	2	8	2	8	2

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 12-18-01

CIMARRO. ,ORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	585	E	-	300	N	2440	11	10	1	1	1	2	1	2	1	2	2	2
2	585	E	-	400	N	3040	11	9	2	2	2	2	2	2	2	2	2	1
3	585	E	-	430	N	3630	11	11	3	1	11	1	6	3	9	2	10	2
4	590	E	-	255	N	3110	11	10	2	2	2	2	2	2	2	2	2	2
5	590	E	-	270	N	2780	12	9	1	2	2	2	2	2	2	2	2	2
6	590	E	-	300	N	3270	10	10	2	2	3	2	1	2	1	2	2	1
7	590	E	-	400	N	2780	10	10	1	2	1	2	3	2	1	2	2	1
8	590	E	-	430	N	3300	9	9	5	1	8	1	13	2	7	2	10	2
9	595	E	-	235	N	2630	9	10	2	1	2	1	8	1	1	2	3	1
10	595	E	-	335	N	2180	8	10	5	1	1	1	6	1	4	1	ROCK	ROCK
11	595	E	-	430	N	3750	11	10	7	1	7	2	14	1	7	2	10	2
12	600	E	-	235	N	3540	8	9	3	2	7	2	3	2	5	1	2	2
13	600	E	-	285	N	2850	9	9	8	2	7	2	6	1	2	2	5	1
14	600	E	-	375	N	3200	9	9	4	1	5	1	5	1	6	2	3	1
15	600	E	-	430	N	3010	10	11	5	1	8	1	10	2	6	2	4	2
16	605	E	-	275	N	3040	9	8	8	2	6	1	1	2	1	2	7	1
17	605	E	-	375	N	2480	8	7	6	1	5	2	6	1	6	2	5	2
18	605	E	-	430	N	3660	10	10	5	1	7	2	9	2	8	2	5	1
19	610	E	-	265	N	2460	7	7	4	2	4	2	5	2	3	2	5	2
20	610	E	-	365	N	2440	10	7	4	1	5	1	4	2	4	2	3	1
21	610	E	-	410	N	2490	9	8	7	2	6	2	6	2	7	1	5	2

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 12-18-01

CIMARRC CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	610	E	-	430	N	4420	11	11	5	1	7	2	6	2	9	2	6	1
2	615	E	-	310	N	2760	9	9	6	1	9	1	8	1	4	2	5	1
3	615	E	-	375	N	2770	9	9	4	1	4	1	4	2	5	2	3	2
4	615	E	-	430	N	4010	12	12	4	1	6	2	6	1	5	1	6	1
5	620	E	-	245	N	3500	11	11	2	2	2	2	1	2	1	1	2	1
6	620	E	-	320	N	3250	11	10	1	2	1	2	1	2	2	2	2	2
7	620	E	-	395	N	3230	12	10	3	2	2	2	2	2	1	2	2	2
8	620	E	-	430	N	3610	12	12	3	1	5	1	7	2	6	1	8	1
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #50058	CPM	2500	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Boyer DATE: 12-18-01

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	390	E	-	335	N	2380	8	8	6	1
2	390	E	-	340	N	2460	9	9	5	1
3	390	E	-	345	N	3320	10	10	6	1
4	390	E	-	350	N	3530	10	10	6	2
5	390	E	-	355	N	3340	10	10	6	1
6	390	E	-	360	N	3250	10	10	8	1
7	390	E	-	365	N	3340	10	10	5	2
8	390	E	-	370	N	3470	11	11	9	1
9	390	E	-	375	N	3740	11	11	7	2
10	390	E	-	380	N	4030	13	13	5	2
11	390	E	-	385	N	3310	10	10	6	1
12	390	E	-	390	N	2500	8	8	5	1
13	390	E	-	395	N	2620	8	8	10	1
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	395	E	-	340	N	2620	9	9	8	1
2	395	E	-	345	N	3620	10	9	7	1
3	395	E	-	350	N	3170	10	10	7	1
4	395	E	-	355	N	3620	9	9	8	1
5	395	E	-	360	N	3930	10	10	5	2
6	395	E	-	365	N	3610	11	9	8	2
7	395	E	-	370	N	3260	10	9	3	2
8	395	E	-	375	N	3480	10	9	4	2
9	395	E	-	380	N	3350	11	9	5	2
10	395	E	-	385	N	2560	11	10	3	1
11	395	E	-	390	N	2530	10	10	4	1
12	395	E	-	395	N	2990	10	10	4	1
13	395	E	-	430	N	2430	10	9	7	1
14	395	E	-	435	N	2870	10	9	4	2
15	395	E	-	440	N	2150	10	8	4	1
16	395	E	-	445	N	2470	9	11	6	1
17	395	E	-	450	N	3300	10	8	1	2
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	Th (Nat)
1	400	E	-	345	N	3060	10	10	10	1
2	400	E	-	350	N	3150	9	10	9	2
3	400	E	-	355	N	2880	9	11	6	1
4	400	E	-	360	N	3420	11	10	8	1
5	400	E	-	365	N	3780	11	11	8	1
6	400	E	-	370	N	2930	10	10	4	1
7	400	E	-	375	N	3030	9	9	8	2
8	400	E	-	380	N	3650	10	9	7	1
9	400	E	-	385	N	3470	10	9	5	2
10	400	E	-	390	N	3400	9	9	7	1
11	400	E	-	395	N	2350	10	9	5	2
12	400	E	-	400	N	3460	10	10	7	2
13	400	E	-	405	N	2240	9	9	2	1
14	400	E	-	410	N	2210	7	9	4	1
15	400	E	-	415	N	2300	6	8	3	1
16	400	E	-	420	N	1960	8	7	3	1
17	400	E	-	425	N	2640	8	7	4	1
18	400	E	-	430	N	2260	8	8	3	1
19	400	E	-	435	N	2350	8	9	4	1
20	400	E	-	440	N	2750	9	7	2	1
21	400	E	-	445	N	2360	11	9	1	2
22	400	E	-	450	N	2660	9	9	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Bryan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	405	E	-	350	N	3090	9	10	6	1
2	405	E	-	355	N	3000	10	11	6	1
3	405	E	-	360	N	3260	11	11	2	2
4	405	E	-	365	N	2560	9	10	5	1
5	405	E	-	370	N	3270	9	9	4	2
6	405	E	-	375	N	3300	8	9	3	1
7	405	E	-	380	N	3560	10	9	4	1
8	405	E	-	385	N	3810	10	9	3	2
9	405	E	-	390	N	3610	10	9	5	2
10	405	E	-	395	N	3540	9	9	4	2
11	405	E	-	400	N	2890	9	10	8	1
12	405	E	-	405	N	2950	9	8	5	1
13	405	E	-	410	N	2430	7	6	4	1
14	405	E	-	415	N	2100	7	7	4	1
15	405	E	-	420	N	3160	10	11	6	1
16	405	E	-	425	N	2670	10	10	7	2
17	405	E	-	430	N	2580	9	9	5	2
18	405	E	-	435	N	3130	9	9	6	2
19	405	E	-	440	N	2850	10	11	11	2
20	405	E	-	445	N	2720	8	9	6	1
21	405	E	-	450	N	2100	7	8	5	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	410	E	-	355	N	3070	9	9	5	2
2	410	E	-	360	N	2820	10	9	4	1
3	410	E	-	365	N	3190	9	10	7	1
4	410	E	-	370	N	2990	10	9	5	2
5	410	E	-	375	N	3370	9	10	3	1
6	410	E	-	380	N	3240	10	10	3	2
7	410	E	-	385	N	3630	10	9	1	2
8	410	E	-	390	N	3400	10	9	3	1
9	410	E	-	395	N	2740	11	11	6	1
10	410	E	-	400	N	2940	9	10	5	2
11	410	E	-	405	N	2200	10	9	4	1
12	410	E	-	410	N	1710	5	6	4	2
13	410	E	-	415	N	1490	7	7	4	1
14	410	E	-	420	N	2210	8	8	7	1
15	410	E	-	425	N	3820	10	11	17	3
16	410	E	-	430	N	3800	11	11	24	2
17	410	E	-	435	N	4360	12	11	19	3
18	410	E	-	440	N	2820	9	10	19	2
19	410	E	-	445	N	2120	8	8	5	1
20	410	E	-	450	N	2880	8	8	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Bryan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	415	E	-	360	N	3280	10	10	6	2
2	415	E	-	365	N	3110	10	9	5	1
3	415	E	-	370	N	2940	9	9	2	2
4	415	E	-	375	N	3090	9	10	5	1
5	415	E	-	380	N	3040	9	11	4	1
6	415	E	-	385	N	3470	10	9	5	1
7	415	E	-	390	N	2860	10	9	7	1
8	415	E	-	395	N	3400	9	9	6	1
9	415	E	-	400	N	2110	10	11	3	1
10	415	E	-	405	N	2680	8	8	3	2
11	415	E	-	410	N	3100	10	10	8	2
12	415	E	-	415	N	2710	6	6	ROCK	ROCK
13	415	E	-	420	N	2320	6	6	ROCK	ROCK
14	415	E	-	425	N	1890	10	10	12	1
15	415	E	-	430	N	2150	10	10	16	1
16	415	E	-	435	N	2810	8	9	7	1
17	415	E	-	440	N	2480	10	10	3	2
18	415	E	-	445	N	2130	8	7	5	1
19	415	E	-	450	N	3100	7	7	3	1
20	415	E	-	455	N	2690	9	8	4	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	Th (Nat)
1	420	E	-	360	N	2420	7	8	4	2
2	420	E	-	365	N	2430	9	11	5	1
3	420	E	-	370	N	2690	9	9	4	1
4	420	E	-	375	N	3400	9	9	6	2
5	420	E	-	380	N	3100	9	9	6	1
6	420	E	-	385	N	3420	10	9	7	1
7	420	E	-	390	N	3200	11	9	7	1
8	420	E	-	395	N	3280	9	9	4	2
9	420	E	-	400	N	3300	9	9	5	1
10	420	E	-	405	N	2270	10	9	7	1
11	420	E	-	410	N	2210	9	9	6	1
12	420	E	-	415	N	1990	7	6	2	1
13	420	E	-	420	N	2270	6	5	ROCK	ROCK
14	420	E	-	425	N	2430	6	6	ROCK	ROCK
15	420	E	-	430	N	2920	8	7	ROCK	ROCK
16	420	E	-	435	N	2730	8	9	1	1
17	420	E	-	440	N	2510	10	8	4	1
18	420	E	-	445	N	2570	10	9	5	2
19	420	E	-	450	N	3220	9	9	4	2
20	420	E	-	455	N	2940	11	10	4	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. O. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	425	E	-	365	N	2610	11	10	5	1
2	425	E	-	370	N	2850	10	10	2	1
3	425	E	-	375	N	3320	9	10	7	1
4	425	E	-	380	N	3220	10	10	9	1
5	425	E	-	385	N	3300	10	11	7	2
6	425	E	-	390	N	3450	10	9	5	2
7	425	E	-	395	N	3430	11	11	4	1
8	425	E	-	400	N	3470	9	9	5	2
9	425	E	-	405	N	2320	10	9	6	1
10	425	E	-	410	N	2560	10	8	4	1
11	425	E	-	415	N	2720	8	8	3	1
12	425	E	-	420	N	2790	6	6	ROCK	ROCK
13	425	E	-	425	N	2350	6	7	ROCK	ROCK
14	425	E	-	430	N	2490	5	6	4	1
15	425	E	-	435	N	2640	9	9	3	1
16	425	E	-	440	N	2810	9	10	2	1
17	425	E	-	445	N	2370	10	11	3	2
18	425	E	-	450	N	2260	10	10	5	2
19	425	E	-	455	N	2590	10	11	4	2
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	430	E	-	370	N	3200	10	9	6	1
2	430	E	-	375	N	3170	9	11	7	1
3	430	E	-	380	N	3390	8	10	4	1
4	430	E	-	385	N	3060	9	9	5	1
5	430	E	-	390	N	3360	9	9	9	2
6	430	E	-	395	N	3560	9	10	5	1
7	430	E	-	400	N	3460	8	9	8	2
8	430	E	-	405	N	2980	9	10	4	1
9	430	E	-	410	N	2190	7	8	1	1
10	430	E	-	415	N	2090	9	8	9	1
11	430	E	-	420	N	2500	8	9	2	1
12	430	E	-	425	N	3150	11	10	5	2
13	430	E	-	430	N	2610	9	9	4	2
14	430	E	-	435	N	2260	9	9	4	1
15	430	E	-	440	N	1830	7	7	4	2
16	430	E	-	445	N	3080	9	9	2	2
17	430	E	-	450	N	3240	9	9	3	2
18	430	E	-	455	N	2970	9	10	3	2
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Boyce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	435	E	-	375	N	3670	9	10	5	1
2	435	E	-	380	N	3420	9	10	4	2
3	435	E	-	385	N	2850	9	10	4	1
4	435	E	-	390	N	3280	9	10	4	1
5	435	E	-	395	N	3470	10	10	6	1
6	435	E	-	400	N	3160	10	10	7	2
7	435	E	-	405	N	2450	8	8	5	1
8	435	E	-	410	N	3680	10	9	3	1
9	435	E	-	415	N	1990	9	9	2	1
10	435	E	-	420	N	2320	9	10	4	1
11	435	E	-	425	N	2550	9	9	9	1
12	435	E	-	430	N	2170	8	9	4	1
13	435	E	-	435	N	2490	10	9	4	2
14	435	E	-	440	N	2650	9	9	4	1
15	435	E	-	445	N	2910	10	10	2	1
16	435	E	-	450	N	3570	10	10	4	2
17	435	E	-	455	N	3150	11	10	1	2
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	440	E	-	380	N	3500	11	10	2	2
2	440	E	-	385	N	3120	10	10	5	1
3	440	E	-	390	N	3120	11	10	6	1
4	440	E	-	395	N	3320	10	10	5	1
5	440	E	-	400	N	3890	9	9	2	2
6	440	E	-	405	N	3790	11	11	4	1
7	440	E	-	410	N	3110	9	11	7	2
8	440	E	-	415	N	2940	11	10	6	1
9	440	E	-	420	N	2570	9	9	1	1
10	440	E	-	425	N	2790	8	8	2	1
11	440	E	-	430	N	2490	8	9	4	1
12	440	E	-	435	N	2410	9	8	6	1
13	440	E	-	440	N	3040	9	8	8	2
14	440	E	-	445	N	2980	10	10	8	2
15	440	E	-	450	N	3060	10	9	3	2
16	440	E	-	455	N	3270	10	11	7	2
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	445	E	-	385	N	3140	9	9	9	1
2	445	E	-	390	N	3400	9	9	7	1
3	445	E	-	395	N	3410	10	9	5	1
4	445	E	-	400	N	3720	10	9	4	2
5	445	E	-	405	N	2830	11	11	5	2
6	445	E	-	410	N	2510	9	9	11	2
7	445	E	-	415	N	2940	10	9	3	2
8	445	E	-	420	N	3310	9	10	3	2
9	445	E	-	425	N	3640	10	9	1	2
10	445	E	-	430	N	3070	10	9	3	1
11	445	E	-	435	N	2460	11	10	6	1
12	445	E	-	440	N	2390	8	8	5	1
13	445	E	-	445	N	2660	9	9	2	2
14	445	E	-	450	N	2310	9	8	Concrete	Concrete
15	445	E	-	455	N	2370	8	9	Concrete	Concrete
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	450	E	-	390	N	3240	10	9	4	1
2	450	E	-	395	N	3140	10	10	6	2
3	450	E	-	400	N	3550	8	10	3	2
4	450	E	-	405	N	2650	9	9	3	2
5	450	E	-	410	N	2970	10	9	8	1
6	450	E	-	415	N	3000	11	10	6	2
7	450	E	-	420	N	3630	10	11	2	2
8	450	E	-	425	N	3480	10	11	7	2
9	450	E	-	430	N	3310	10	10	5	1
10	450	E	-	435	N	2910	10	11	5	1
11	450	E	-	440	N	3070	10	11	3	1
12	450	E	-	445	N	3130	10	10	4	2
13	450	E	-	450	N	2970	9	9	4	2
14	450	E	-	455	N	3130	10	10	3	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	455	E	-	390	N	2990	9	10	3	2
2	455	E	-	395	N	3130	9	9	5	2
3	455	E	-	400	N	3260	10	11	3	2
4	455	E	-	405	N	3590	9	8	4	2
5	455	E	-	410	N	2530	9	10	4	2
6	455	E	-	415	N	1990	10	10	6	1
7	455	E	-	420	N	2860	10	9	2	2
8	455	E	-	425	N	3570	9	9	4	2
9	455	E	-	430	N	3300	10	9	3	2
10	455	E	-	435	N	2770	9	10	4	2
11	455	E	-	440	N	3320	11	9	2	2
12	455	E	-	445	N	3560	8	9	3	1
13	455	E	-	450	N	2970	9	9	5	1
14	455	E	-	455	N	3560	10	9	3	2
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Boyce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	460	E	-	380	N	3450	9	9	2	2
2	460	E	-	385	N	3410	10	10	5	1
3	460	E	-	390	N	3440	9	10	5	1
4	460	E	-	395	N	3280	10	11	6	2
5	460	E	-	400	N	3410	10	9	8	1
6	460	E	-	405	N	3310	9	9	6	2
7	460	E	-	410	N	2800	10	9	13	1
8	460	E	-	415	N	1980	10	10	6	1
9	460	E	-	420	N	3350	10	10	2	2
10	460	E	-	425	N	3330	9	9	4	1
11	460	E	-	430	N	3150	11	9	5	1
12	460	E	-	435	N	3070	8	8	2	2
13	460	E	-	440	N	3220	9	9	3	2
14	460	E	-	445	N	3400	10	9	10	1
15	460	E	-	450	N	3540	11	9	5	2
16	460	E	-	455	N	3260	9	10	5	1
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	465	E	-	370	N	3880	11	9	14	2
2	465	E	-	375	N	4020	9	9	5	2
3	465	E	-	380	N	3520	9	8	2	2
4	465	E	-	385	N	3800	10	9	8	2
5	465	E	-	390	N	3550	10	9	6	1
6	465	E	-	395	N	3440	9	10	7	2
7	465	E	-	400	N	3830	9	9	5	2
8	465	E	-	405	N	3710	11	9	6	2
9	465	E	-	410	N	2930	9	10	4	2
10	465	E	-	415	N	2170	9	9	7	1
11	465	E	-	420	N	3060	8	11	6	1
12	465	E	-	425	N	2790	10	9	5	2
13	465	E	-	430	N	3220	10	9	5	1
14	465	E	-	435	N	2930	9	9	2	1
15	465	E	-	440	N	2800	10	9	4	1
16	465	E	-	445	N	2960	10	9	3	2
17	465	E	-	450	N	2890	11	9	3	2
18	465	E	-	455	N	3440	9	8	4	2
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	470	E	-	360	N	3160	8	9	10	2
2	470	E	-	365	N	3580	9	9	6	2
3	470	E	-	370	N	3670	10	10	7	2
4	470	E	-	375	N	3830	10	9	5	2
5	470	E	-	380	N	3610	9	9	4	2
6	470	E	-	385	N	3230	11	9	4	1
7	470	E	-	390	N	3510	9	9	5	2
8	470	E	-	395	N	3370	9	9	8	1
9	470	E	-	400	N	3250	10	9	2	2
10	470	E	-	405	N	3520	9	9	5	2
11	470	E	-	410	N	2490	9	8	8	1
12	470	E	-	415	N	1770	10	10	4	1
13	470	E	-	420	N	2490	10	10	8	1
14	470	E	-	425	N	2950	10	11	8	2
15	470	E	-	430	N	3250	11	9	3	2
16	470	E	-	435	N	2770	9	10	11	1
17	470	E	-	440	N	3120	10	11	9	2
18	470	E	-	445	N	2820	9	10	4	2
19	470	E	-	450	N	3260	11	10	1	2
20	470	E	-	455	N	3710	9	10	3	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6". Sample Total-U	0-6". Sample Th (Nat)
1	475	E	-	350	N	3090	10	9	5	1
2	475	E	-	355	N	3370	10	9	5	2
3	475	E	-	360	N	3340	9	8	7	1
4	475	E	-	365	N	3440	9	10	3	2
5	475	E	-	370	N	3690	10	9	4	2
6	475	E	-	375	N	3800	9	9	5	2
7	475	E	-	380	N	3660	9	9	3	2
8	475	E	-	385	N	3430	10	9	5	2
9	475	E	-	390	N	3590	8	10	5	2
10	475	E	-	395	N	3590	11	9	8	1
11	475	E	-	400	N	3460	9	9	2	2
12	475	E	-	405	N	3060	10	9	6	1
13	475	E	-	410	N	2580	9	9	8	1
14	475	E	-	415	N	1830	8	9	5	1
15	475	E	-	420	N	2610	9	8	6	1
16	475	E	-	425	N	3120	9	9	8	1
17	475	E	-	430	N	2410	9	9	3	1
18	475	E	-	435	N	3440	10	11	6	2
19	475	E	-	440	N	3050	10	10	6	1
20	475	E	-	445	N	2790	10	9	6	2
21	475	E	-	450	N	3210	9	11	2	2
22	475	E	-	455	N	3280	9	9	3	2
23	475	E	-	460	N	3310	10	9	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	480	E	-	340	N	2970	8	8	2	1
2	480	E	-	345	N	3040	9	10	4	1
3	480	E	-	350	N	3300	10	10	3	2
4	480	E	-	355	N	3490	10	10	5	1
5	480	E	-	360	N	3150	9	10	3	1
6	480	E	-	365	N	2970	9	10	3	1
7	480	E	-	370	N	3040	10	11	6	2
8	480	E	-	375	N	3240	11	9	9	1
9	480	E	-	380	N	3140	9	11	4	1
10	480	E	-	385	N	3570	9	10	2	2
11	480	E	-	390	N	3760	10	8	7	1
12	480	E	-	395	N	3310	10	10	1	2
13	480	E	-	400	N	3680	9	10	7	2
14	480	E	-	405	N	2930	9	10	5	2
15	480	E	-	410	N	2400	11	10	5	2
16	480	E	-	415	N	2500	10	11	7	1
17	480	E	-	420	N	2230	10	10	6	1
18	480	E	-	425	N	2980	10	10	4	2
19	480	E	-	430	N	3040	10	9	1	2
20	480	E	-	435	N	2910	11	9	6	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Boyer DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	480	E	-	440	N	3280	9	10	5	2
2	480	E	-	445	N	3390	10	9	7	2
3	480	E	-	450	N	2920	9	9	2	1
4	480	E	-	455	N	2960	9	9	4	2
5	480	E	-	460	N	3280	9	10	7	1
6	480	E	-	465	N	3470	10	10	7	2
7		E	-		N					
8		E	-		N					
9		E	-		N					
10		E	-		N					
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	485	E	-	330	N	3310	12	12	3	2
2	485	E	-	335	N	3330	11	11	3	2
3	485	E	-	340	N	3480	12	12	2	2
4	485	E	-	345	N	3070	13	10	3	2
5	485	E	-	350	N	3640	12	11	2	2
6	485	E	-	355	N	3510	11	11	3	2
7	485	E	-	360	N	3230	11	11	2	2
8	485	E	-	365	N	3280	12	13	3	2
9	485	E	-	370	N	3370	12	11	3	2
10	485	E	-	375	N	3430	12	10	3	2
11	485	E	-	380	N	3390	12	10	3	2
12	485	E	-	385	N	3210	12	11	3	2
13	485	E	-	390	N	3370	12	10	3	2
14	485	E	-	395	N	3320	11	11	2	2
15	485	E	-	400	N	3120	12	11	2	2
16	485	E	-	405	N	3190	12	10	3	2
17	485	E	-	410	N	3390	11	11	3	2
18	485	E	-	415	N	2890	12	10	3	2
19	485	E	-	420	N	3250	13	11	4	2
20	485	E	-	425	N	3330	12	12	4	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	485	E	-	430	N	3220	12	12	3	2
2	485	E	-	435	N	2810	12	11	3	2
3	485	E	-	440	N	3310	13	11	3	2
4	485	E	-	445	N	3330	11	11	2	2
5	485	E	-	450	N	3760	13	12	2	2
6	485	E	-	455	N	3580	12	11	3	2
7	485	E	-	460	N	3430	14	11	3	2
8	485	E	-	465	N	3230	11	10	2	2
9	485	E	-	470	N	3140	11	11	4	2
10		E	-		N					
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	490	E	-	320	N	2570	10	10	2	2
2	490	E	-	325	N	2970	8	11	3	2
3	490	E	-	330	N	3050	10	10	2	2
4	490	E	-	335	N	2990	9	10	3	2
5	490	E	-	340	N	2960	11	9	2	2
6	490	E	-	345	N	2920	12	10	2	2
7	490	E	-	350	N	3440	10	10	3	2
8	490	E	-	355	N	3010	11	11	3	2
9	490	E	-	360	N	2910	12	10	3	2
10	490	E	-	365	N	2950	12	10	2	2
11	490	E	-	370	N	3350	11	9	2	2
12	490	E	-	375	N	3380	11	10	3	2
13	490	E	-	380	N	3680	12	10	2	2
14	490	E	-	385	N	3060	11	11	3	2
15	490	E	-	390	N	2910	12	11	3	2
16	490	E	-	395	N	3030	12	10	2	2
17	490	E	-	400	N	3110	11	10	2	2
18	490	E	-	405	N	3330	10	12	2	2
19	490	E	-	410	N	2630	10	10	3	2
20	490	E	-	415	N	3140	12	9	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: U. C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	490	E	-	420	N	3200	13	11	3	2
2	490	E	-	425	N	3400	11	10	3	2
3	490	E	-	430	N	3550	12	10	3	2
4	490	E	-	435	N	2850	10	10	3	1
5	490	E	-	440	N	3350	10	10	2	2
6	490	E	-	445	N	3630	11	11	2	2
7	490	E	-	450	N	3730	13	12	3	2
8	490	E	-	455	N	3580	11	12	2	2
9	490	E	-	460	N	3630	10	10	3	2
10	490	E	-	465	N	2820	11	10	2	2
11	490	E	-	470	N	3460	12	11	3	2
12	490	E	-	475	N	3550	13	11	3	2
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. E. Agren DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	495	E	-	310	N	2580	9	10	2	2
2	495	E	-	315	N	2680	9	10	3	1
3	495	E	-	320	N	2660	12	8	2	2
4	495	E	-	325	N	2780	10	11	3	2
5	495	E	-	330	N	2870	9	11	2	2
6	495	E	-	335	N	2890	10	9	2	2
7	495	E	-	340	N	2960	9	10	2	1
8	495	E	-	345	N	2640	9	9	2	2
9	495	E	-	350	N	2890	9	10	2	2
10	495	E	-	355	N	3010	10	11	3	2
11	495	E	-	360	N	3180	12	11	2	2
12	495	E	-	365	N	3380	12	11	2	2
13	495	E	-	370	N	2970	10	10	2	2
14	495	E	-	375	N	3210	10	11	3	2
15	495	E	-	380	N	2920	10	10	3	2
16	495	E	-	385	N	2960	12	10	2	2
17	495	E	-	390	N	3210	10	10	2	2
18	495	E	-	395	N	3070	10	10	2	1
19	495	E	-	400	N	3370	10	12	3	2
20	495	E	-	405	N	3020	10	9	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. E. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	495	E	-	410	N	2740	10	9	2	2
2	495	E	-	415	N	3120	10	10	2	2
3	495	E	-	420	N	3340	11	10	3	2
4	495	E	-	425	N	3390	11	11	3	2
5	495	E	-	430	N	3220	12	11	3	2
6	495	E	-	470	N	3190	11	10	3	2
7	495	E	-	475	N	3390	11	11	2	2
8	495	E	-	480	N	2870	12	10	2	2
9		E	-		N					
10		E	-		N					
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Agee DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	500	E	-	295	N	2660	12	10	2	2
2	500	E	-	300	N	2800	12	10	2	2
3	500	E	-	305	N	3130	10	10	2	2
4	500	E	-	310	N	3020	10	10	3	2
5	500	E	-	315	N	3310	10	10	3	2
6	500	E	-	320	N	3200	10	9	2	2
7	500	E	-	325	N	3070	10	12	3	2
8	500	E	-	330	N	3140	11	10	2	2
9	500	E	-	335	N	2830	10	9	2	1
10	500	E	-	340	N	2590	10	9	3	2
11	500	E	-	345	N	2970	10	10	3	2
12	500	E	-	350	N	3130	11	10	3	2
13	500	E	-	355	N	3030	12	9	2	2
14	500	E	-	360	N	2940	10	11	2	1
15	500	E	-	365	N	3170	12	9	2	2
16	500	E	-	370	N	2830	10	10	3	2
17	500	E	-	375	N	2730	12	11	3	2
18	500	E	-	380	N	3100	12	9	3	2
19	500	E	-	385	N	3050	11	11	2	2
20	500	E	-	390	N	3100	12	10	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	500	E	-	395	N	3150	11	11	2	2
2	500	E	-	400	N	3430	9	10	3	2
3	500	E	-	405	N	3310	12	9	2	2
4	500	E	-	410	N	2880	11	9	2	2
5	500	E	-	415	N	2960	12	10	3	2
6	500	E	-	420	N	2550	12	10	2	1
7	500	E	-	425	N	3320	11	12	3	2
8	500	E	-	430	N	3620	11	12	2	2
9		E	-		N					
10		E	-		N					
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Kogan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	505	E	-	280	N	3040	11	10	3	2
2	505	E	-	285	N	2540	11	12	2	2
3	505	E	-	290	N	2730	10	10	2	2
4	505	E	-	295	N	2930	10	9	2	2
5	505	E	-	300	N	2980	11	9	2	2
6	505	E	-	305	N	2850	12	10	2	2
7	505	E	-	310	N	2850	11	11	2	2
8	505	E	-	315	N	2570	11	12	2	2
9	505	E	-	320	N	3100	10	9	2	2
10	505	E	-	325	N	3080	11	10	2	2
11	505	E	-	330	N	2900	12	11	1	2
12	505	E	-	335	N	2800	11	10	2	2
13	505	E	-	340	N	2880	11	10	2	2
14	505	E	-	345	N	2550	11	11	3	2
15	505	E	-	350	N	2980	12	10	2	2
16	505	E	-	355	N	2830	11	10	2	2
17	505	E	-	360	N	3080	11	11	2	2
18	505	E	-	365	N	3040	11	10	2	2
19	505	E	-	370	N	2920	12	10	2	2
20	505	E	-	375	N	3100	12	10	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Hogue DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	505	E	-	380	N	2980	12	10	2	2
2	505	E	-	385	N	2880	12	10	3	2
3	505	E	-	390	N	2870	11	10	2	2
4	505	E	-	395	N	3160	12	10	4	2
5	505	E	-	400	N	3120	11	11	2	2
6	505	E	-	405	N	3070	10	10	3	2
7	505	E	-	410	N	2800	12	11	2	2
8	505	E	-	415	N	3090	11	11	3	2
9	505	E	-	420	N	3210	12	11	2	2
10	505	E	-	425	N	3510	11	11	2	2
11	505	E	-	430	N	3790	11	11	6	1
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Fogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	510	E	-	265	N	2870	10	9	2	2
2	510	E	-	270	N	3140	11	10	4	2
3	510	E	-	275	N	3190	12	11	2	2
4	510	E	-	280	N	2980	11	10	3	2
5	510	E	-	285	N	2950	12	10	2	2
6	510	E	-	290	N	3320	11	10	2	2
7	510	E	-	295	N	2990	11	11	2	2
8	510	E	-	300	N	2870	11	10	2	2
9	510	E	-	305	N	2990	11	10	2	2
10	510	E	-	310	N	3040	12	11	2	2
11	510	E	-	315	N	2860	11	11	2	2
12	510	E	-	320	N	2670	12	11	2	2
13	510	E	-	325	N	2900	12	10	2	2
14	510	E	-	330	N	3260	11	10	2	2
15	510	E	-	335	N	2960	12	10	2	2
16	510	E	-	340	N	2680	10	10	1	2
17	510	E	-	345	N	2480	12	9	2	2
18	510	E	-	350	N	2860	12	10	2	2
19	510	E	-	355	N	2690	12	10	3	2
20	510	E	-	360	N	2900	12	11	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	510	E	-	365	N	3080	10	10	2	2
2	510	E	-	370	N	2820	12	10	2	2
3	510	E	-	375	N	3000	11	11	2	2
4	510	E	-	380	N	3010	12	11	3	2
5	510	E	-	385	N	2870	11	10	2	2
6	510	E	-	390	N	3250	11	10	2	2
7	510	E	-	395	N	2760	12	10	2	2
8	510	E	-	400	N	3120	11	10	2	2
9	510	E	-	405	N	3100	12	11	3	2
10	510	E	-	410	N	2880	11	11	2	2
11	510	E	-	415	N	3110	11	10	3	2
12	510	E	-	420	N	3440	12	11	4	2
13	510	E	-	425	N	3240	12	12	2	2
14	510	E	-	430	N	2630	10	10	5	1
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Kogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	515	E	-	250	N	3080	11	10	2	2
2	515	E	-	255	N	3090	11	10	3	2
3	515	E	-	260	N	2850	10	12	3	2
4	515	E	-	265	N	3230	11	10	2	2
5	515	E	-	270	N	3060	11	9	2	2
6	515	E	-	275	N	3070	10	10	2	2
7	515	E	-	280	N	2880	11	10	2	2
8	515	E	-	285	N	3030	12	11	2	2
9	515	E	-	290	N	2840	11	9	1	2
10	515	E	-	295	N	3220	11	11	2	2
11	515	E	-	300	N	2740	11	11	1	2
12	515	E	-	305	N	2950	11	11	3	2
13	515	E	-	310	N	2950	12	11	2	2
14	515	E	-	315	N	2590	12	10	2	2
15	515	E	-	320	N	2990	11	11	3	2
16	515	E	-	325	N	2730	12	10	2	2
17	515	E	-	330	N	2510	11	11	2	2
18	515	E	-	335	N	2650	10	9	2	2
19	515	E	-	340	N	2750	10	10	3	2
20	515	E	-	345	N	2540	12	10	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Boyce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	515	E	-	350	N	2620	11	10	3	2
2	515	E	-	355	N	2940	11	11	1	2
3	515	E	-	360	N	3080	12	10	2	2
4	515	E	-	365	N	2580	12	10	3	2
5	515	E	-	370	N	2880	11	10	2	2
6	515	E	-	375	N	3020	11	10	2	2
7	515	E	-	380	N	3000	12	11	2	2
8	515	E	-	385	N	3010	11	11	2	2
9	515	E	-	390	N	3250	12	11	2	2
10	515	E	-	395	N	3120	12	11	2	2
11	515	E	-	400	N	3110	12	10	2	2
12	515	E	-	405	N	3020	11	11	3	2
13	515	E	-	410	N	2990	11	10	2	2
14	515	E	-	415	N	3100	11	10	3	2
15	515	E	-	420	N	3140	12	11	3	2
16	515	E	-	425	N	3540	12	11	2	2
17	515	E	-	430	N	3330	12	11	10	1
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.C. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	520	E	-	230	N	2770	9	9	6	2
2	520	E	-	235	N	2730	8	9	5	2
3	520	E	-	240	N	2900	9	10	3	2
4	520	E	-	245	N	2690	10	9	3	1
5	520	E	-	250	N	2930	12	11	3	2
6	520	E	-	255	N	3290	11	10	2	2
7	520	E	-	260	N	2800	11	11	2	2
8	520	E	-	265	N	2650	10	11	3	2
9	520	E	-	270	N	3260	11	10	2	2
10	520	E	-	275	N	2940	11	11	2	2
11	520	E	-	280	N	3050	11	10	2	2
12	520	E	-	285	N	2780	10	11	3	2
13	520	E	-	290	N	2810	12	10	2	2
14	520	E	-	295	N	3030	10	10	2	2
15	520	E	-	300	N	3050	11	10	3	2
16	520	E	-	305	N	3050	10	10	2	2
17	520	E	-	310	N	3030	12	11	1	2
18	520	E	-	315	N	3140	11	10	2	2
19	520	E	-	320	N	2560	12	11	2	2
20	520	E	-	325	N	3010	11	10	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Bryan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	520	E	-	330	N	2990	12	11	2	2
2	520	E	-	335	N	3010	11	10	3	2
3	520	E	-	340	N	2710	11	10	2	1
4	520	E	-	345	N	3060	10	10	2	2
5	520	E	-	350	N	2800	11	11	3	2
6	520	E	-	355	N	2680	11	10	2	2
7	520	E	-	360	N	2800	12	11	2	2
8	520	E	-	365	N	2980	11	10	2	2
9	520	E	-	370	N	2820	11	10	2	2
10	520	E	-	375	N	2870	11	10	3	2
11	520	E	-	380	N	2960	12	12	2	2
12	520	E	-	385	N	2880	11	10	2	2
13	520	E	-	390	N	3300	11	10	3	2
14	520	E	-	395	N	2970	13	11	2	2
15	520	E	-	400	N	3030	12	11	2	2
16	520	E	-	405	N	3080	11	10	2	2
17	520	E	-	410	N	3010	12	10	2	2
18	520	E	-	415	N	3230	12	12	3	2
19	520	E	-	420	N	3280	12	11	3	2
20	520	E	-	425	N	3280	13	13	2	2
21	520	E	-	430	N	3680	12	10	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. E. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	525	E	-	230	N	2570	8	9	6	2
2	525	E	-	235	N	3270	9	9	1	1
3	525	E	-	240	N	2900	9	9	6	2
4	525	E	-	245	N	2230	9	9	3	1
5	525	E	-	250	N	3370	10	11	3	2
6	525	E	-	255	N	3100	10	9	2	2
7	525	E	-	260	N	2870	12	10	2	2
8	525	E	-	265	N	3060	11	10	3	2
9	525	E	-	270	N	3000	12	11	2	2
10	525	E	-	275	N	2910	11	11	2	2
11	525	E	-	280	N	3020	12	11	3	2
12	525	E	-	285	N	2680	12	11	2	2
13	525	E	-	290	N	2610	11	11	2	2
14	525	E	-	295	N	2870	11	11	3	2
15	525	E	-	300	N	2760	12	11	1	2
16	525	E	-	305	N	2840	12	11	1	2
17	525	E	-	310	N	3220	11	11	2	2
18	525	E	-	315	N	2910	12	10	2	2
19	525	E	-	320	N	2360	11	11	2	2
20	525	E	-	325	N	2850	11	9	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	525	E	-	330	N	2590	11	11	2	2
2	525	E	-	335	N	2950	11	10	1	2
3	525	E	-	340	N	3220	11	10	2	2
4	525	E	-	345	N	2920	12	11	3	2
5	525	E	-	350	N	2860	12	11	2	2
6	525	E	-	355	N	2870	12	9	2	2
7	525	E	-	360	N	2980	11	10	2	2
8	525	E	-	365	N	3240	12	11	2	2
9	525	E	-	370	N	3140	11	10	2	2
10	525	E	-	375	N	3050	11	10	3	2
11	525	E	-	380	N	3390	12	11	3	2
12	525	E	-	385	N	3040	13	12	3	2
13	525	E	-	390	N	3140	12	11	3	2
14	525	E	-	395	N	2950	12	12	2	2
15	525	E	-	400	N	2990	12	12	2	2
16	525	E	-	405	N	3350	12	11	3	2
17	525	E	-	410	N	3270	12	12	2	2
18	525	E	-	415	N	3000	12	12	3	2
19	525	E	-	420	N	3210	12	11	2	2
20	525	E	-	425	N	3630	13	11	2	2
21	525	E	-	430	N	3530	12	12	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	530	E	-	230	N	3020	9	9	6	1
2	530	E	-	235	N	2960	9	9	5	1
3	530	E	-	240	N	2840	8	10	3	1
4	530	E	-	245	N	2900	10	8	6	2
5	530	E	-	250	N	3000	11	11	3	2
6	530	E	-	255	N	2950	11	9	3	2
7	530	E	-	260	N	2820	13	11	3	2
8	530	E	-	265	N	3030	10	11	2	2
9	530	E	-	270	N	2720	12	10	3	2
10	530	E	-	275	N	2960	10	11	2	2
11	530	E	-	280	N	2980	11	9	2	2
12	530	E	-	285	N	2980	11	10	3	1
13	530	E	-	290	N	3160	12	10	2	2
14	530	E	-	295	N	3080	10	10	3	2
15	530	E	-	300	N	2880	11	11	2	2
16	530	E	-	305	N	3090	12	11	2	2
17	530	E	-	310	N	2930	12	11	2	2
18	530	E	-	315	N	3180	12	11	2	2
19	530	E	-	320	N	3170	13	12	3	2
20	530	E	-	325	N	3150	12	11	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Kogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	530	E	-	330	N	3560	13	12	3	2
2	530	E	-	335	N	3380	12	12	3	2
3	530	E	-	340	N	3190	11	11	3	2
4	530	E	-	345	N	3420	12	12	3	2
5	530	E	-	350	N	2780	12	11	2	2
6	530	E	-	355	N	2860	11	11	2	2
7	530	E	-	360	N	2900	11	11	2	2
8	530	E	-	365	N	2980	12	10	3	2
9	530	E	-	370	N	2960	11	10	2	2
10	530	E	-	375	N	3390	14	12	2	2
11	530	E	-	380	N	3350	11	12	3	2
12	530	E	-	385	N	3510	13	10	2	2
13	530	E	-	390	N	3020	12	11	1	2
14	530	E	-	395	N	3470	12	11	4	2
15	530	E	-	400	N	3200	12	10	3	2
16	530	E	-	405	N	3200	12	10	3	2
17	530	E	-	410	N	3500	12	11	3	2
18	530	E	-	415	N	3360	12	11	3	2
19	530	E	-	420	N	3040	12	11	3	2
20	530	E	-	425	N	3150	12	11	2	2
21	530	E	-	430	N	4110	12	11	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	535	E	-	230	N	2220	8	8	6	1
2	535	E	-	235	N	2690	9	9	4	1
3	535	E	-	240	N	2580	9	9	6	1
4	535	E	-	245	N	2610	10	9	3	2
5	535	E	-	250	N	2950	11	10	3	2
6	535	E	-	255	N	3140	12	11	4	2
7	535	E	-	260	N	2940	12	12	4	2
8	535	E	-	265	N	3190	11	10	5	2
9	535	E	-	270	N	3160	13	11	4	2
10	535	E	-	275	N	3440	11	11	4	2
11	535	E	-	280	N	3570	12	12	3	2
12	535	E	-	285	N	3660	12	11	3	2
13	535	E	-	290	N	3430	12	10	3	2
14	535	E	-	295	N	3210	11	11	3	2
15	535	E	-	300	N	3330	12	11	3	2
16	535	E	-	305	N	3220	12	12	3	2
17	535	E	-	310	N	3530	12	11	3	2
18	535	E	-	315	N	3490	12	10	2	2
19	535	E	-	320	N	3290	13	11	2	2
20	535	E	-	325	N	2780	12	10	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Horgen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	535	E	-	330	N	3130	12	11	2	2
2	535	E	-	335	N	3040	12	13	3	2
3	535	E	-	340	N	3020	12	11	2	2
4	535	E	-	345	N	3240	11	11	2	2
5	535	E	-	350	N	3260	12	11	4	2
6	535	E	-	355	N	3680	12	12	3	2
7	535	E	-	360	N	3510	11	11	3	2
8	535	E	-	365	N	3480	12	11	3	2
9	535	E	-	370	N	3220	13	12	2	2
10	535	E	-	375	N	3320	12	12	3	2
11	535	E	-	380	N	3490	13	12	2	2
12	535	E	-	385	N	3320	12	11	2	2
13	535	E	-	390	N	3120	12	12	3	2
14	535	E	-	395	N	3340	13	11	3	2
15	535	E	-	400	N	3260	11	10	3	2
16	535	E	-	405	N	3120	12	12	3	2
17	535	E	-	410	N	3460	12	11	3	2
18	535	E	-	415	N	3280	12	11	2	2
19	535	E	-	420	N	3240	12	11	2	2
20	535	E	-	425	N	2910	12	11	2	2
21	535	E	-	430	N	3530	10	10	4	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Kogen DATE: 7-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	540	E	-	230	N	2700	9	8	6	1
2	540	E	-	235	N	2780	8	9	7	1
3	540	E	-	240	N	2810	10	8	3	1
4	540	E	-	245	N	2770	9	9	2	2
5	540	E	-	250	N	3290	12	10	3	2
6	540	E	-	255	N	3540	12	11	6	2
7	540	E	-	260	N	3220	12	11	4	2
8	540	E	-	265	N	3500	12	12	4	2
9	540	E	-	270	N	3240	13	11	5	2
10	540	E	-	275	N	2830	11	10	3	2
11	540	E	-	280	N	2660	12	11	2	1
12	540	E	-	285	N	2780	10	10	2	1
13	540	E	-	290	N	2840	11	10	3	2
14	540	E	-	295	N	2580	11	9	3	2
15	540	E	-	300	N	2820	11	10	2	1
16	540	E	-	305	N	2390	11	9	1	2
17	540	E	-	310	N	2900	11	9	3	2
18	540	E	-	315	N	2900	12	11	2	2
19	540	E	-	320	N	2940	12	10	3	2
20	540	E	-	325	N	3080	11	11	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Hyere DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	540	E	-	330	N	2750	11	11	2	2
2	540	E	-	335	N	2440	12	10	3	2
3	540	E	-	340	N	3040	12	10	3	2
4	540	E	-	345	N	3120	12	11	2	2
5	540	E	-	350	N	3100	12	10	2	2
6	540	E	-	355	N	2780	11	10	2	2
7	540	E	-	360	N	3050	11	11	3	2
8	540	E	-	365	N	2770	12	10	2	2
9	540	E	-	370	N	2980	11	9	2	2
10	540	E	-	375	N	3040	12	10	2	2
11	540	E	-	380	N	2920	12	11	2	1
12	540	E	-	385	N	2880	11	10	2	2
13	540	E	-	390	N	2950	11	11	2	2
14	540	E	-	395	N	3330	12	10	2	2
15	540	E	-	400	N	3130	11	11	2	2
16	540	E	-	405	N	3120	13	11	3	2
17	540	E	-	410	N	3340	12	11	2	2
18	540	E	-	415	N	2900	13	11	3	2
19	540	E	-	420	N	2860	11	10	2	2
20	540	E	-	425	N	3020	12	11	3	2
21	540	E	-	430	N	4030	10	9	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	545	E	-	230	N	2920	9	9	3	1
2	545	E	-	235	N	2750	10	8	6	1
3	545	E	-	240	N	2220	9	8	4	1
4	545	E	-	245	N	2530	8	10	4	1
5	545	E	-	250	N	3550	12	11	2	2
6	545	E	-	255	N	3370	12	11	3	2
7	545	E	-	260	N	3400	12	11	3	2
8	545	E	-	265	N	3350	12	11	3	2
9	545	E	-	270	N	3470	12	11	3	2
10	545	E	-	275	N	3660	12	10	3	2
11	545	E	-	280	N	3690	12	11	2	2
12	545	E	-	285	N	3460	12	12	3	2
13	545	E	-	290	N	3280	12	11	3	2
14	545	E	-	295	N	3190	12	12	2	2
15	545	E	-	300	N	3200	13	11	2	2
16	545	E	-	305	N	3710	12	11	3	2
17	545	E	-	310	N	3320	12	12	2	2
18	545	E	-	315	N	3230	12	12	2	2
19	545	E	-	320	N	3010	12	11	3	2
20	545	E	-	325	N	3090	12	11	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6".Sample Total-U	0-6".Sample Th (Nat)
1	545	E	-	330	N	3220	13	11	2	2
2	545	E	-	335	N	3310	12	10	3	2
3	545	E	-	340	N	3420	12	12	3	2
4	545	E	-	345	N	3190	13	11	2	2
5	545	E	-	350	N	3000	13	11	2	2
6	545	E	-	355	N	3290	12	11	3	2
7	545	E	-	360	N	3160	13	11	3	2
8	545	E	-	365	N	3370	12	11	2	2
9	545	E	-	370	N	3700	13	12	2	2
10	545	E	-	375	N	3500	13	11	2	2
11	545	E	-	380	N	3170	12	11	3	2
12	545	E	-	385	N	3610	12	12	2	2
13	545	E	-	390	N	3210	14	12	2	2
14	545	E	-	395	N	3150	11	11	3	2
15	545	E	-	400	N	3100	12	10	2	2
16	545	E	-	405	N	3160	11	10	1	1
17	545	E	-	410	N	3280	12	10	2	2
18	545	E	-	415	N	3190	12	10	3	2
19	545	E	-	420	N	3330	11	11	3	2
20	545	E	-	425	N	3560	11	12	2	2
21	545	E	-	430	N	3610	10	10	3	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	550	E	-	230	N	2640	8	8	2	1
2	550	E	-	235	N	2680	9	10	5	2
3	550	E	-	240	N	2550	9	8	3	1
4	550	E	-	245	N	2920	9	9	6	2
5	550	E	-	250	N	3230	13	10	2	2
6	550	E	-	255	N	3530	11	10	2	2
7	550	E	-	260	N	3190	13	11	3	2
8	550	E	-	265	N	3090	11	11	3	2
9	550	E	-	270	N	3430	12	10	3	2
10	550	E	-	275	N	3490	11	12	3	2
11	550	E	-	280	N	3630	11	11	2	2
12	550	E	-	285	N	3240	12	11	2	2
13	550	E	-	290	N	3390	11	10	2	2
14	550	E	-	295	N	3080	11	10	3	2
15	550	E	-	300	N	3180	11	11	2	2
16	550	E	-	305	N	3160	12	12	2	2
17	550	E	-	310	N	3450	13	11	3	2
18	550	E	-	315	N	3400	11	11	2	2
19	550	E	-	320	N	3560	12	10	2	2
20	550	E	-	325	N	3120	12	11	1	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	550	E	-	330	N	3350	13	13	2	2
2	550	E	-	335	N	3280	12	12	2	2
3	550	E	-	340	N	3320	13	11	1	2
4	550	E	-	345	N	3170	12	12	2	2
5	550	E	-	350	N	2960	12	11	2	2
6	550	E	-	355	N	3300	12	12	2	2
7	550	E	-	360	N	3190	12	10	2	2
8	550	E	-	365	N	3000	12	10	2	2
9	550	E	-	370	N	3500	10	10	2	2
10	550	E	-	375	N	3480	11	10	3	2
11	550	E	-	380	N	3390	12	12	2	2
12	550	E	-	385	N	3210	11	10	2	2
13	550	E	-	390	N	3420	12	11	3	2
14	550	E	-	395	N	3040	12	12	2	2
15	550	E	-	400	N	3100	11	11	2	2
16	550	E	-	405	N	3460	13	12	2	2
17	550	E	-	410	N	2900	12	12	2	2
18	550	E	-	415	N	2730	11	11	2	2
19	550	E	-	420	N	3040	11	11	2	2
20	550	E	-	425	N	3300	12	10	2	2
21	550	E	-	430	N	3660	10	10	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	555	E	-	230	N	2830	9	8	5	1
2	555	E	-	235	N	2760	9	9	3	1
3	555	E	-	240	N	2780	8	9	4	1
4	555	E	-	245	N	3080	9	9	4	2
5	555	E	-	250	N	2570	11	10	3	2
6	555	E	-	255	N	2720	10	10	3	2
7	555	E	-	260	N	3450	12	12	2	2
8	555	E	-	265	N	3540	13	12	2	2
9	555	E	-	270	N	3290	13	11	3	2
10	555	E	-	275	N	3520	11	11	3	2
11	555	E	-	280	N	3060	12	11	3	2
12	555	E	-	285	N	3350	12	8	3	2
13	555	E	-	290	N	3180	12	11	2	2
14	555	E	-	295	N	3410	12	10	3	2
15	555	E	-	300	N	3140	12	11	3	1
16	555	E	-	305	N	3340	10	10	2	2
17	555	E	-	310	N	3190	11	10	2	2
18	555	E	-	315	N	3140	12	10	1	2
19	555	E	-	320	N	3210	11	11	2	2
20	555	E	-	325	N	2940	11	11	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	555	E	-	330	N	3010	12	10	3	2
2	555	E	-	335	N	3390	12	10	3	2
3	555	E	-	340	N	3130	13	11	3	2
4	555	E	-	345	N	2850	12	10	3	2
5	555	E	-	350	N	3040	13	11	2	2
6	555	E	-	355	N	2840	11	10	3	2
7	555	E	-	360	N	3050	11	11	3	2
8	555	E	-	365	N	2700	12	10	1	2
9	555	E	-	370	N	2680	12	10	1	1
10	555	E	-	375	N	2880	12	10	2	2
11	555	E	-	380	N	2840	12	10	3	2
12	555	E	-	385	N	3060	11	10	2	2
13	555	E	-	390	N	2940	11	10	2	2
14	555	E	-	395	N	3020	11	9	2	2
15	555	E	-	400	N	3110	10	11	3	2
16	555	E	-	405	N	2600	11	10	2	1
17	555	E	-	410	N	2690	11	10	2	2
18	555	E	-	415	N	2690	12	10	2	2
19	555	E	-	420	N	2500	11	10	2	1
20	555	E	-	425	N	2230	9	10	2	1
21	555	E	-	430	N	3510	12	10	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	Th (Nat)
1	560	E	-	230	N	3440	9	9	2	1
2	560	E	-	235	N	2790	8	9	8	2
3	560	E	-	240	N	3160	7	9	3	2
4	560	E	-	245	N	3320	9	9	3	2
5	560	E	-	250	N	3110	12	11	2	2
6	560	E	-	255	N	3100	12	10	2	2
7	560	E	-	260	N	2880	12	11	2	2
8	560	E	-	265	N	3390	11	10	3	2
9	560	E	-	270	N	3170	11	11	3	2
10	560	E	-	275	N	3260	12	11	3	2
11	560	E	-	280	N	3000	11	10	2	2
12	560	E	-	285	N	3090	11	10	2	2
13	560	E	-	290	N	3160	12	11	3	2
14	560	E	-	295	N	3080	11	10	3	2
15	560	E	-	300	N	2790	12	11	3	2
16	560	E	-	305	N	3070	12	10	3	2
17	560	E	-	310	N	3200	11	11	3	2
18	560	E	-	315	N	3010	11	11	3	2
19	560	E	-	320	N	3110	11	10	2	2
20	560	E	-	325	N	3320	12	10	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. R. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	560	E	-	330	N	3310	11	11	3	2
2	560	E	-	335	N	3030	11	11	3	2
3	560	E	-	340	N	3170	11	10	3	2
4	560	E	-	345	N	3220	11	10	2	2
5	560	E	-	350	N	2730	12	11	2	2
6	560	E	-	355	N	3250	12	11	3	2
7	560	E	-	360	N	3060	11	11	3	2
8	560	E	-	365	N	3200	12	10	3	1
9	560	E	-	370	N	2760	12	10	3	2
10	560	E	-	375	N	2990	12	10	2	2
11	560	E	-	380	N	3050	11	10	3	1
12	560	E	-	385	N	2950	11	11	2	2
13	560	E	-	390	N	2940	12	11	2	2
14	560	E	-	395	N	2850	11	10	2	2
15	560	E	-	400	N	2860	11	9	2	2
16	560	E	-	405	N	2930	12	10	2	2
17	560	E	-	410	N	2990	12	11	3	2
18	560	E	-	415	N	2980	10	12	2	2
19	560	E	-	420	N	3470	10	11	3	2
20	560	E	-	425	N	2750	11	10	2	1
21	560	E	-	430	N	2860	10	9	3	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	565	E	-	230	N	3000	9	8	5	2
2	565	E	-	235	N	2920	9	9	2	2
3	565	E	-	240	N	3090	9	8	6	2
4	565	E	-	245	N	2890	8	10	6	1
5	565	E	-	250	N	3010	11	12	2	2
6	565	E	-	255	N	2810	11	11	3	2
7	565	E	-	260	N	3010	11	11	7	2
8	565	E	-	265	N	2970	9	9	2	1
9	565	E	-	270	N	3060	13	11	2	2
10	565	E	-	275	N	2760	11	10	3	2
11	565	E	-	280	N	3500	12	11	3	2
12	565	E	-	285	N	2490	10	10	2	2
13	565	E	-	290	N	3140	11	11	3	2
14	565	E	-	295	N	3210	12	12	2	2
15	565	E	-	300	N	3330	11	11	2	2
16	565	E	-	305	N	3070	12	11	2	2
17	565	E	-	310	N	3430	12	10	2	2
18	565	E	-	315	N	3010	13	12	2	2
19	565	E	-	320	N	3600	12	11	2	2
20	565	E	-	325	N	3200	12	11	4	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Kopen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	565	E	-	330	N	2990	12	10	3	2
2	565	E	-	335	N	2900	12	11	3	1
3	565	E	-	340	N	3230	12	11	3	2
4	565	E	-	345	N	3540	12	12	3	2
5	565	E	-	350	N	3680	11	10	3	2
6	565	E	-	355	N	2700	11	11	2	2
7	565	E	-	360	N	2970	11	11	2	2
8	565	E	-	365	N	2980	13	11	2	2
9	565	E	-	370	N	3240	12	11	2	2
10	565	E	-	375	N	3340	12	12	2	2
11	565	E	-	380	N	3100	12	10	3	2
12	565	E	-	385	N	3200	13	11	3	2
13	565	E	-	390	N	3590	13	12	3	2
14	565	E	-	395	N	3140	12	11	3	2
15	565	E	-	400	N	3700	13	11	3	2
16	565	E	-	405	N	3150	12	11	2	2
17	565	E	-	410	N	3210	12	11	2	2
18	565	E	-	415	N	3280	11	10	2	2
19	565	E	-	420	N	3570	12	11	3	2
20	565	E	-	425	N	3170	12	10	2	2
21	565	E	-	430	N	3190	10	10	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	570	E	-	230	N	2730	10	8	3	2
2	570	E	-	235	N	2870	10	9	5	2
3	570	E	-	240	N	2580	9	9	1	2
4	570	E	-	245	N	2850	9	9	2	2
5	570	E	-	250	N	2730	13	12	2	2
6	570	E	-	255	N	2900	10	10	4	2
7	570	E	-	260	N	3320	12	10	3	2
8	570	E	-	265	N	3020	11	9	3	2
9	570	E	-	270	N	3090	13	11	3	2
10	570	E	-	275	N	3270	12	11	3	2
11	570	E	-	280	N	3150	10	10	2	2
12	570	E	-	285	N	3550	13	11	2	2
13	570	E	-	290	N	2920	11	9	1	2
14	570	E	-	295	N	3480	11	11	2	2
15	570	E	-	300	N	3310	12	11	3	2
16	570	E	-	305	N	3170	12	11	2	2
17	570	E	-	310	N	3210	13	11	3	2
18	570	E	-	315	N	3670	11	11	3	2
19	570	E	-	320	N	3400	12	10	3	2
20	570	E	-	325	N	3340	12	11	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Kozen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	570	E	-	330	N	3440	12	10	3	2
2	570	E	-	335	N	3470	12	11	2	2
3	570	E	-	340	N	3440	12	11	2	2
4	570	E	-	345	N	3080	12	11	3	2
5	570	E	-	350	N	3320	11	11	2	2
6	570	E	-	355	N	3450	12	11	2	2
7	570	E	-	360	N	3330	11	9	3	2
8	570	E	-	365	N	3470	12	10	3	2
9	570	E	-	370	N	3720	13	11	3	2
10	570	E	-	375	N	3110	11	11	3	2
11	570	E	-	380	N	2930	11	11	2	2
12	570	E	-	385	N	3190	11	11	2	2
13	570	E	-	390	N	3140	12	12	2	2
14	570	E	-	395	N	3240	12	11	2	2
15	570	E	-	400	N	3390	13	12	2	2
16	570	E	-	405	N	3090	12	11	2	2
17	570	E	-	410	N	3190	12	11	3	2
18	570	E	-	415	N	3130	12	12	2	2
19	570	E	-	420	N	3370	12	11	3	2
20	570	E	-	425	N	3190	12	10	2	2
21	570	E	-	430	N	3840	12	11	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	575	E	-	230	N	3040	9	8	3	2
2	575	E	-	235	N	3050	9	9	2	2
3	575	E	-	240	N	2800	9	8	5	1
4	575	E	-	245	N	3080	9	9	4	2
5	575	E	-	250	N	2820	11	10	2	2
6	575	E	-	255	N	2960	10	10	2	2
7	575	E	-	260	N	3060	11	10	3	2
8	575	E	-	265	N	3060	11	10	2	2
9	575	E	-	270	N	3360	11	10	3	2
10	575	E	-	275	N	2820	12	10	2	2
11	575	E	-	280	N	3320	11	10	3	2
12	575	E	-	285	N	3190	12	11	3	2
13	575	E	-	290	N	3490	11	11	2	2
14	575	E	-	295	N	3380	12	11	3	2
15	575	E	-	300	N	2810	12	11	3	2
16	575	E	-	305	N	3240	12	11	2	2
17	575	E	-	310	N	3400	12	10	3	2
18	575	E	-	315	N	3030	13	11	2	2
19	575	E	-	320	N	3730	12	12	3	2
20	575	E	-	325	N	3370	13	11	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	575	E	-	330	N	3490	12	11	2	2
2	575	E	-	335	N	3450	13	11	3	2
3	575	E	-	340	N	3740	13	11	2	2
4	575	E	-	345	N	3500	11	10	2	2
5	575	E	-	350	N	3470	11	10	3	2
6	575	E	-	355	N	3580	12	11	2	2
7	575	E	-	360	N	3000	11	10	2	2
8	575	E	-	365	N	2730	12	10	2	2
9	575	E	-	370	N	2960	12	10	1	2
10	575	E	-	375	N	3360	12	10	2	2
11	575	E	-	380	N	2920	13	12	2	2
12	575	E	-	385	N	3600	12	11	2	2
13	575	E	-	390	N	3360	12	10	3	2
14	575	E	-	395	N	3190	12	11	3	2
15	575	E	-	400	N	3360	12	10	2	2
16	575	E	-	405	N	3110	11	11	2	2
17	575	E	-	410	N	2850	11	10	2	2
18	575	E	-	415	N	2000	12	11	3	2
19	575	E	-	420	N	2930	12	10	2	2
20	575	E	-	425	N	2980	13	11	2	2
21	575	E	-	430	N	3760	12	11	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Vogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	0-6",Sample Th (Nat)
1	580	E	-	230	N	2730	9	9	5	1
2	580	E	-	235	N	2880	9	9	1	2
3	580	E	-	240	N	2710	8	9	5	1
4	580	E	-	245	N	3030	9	10	7	2
5	580	E	-	250	N	3100	10	12	3	2
6	580	E	-	255	N	2960	11	10	5	2
7	580	E	-	260	N	2750	10	10	3	2
8	580	E	-	265	N	3040	11	11	2	2
9	580	E	-	270	N	2490	10	10	2	1
10	580	E	-	275	N	2550	10	8	1	1
11	580	E	-	280	N	2790	11	10	1	2
12	580	E	-	285	N	2370	11	9	1	2
13	580	E	-	290	N	2500	10	10	2	1
14	580	E	-	295	N	2780	10	9	2	2
15	580	E	-	300	N	2310	11	11	1	1
16	580	E	-	305	N	2830	11	9	1	1
17	580	E	-	310	N	2440	11	9	1	2
18	580	E	-	315	N	2520	10	8	3	2
19	580	E	-	320	N	2140	11	10	1	1
20	580	E	-	325	N	2700	10	10	2	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. Rogers DATE: 7-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	580	E	-	330	N	2630	10	8	1	1
2	580	E	-	335	N	2630	9	9	1	1
3	580	E	-	340	N	2640	10	10	1	1
4	580	E	-	345	N	2830	10	10	1	1
5	580	E	-	350	N	2700	11	10	1	2
6	580	E	-	355	N	2770	12	10	2	2
7	580	E	-	360	N	2770	11	10	2	2
8	580	E	-	365	N	2710	12	10	3	2
9	580	E	-	370	N	2690	10	10	2	2
10	580	E	-	375	N	2970	10	9	2	2
11	580	E	-	380	N	2670	10	10	2	2
12	580	E	-	385	N	2760	10	9	2	2
13	580	E	-	390	N	2870	10	10	3	2
14	580	E	-	395	N	3140	11	10	2	2
15	580	E	-	400	N	2820	11	10	2	2
16	580	E	-	405	N	3410	10	10	2	2
17	580	E	-	410	N	3080	11	9	2	2
18	580	E	-	415	N	3280	12	10	2	2
19	580	E	-	420	N	3330	12	10	3	2
20	580	E	-	425	N	3110	11	11	2	2
21	580	E	-	430	N	3290	10	10	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	585	E	-	230	N	2980	9	9	6	1
2	585	E	-	235	N	2840	8	9	3	1
3	585	E	-	240	N	2560	10	10	3	2
4	585	E	-	245	N	2750	9	9	7	1
5	585	E	-	250	N	3180	11	10	3	2
6	585	E	-	255	N	3020	11	11	3	2
7	585	E	-	260	N	2990	10	9	3	2
8	585	E	-	265	N	2980	10	10	3	2
9	585	E	-	270	N	2920	12	11	3	2
10	585	E	-	275	N	2340	10	10	3	1
11	585	E	-	280	N	2760	10	9	1	1
12	585	E	-	285	N	2750	11	9	2	2
13	585	E	-	290	N	2370	11	10	1	2
14	585	E	-	295	N	2400	10	10	2	2
15	585	E	-	300	N	2440	11	10	1	1
16	585	E	-	305	N	2060	10	10	2	2
17	585	E	-	310	N	1960	9	9	2	2
18	585	E	-	315	N	2120	9	9	1	1
19	585	E	-	320	N	2110	9	8	2	1
20	585	E	-	325	N	1850	8	7	1	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	585	E	-	330	N	2380	10	9	1	2
2	585	E	-	335	N	2400	9	9	1	2
3	585	E	-	340	N	2640	10	8	2	1
4	585	E	-	345	N	2630	10	10	1	2
5	585	E	-	350	N	2970	12	10	2	2
6	585	E	-	355	N	2590	10	10	2	2
7	585	E	-	360	N	2600	11	8	1	2
8	585	E	-	365	N	2770	10	10	1	2
9	585	E	-	370	N	3100	11	10	2	2
10	585	E	-	375	N	2980	10	9	2	2
11	585	E	-	380	N	2830	11	10	2	2
12	585	E	-	385	N	2870	12	11	3	2
13	585	E	-	390	N	2990	12	11	2	2
14	585	E	-	395	N	3030	11	11	3	2
15	585	E	-	400	N	3040	11	9	2	2
16	585	E	-	405	N	2890	12	10	3	2
17	585	E	-	410	N	2760	11	10	3	2
18	585	E	-	415	N	3060	11	10	2	2
19	585	E	-	420	N	2880	11	11	2	2
20	585	E	-	425	N	2920	12	11	3	2
21	585	E	-	430	N	3630	11	11	3	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	590	E	-	230	N	2640	9	9	3	2
2	590	E	-	235	N	3160	9	9	8	1
3	590	E	-	240	N	2440	9	10	4	1
4	590	E	-	245	N	2710	9	9	5	1
5	590	E	-	250	N	2850	12	11	1	2
6	590	E	-	255	N	3110	11	10	2	2
7	590	E	-	260	N	2800	12	10	2	2
8	590	E	-	265	N	2860	12	11	2	2
9	590	E	-	270	N	2780	12	9	1	2
10	590	E	-	275	N	3610	9	11	2	2
11	590	E	-	280	N	2840	10	9	2	2
12	590	E	-	285	N	2810	10	10	1	2
13	590	E	-	290	N	2600	10	9	2	2
14	590	E	-	295	N	3120	12	11	1	2
15	590	E	-	300	N	3270	10	10	2	2
16	590	E	-	305	N	2330	11	10	1	2
17	590	E	-	310	N	2640	10	9	1	1
18	590	E	-	315	N	2430	11	9	2	2
19	590	E	-	320	N	2640	11	9	1	2
20	590	E	-	325	N	2660	10	8	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Kogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	590	E	-	330	N	2330	10	10	1	2
2	590	E	-	335	N	2330	10	9	2	2
3	590	E	-	340	N	3260	11	9	2	2
4	590	E	-	345	N	2270	10	9	1	2
5	590	E	-	350	N	2500	10	9	1	2
6	590	E	-	355	N	3020	11	10	2	2
7	590	E	-	360	N	2560	10	9	1	2
8	590	E	-	365	N	2550	11	9	1	2
9	590	E	-	370	N	2550	11	9	2	2
10	590	E	-	375	N	2780	11	10	2	2
11	590	E	-	380	N	2880	12	11	1	2
12	590	E	-	385	N	2630	10	10	1	2
13	590	E	-	390	N	3200	12	10	3	2
14	590	E	-	395	N	2540	12	10	2	2
15	590	E	-	400	N	2780	10	10	1	2
16	590	E	-	405	N	2510	10	10	1	2
17	590	E	-	410	N	2640	12	10	2	2
18	590	E	-	415	N	2940	11	9	2	2
19	590	E	-	420	N	3430	11	10	2	2
20	590	E	-	425	N	3700	10	10	3	2
21	590	E	-	430	N	3300	9	9	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. Q. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	595	E	-	230	N	2710	8	8	3	1
2	595	E	-	235	N	2630	9	10	2	1
3	595	E	-	240	N	2450	9	8	3	1
4	595	E	-	245	N	2700	8	7	3	2
5	595	E	-	250	N	2550	8	9	4	2
6	595	E	-	255	N	2650	9	9	9	1
7	595	E	-	260	N	2680	9	10	6	2
8	595	E	-	265	N	2540	9	10	6	1
9	595	E	-	270	N	2690	8	8	9	1
10	595	E	-	275	N	2740	9	10	10	2
11	595	E	-	280	N	2890	9	9	7	2
12	595	E	-	285	N	3110	9	9	4	2
13	595	E	-	290	N	2860	8	9	6	2
14	595	E	-	295	N	2920	10	8	5	1
15	595	E	-	300	N	2360	9	8	4	1
16	595	E	-	305	N	3200	9	8	5	2
17	595	E	-	310	N	2990	8	9	4	2
18	595	E	-	315	N	2730	9	8	5	1
19	595	E	-	320	N	2500	9	9	5	2
20	595	E	-	325	N	2760	9	9	3	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Hogue DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6",Sample Total-U	Th (Nat)
1	595	E	-	330	N	2860	9	10	6	1
2	595	E	-	335	N	2180	8	10	5	1
3	595	E	-	340	N	2470	9	10	5	2
4	595	E	-	345	N	2740	8	9	5	1
5	595	E	-	350	N	2420	8	10	4	1
6	595	E	-	355	N	3030	10	9	2	1
7	595	E	-	360	N	2480	9	10	5	2
8	595	E	-	365	N	2750	10	9	6	1
9	595	E	-	370	N	3040	9	10	3	2
10	595	E	-	375	N	2390	9	9	6	2
11	595	E	-	380	N	2560	9	10	4	1
12	595	E	-	385	N	2920	9	10	6	2
13	595	E	-	390	N	2760	8	10	7	1
14	595	E	-	395	N	2790	9	9	7	1
15	595	E	-	400	N	2590	9	9	6	1
16	595	E	-	405	N	2780	9	9	5	2
17	595	E	-	410	N	2470	10	9	2	1
18	595	E	-	415	N	2490	9	10	6	1
19	595	E	-	420	N	2730	9	8	3	1
20	595	E	-	425	N	2730	9	8	6	2
21	595	E	-	430	N	3750	11	10	7	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Kogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	600	E	-	230	N	2640	8	9	6	1
2	600	E	-	235	N	3540	8	9	3	2
3	600	E	-	240	N	2650	8	8	5	1
4	600	E	-	245	N	3010	9	9	3	1
5	600	E	-	250	N	2660	8	9	8	1
6	600	E	-	255	N	2520	9	8	5	2
7	600	E	-	260	N	2520	9	9	4	1
8	600	E	-	265	N	2840	9	9	6	1
9	600	E	-	270	N	2790	9	10	2	2
10	600	E	-	275	N	2790	8	9	8	1
11	600	E	-	280	N	2810	9	9	7	1
12	600	E	-	285	N	2850	9	9	8	2
13	600	E	-	290	N	3030	10	9	2	2
14	600	E	-	295	N	2970	9	8	3	2
15	600	E	-	300	N	2850	7	8	6	1
16	600	E	-	305	N	2950	9	9	2	2
17	600	E	-	310	N	2740	9	8	7	1
18	600	E	-	315	N	2550	8	8	11	1
19	600	E	-	320	N	2580	9	8	4	1
20	600	E	-	325	N	2880	9	9	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	600	E	-	330	N	2730	8	8	4	2
2	600	E	-	335	N	2550	8	8	5	1
3	600	E	-	340	N	2470	8	10	6	1
4	600	E	-	345	N	2420	9	10	5	1
5	600	E	-	350	N	2860	9	9	4	2
6	600	E	-	355	N	2450	9	9	7	2
7	600	E	-	360	N	2680	9	9	3	2
8	600	E	-	365	N	2690	9	10	4	1
9	600	E	-	370	N	3110	10	9	5	1
10	600	E	-	375	N	3200	9	9	4	1
11	600	E	-	380	N	2420	9	9	6	1
12	600	E	-	385	N	2480	9	9	7	1
13	600	E	-	390	N	2430	11	8	5	1
14	600	E	-	395	N	2390	9	9	8	1
15	600	E	-	400	N	2210	9	9	6	1
16	600	E	-	405	N	2430	8	7	6	1
17	600	E	-	410	N	2950	9	9	5	1
18	600	E	-	415	N	2840	9	9	5	2
19	600	E	-	420	N	2630	8	9	6	1
20	600	E	-	425	N	2440	7	8	5	1
21	600	E	-	430	N	3010	10	11	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	605	E	-	230	N	2890	9	9	7	1
2	605	E	-	235	N	2850	9	9	6	2
3	605	E	-	240	N	2740	8	9	8	1
4	605	E	-	245	N	2550	8	8	5	2
5	605	E	-	250	N	2790	8	8	6	1
6	605	E	-	255	N	3510	9	8	7	1
7	605	E	-	260	N	2820	9	8	7	1
8	605	E	-	265	N	2920	9	8	4	2
9	605	E	-	270	N	2590	10	9	5	1
10	605	E	-	275	N	3040	9	8	8	2
11	605	E	-	280	N	2360	8	10	8	1
12	605	E	-	285	N	2430	8	8	5	1
13	605	E	-	290	N	3210	7	10	6	1
14	605	E	-	295	N	2180	7	7	5	2
15	605	E	-	300	N	2360	8	7	7	1
16	605	E	-	305	N	2560	10	10	5	2
17	605	E	-	310	N	2870	8	9	6	1
18	605	E	-	315	N	2740	8	8	4	2
19	605	E	-	320	N	2630	8	7	6	2
20	605	E	-	325	N	2910	7	7	7	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. U. Kogan DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	605	E	-	330	N	3220	8	7	5	1
2	605	E	-	335	N	2740	10	9	3	2
3	605	E	-	340	N	2770	10	11	3	1
4	605	E	-	345	N	2630	8	9	5	2
5	605	E	-	350	N	2340	8	7	4	1
6	605	E	-	355	N	2810	10	8	5	2
7	605	E	-	360	N	2730	7	9	7	2
8	605	E	-	365	N	2500	9	9	4	1
9	605	E	-	370	N	2180	7	8	5	1
10	605	E	-	375	N	2480	8	7	6	1
11	605	E	-	380	N	2450	10	9	7	2
12	605	E	-	385	N	2540	7	10	4	1
13	605	E	-	390	N	2890	8	8	5	2
14	605	E	-	395	N	2480	10	7	4	2
15	605	E	-	400	N	2710	7	8	7	1
16	605	E	-	405	N	2990	8	10	5	1
17	605	E	-	410	N	2730	7	9	7	1
18	605	E	-	415	N	2830	7	8	11	1
19	605	E	-	420	N	2760	10	11	4	2
20	605	E	-	425	N	2460	9	7	7	2
21	605	E	-	430	N	3660	10	10	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	610	E	-	230	N	2380	8	7	6	1
2	610	E	-	235	N	3300	10	10	5	1
3	610	E	-	240	N	2740	8	8	5	1
4	610	E	-	245	N	2470	9	7	7	1
5	610	E	-	250	N	3020	10	11	1	2
6	610	E	-	255	N	2410	9	9	5	2
7	610	E	-	260	N	2750	8	7	3	2
8	610	E	-	265	N	2460	7	7	4	2
9	610	E	-	270	N	2170	11	9	2	2
10	610	E	-	275	N	2860	10	7	9	2
11	610	E	-	280	N	2750	10	8	4	2
12	610	E	-	285	N	2490	7	9	5	1
13	610	E	-	290	N	3720	9	9	6	1
14	610	E	-	295	N	2980	10	8	9	1
15	610	E	-	300	N	3190	8	7	8	1
16	610	E	-	305	N	2350	9	9	5	2
17	610	E	-	310	N	2910	9	7	3	1
18	610	E	-	315	N	2850	10	8	5	1
19	610	E	-	320	N	3100	7	9	3	1
20	610	E	-	325	N	2880	7	7	4	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	610	E	-	330	N	2730	10	7	8	1
2	610	E	-	335	N	2680	8	8	5	1
3	610	E	-	340	N	2530	8	9	7	1
4	610	E	-	345	N	2670	8	9	8	1
5	610	E	-	350	N	2640	11	8	2	2
6	610	E	-	355	N	2540	9	7	4	1
7	610	E	-	360	N	2690	9	9	4	2
8	610	E	-	365	N	2440	10	7	4	1
9	610	E	-	370	N	2620	10	10	4	1
10	610	E	-	375	N	2700	7	9	4	1
11	610	E	-	380	N	2580	9	8	4	1
12	610	E	-	385	N	2940	9	9	5	2
13	610	E	-	390	N	2780	8	9	5	2
14	610	E	-	395	N	2810	9	8	4	2
15	610	E	-	400	N	2610	9	9	3	2
16	610	E	-	405	N	2800	10	9	5	1
17	610	E	-	410	N	2490	9	8	7	2
18	610	E	-	415	N	2510	8	9	6	2
19	610	E	-	420	N	2750	9	8	5	1
20	610	E	-	425	N	2740	9	8	7	2
21	610	E	-	430	N	4420	12	12	5	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	615	E	-	230	N	2660	9	8	4	1
2	615	E	-	235	N	3510	8	8	6	1
3	615	E	-	240	N	2800	9	9	6	1
4	615	E	-	245	N	3030	10	9	6	1
5	615	E	-	250	N	2680	9	9	9	1
6	615	E	-	255	N	2540	9	8	5	1
7	615	E	-	260	N	2540	9	9	8	1
8	615	E	-	265	N	2860	9	9	7	1
9	615	E	-	270	N	2810	9	8	4	1
10	615	E	-	275	N	2810	9	9	7	1
11	615	E	-	280	N	2830	9	10	5	1
12	615	E	-	285	N	2880	9	10	5	1
13	615	E	-	290	N	3050	8	10	5	1
14	615	E	-	295	N	2990	9	9	3	2
15	615	E	-	300	N	2870	10	9	6	1
16	615	E	-	305	N	2970	9	8	5	1
17	615	E	-	310	N	2760	9	9	6	1
18	615	E	-	315	N	2570	9	8	5	1
19	615	E	-	320	N	2600	9	9	7	1
20	615	E	-	325	N	2910	9	9	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Kogen DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	615	E	-	330	N	2910	9	9	5	1
2	615	E	-	335	N	2540	9	9	7	1
3	615	E	-	340	N	2780	9	8	2	1
4	615	E	-	345	N	2630	9	8	4	1
5	615	E	-	350	N	2380	8	8	5	1
6	615	E	-	355	N	2650	9	9	3	2
7	615	E	-	360	N	2490	9	9	3	1
8	615	E	-	365	N	2360	9	8	7	1
9	615	E	-	370	N	2750	10	9	4	2
10	615	E	-	375	N	2770	9	9	4	1
11	615	E	-	380	N	2660	9	8	7	1
12	615	E	-	385	N	3240	9	8	5	2
13	615	E	-	390	N	2830	9	10	5	2
14	615	E	-	395	N	2850	8	9	7	1
15	615	E	-	400	N	2680	9	10	5	2
16	615	E	-	405	N	2540	9	9	4	1
17	615	E	-	410	N	2730	7	9	8	1
18	615	E	-	415	N	2880	9	8	6	2
19	615	E	-	420	N	2750	9	9	6	2
20	615	E	-	425	N	2690	8	8	5	2
21	615	E	-	430	N	4010	12	12	4	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(Nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	620	E	-	225	N	2880	11	10	1	2
2	620	E	-	230	N	2980	11	10	2	2
3	620	E	-	235	N	2780	11	9	1	2
4	620	E	-	240	N	3120	11	11	2	2
5	620	E	-	245	N	3500	11	11	2	2
6	620	E	-	250	N	3420	12	11	2	2
7	620	E	-	255	N	3390	13	11	3	2
8	620	E	-	260	N	3230	11	10	2	2
9	620	E	-	265	N	3160	11	9	2	2
10	620	E	-	270	N	3270	11	10	2	2
11	620	E	-	275	N	3250	11	9	2	2
12	620	E	-	280	N	2420	10	10	2	2
13	620	E	-	285	N	3190	12	11	2	2
14	620	E	-	290	N	2860	11	11	2	2
15	620	E	-	295	N	3150	12	11	2	2
16	620	E	-	300	N	3050	12	11	2	2
17	620	E	-	305	N	2920	13	10	3	2
18	620	E	-	310	N	3060	11	10	1	2
19	620	E	-	315	N	3020	11	12	1	2
20	620	E	-	320	N	3250	11	10	1	2
21	620	E	-	325	N	2800	11	10	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected - Option 2 On-Site Disposal Cell Area
Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	620	E	-	330	N	2970	11	10	2	2
2	620	E	-	335	N	3030	11	10	2	2
3	620	E	-	340	N	2800	12	11	3	2
4	620	E	-	345	N	3120	11	10	1	2
5	620	E	-	350	N	2780	10	9	2	2
6	620	E	-	355	N	3200	11	10	1	2
7	620	E	-	360	N	3060	11	10	2	2
8	620	E	-	365	N	3160	11	11	3	2
9	620	E	-	370	N	3270	12	11	2	2
10	620	E	-	375	N	2730	10	9	2	2
11	620	E	-	380	N	2630	9	11	2	2
12	620	E	-	385	N	3010	11	9	2	2
13	620	E	-	390	N	3370	10	10	2	2
14	620	E	-	395	N	3230	12	10	3	2
15	620	E	-	400	N	3210	12	11	2	2
16	620	E	-	405	N	3270	11	11	2	2
17	620	E	-	410	N	3060	12	11	3	2
18	620	E	-	415	N	3210	12	10	1	2
19	620	E	-	420	N	2700	10	10	2	2
20	620	E	-	425	N	2920	10	10	2	2
21	620	E	-	430	N	3610	12	12	3	1

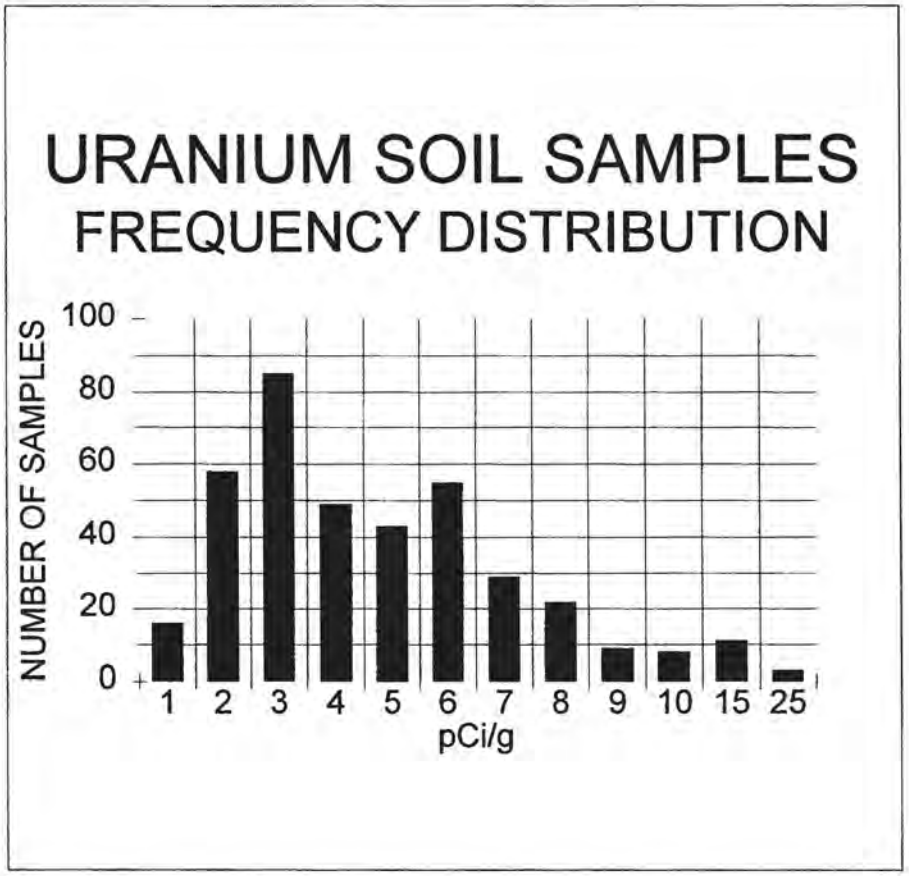
INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 138420	µR/hr	7-9	2
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50058	CPM	2500	N/A
		Total U - 4	1.0
CIMMARON SOIL COUNTER 6" X 7" NaI WELL DETECTOR	pCi/g	Th(Nat) - 1.5	0.2

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

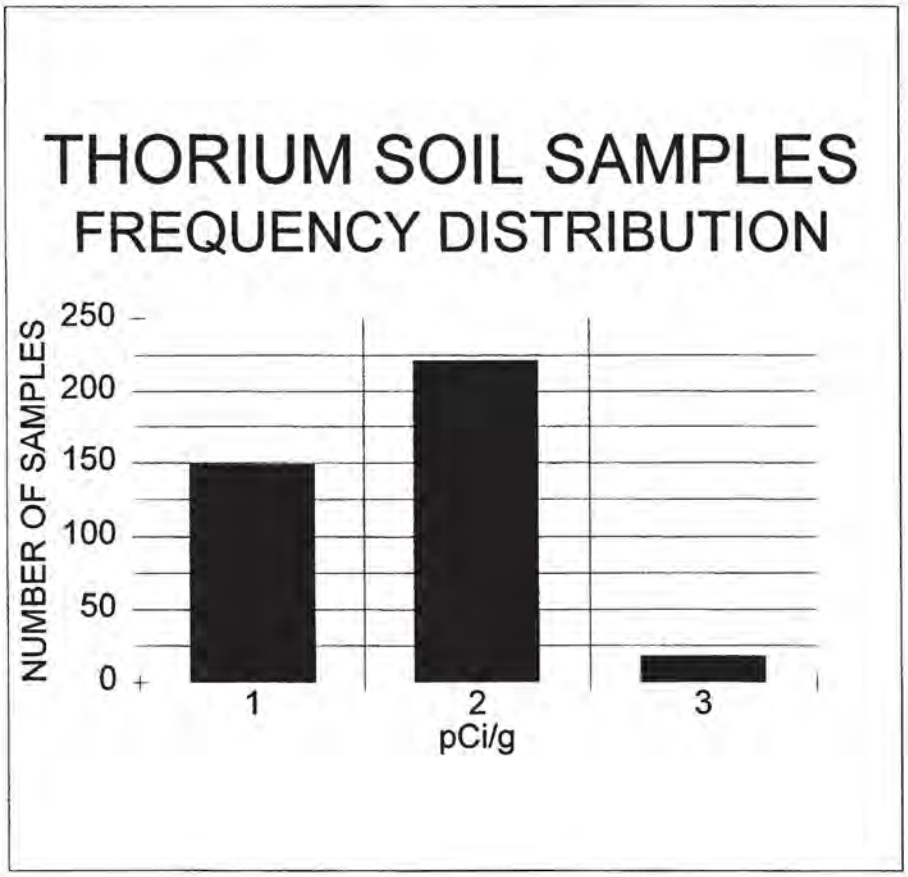
DECEMBER 17, 2001



NUMBER OF READINGS	388
AVERAGE READING	5
MINIMUM READING	1
MAXIMUM READING	24
STANDARD DEVIATION	3

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

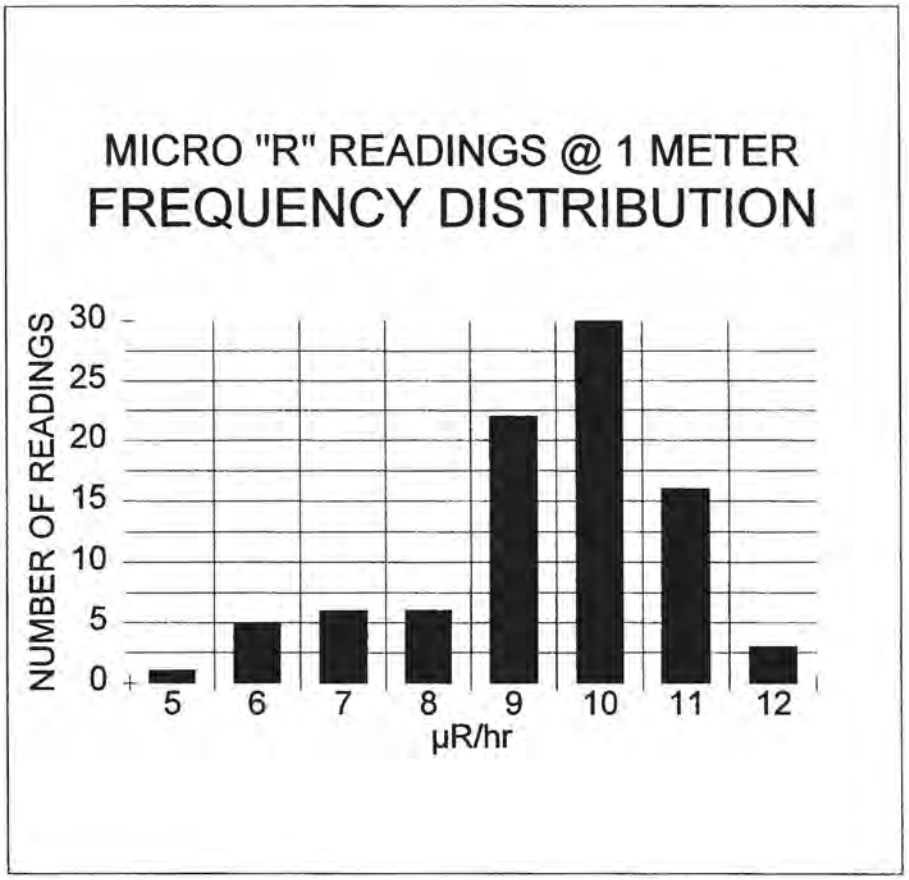
DECEMBER 17, 2001



NUMBER OF READINGS	**388**
AVERAGE READING	**2**
MINIMUM READING	**1**
MAXIMUM READING	**3**
STANDARD DEVIATION	**0.5**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

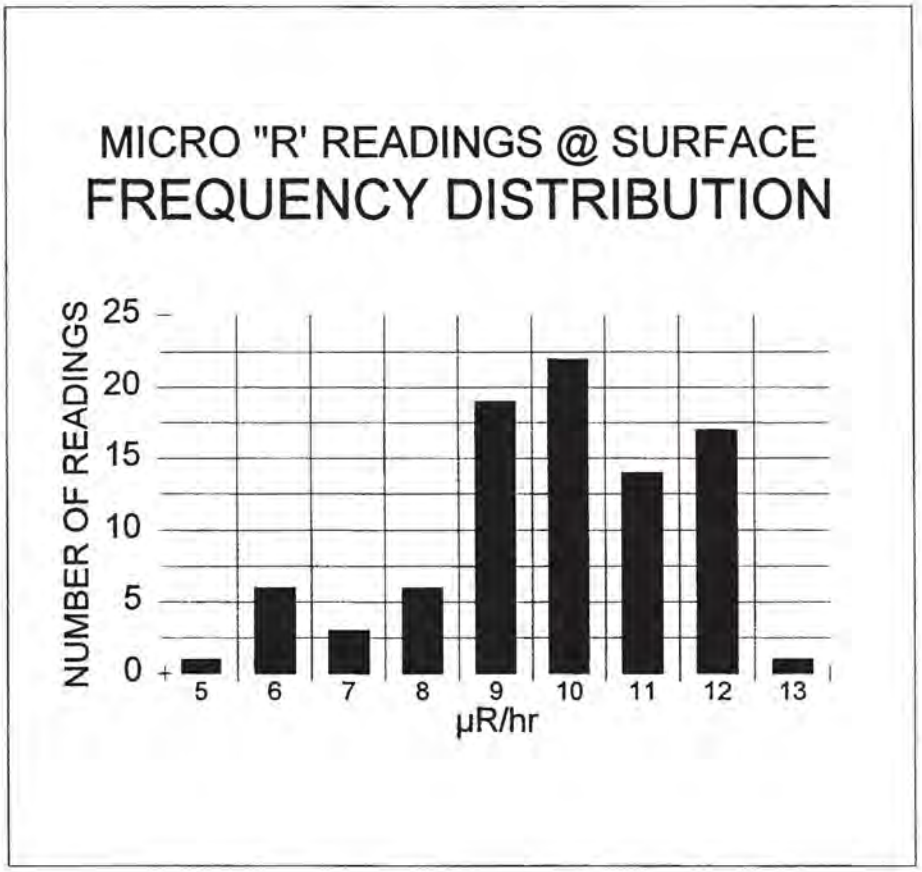
DECEMBER 17, 2001



NUMBER OF READINGS	**89**
AVERAGE READING	**9**
MINIMUM READING	**5**
MAXIMUM READING	**12**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

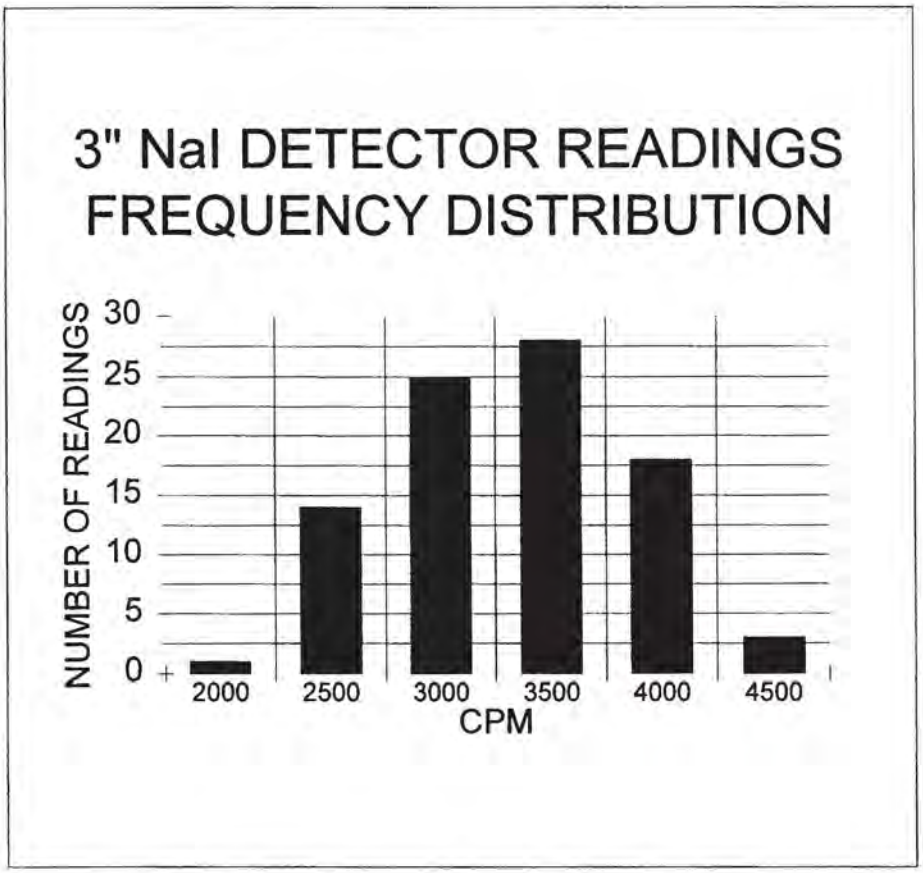
DECEMBER 17, 2001



NUMBER OF READINGS	**89**
AVERAGE READING	**10**
MINIMUM READING	**5**
MAXIMUM READING	**13**
STANDARD DEVIATION	**2**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
DEPTH SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220, S/N 50058
BACKGROUND AVERAGES: 2500

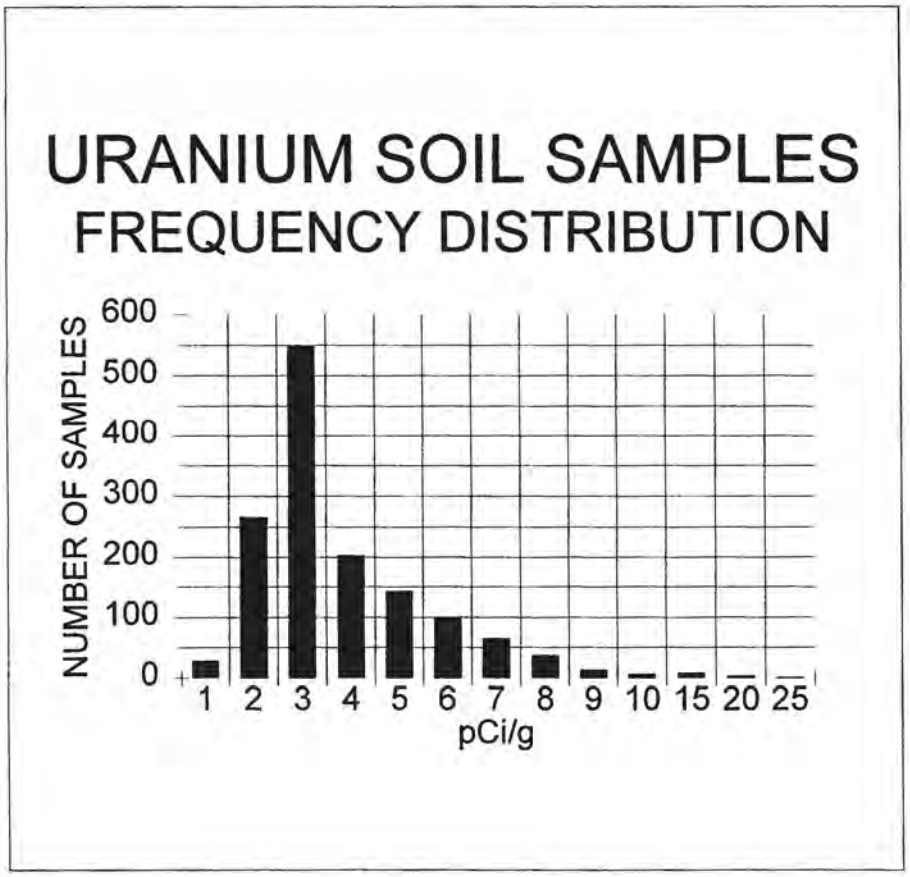
DECEMBER 17, 2001



NUMBER OF READINGS	**89**
AVERAGE READING	**3076**
MINIMUM READING	**1710**
MAXIMUM READING	**4420**
STANDARD DEVIATION	**519**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

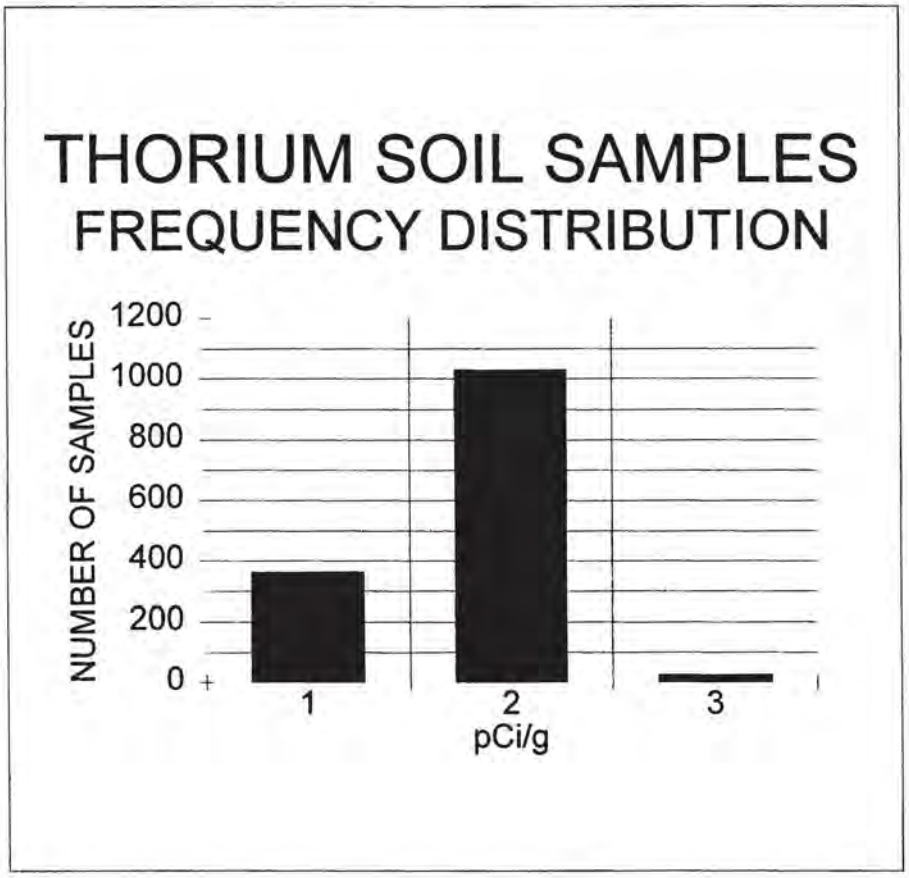
DECEMBER 18, 2001



NUMBER OF READINGS	**1421**
AVERAGE READING	**4**
MINIMUM READING	**1**
MAXIMUM READING	**24**
STANDARD DEVIATION	**2**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

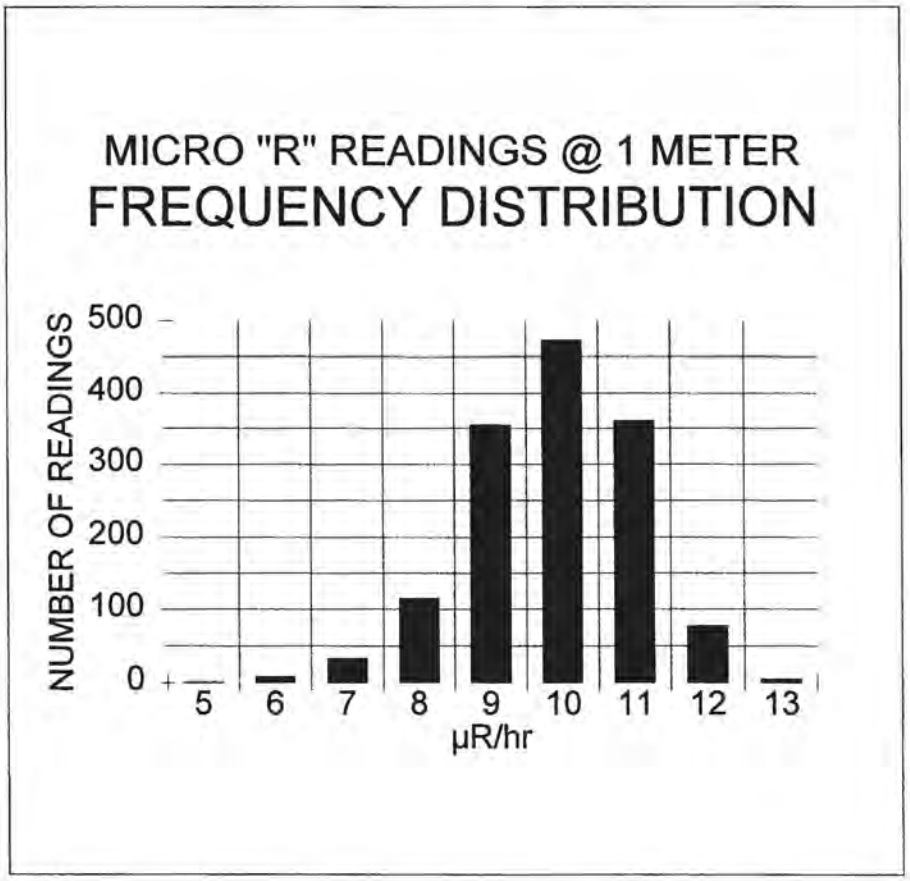
DECEMBER 18, 2001



NUMBER OF READINGS	**1421**
AVERAGE READING	**2**
MINIMUM READING	**1**
MAXIMUM READING	**3**
STANDARD DEVIATION	**0.4**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
SURFACE SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

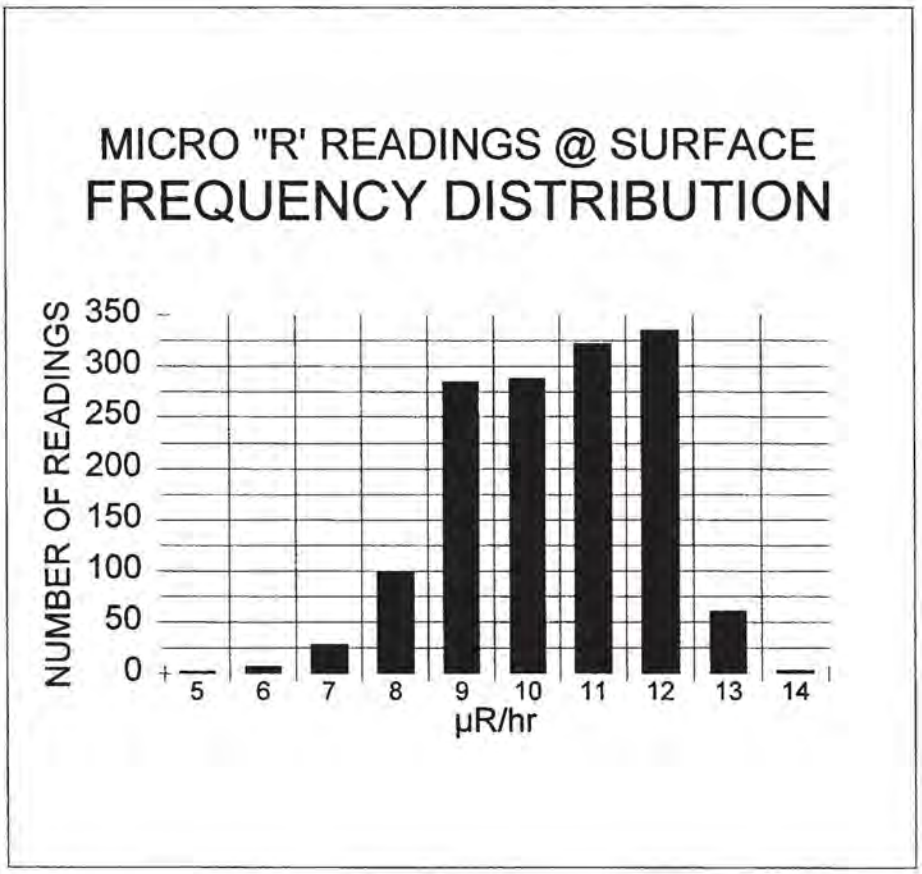
DECEMBER 18, 2001



NUMBER OF READINGS	**1430**
AVERAGE READING	**10**
MINIMUM READING	**5**
MAXIMUM READING	**13**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
SURFACE SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

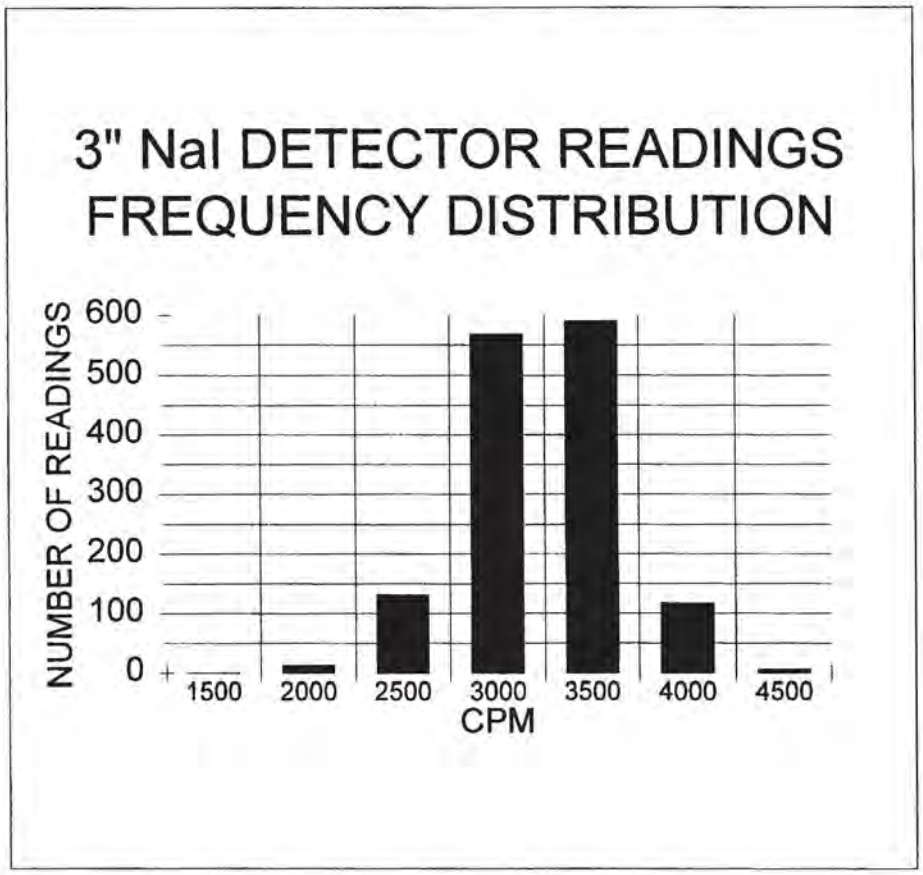
DECEMBER 18, 2001



NUMBER OF READINGS	**1430**
AVERAGE READING	**10**
MINIMUM READING	**5**
MAXIMUM READING	**14**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N"
OPTION 2 ON-SITE DISPOSAL CELL AREA
SURFACE SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220, S/N 50058
BACKGROUND AVERAGES: 2500

DECEMBER 18, 2001



NUMBER OF READINGS	**1430**
AVERAGE READING	**2999**
MINIMUM READING	**1490**
MAXIMUM READING	**4420**
STANDARD DEVIATION	**381**

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
1	0.7	-2.9	8.3
2	0.7	-2.9	8.3
3	0.7	-2.9	8.2
4	0.8	-2.8	7.6
5	0.8	-2.7	7.5
6	0.9	-2.7	7.1
7	0.9	-2.6	7.0
8	1.0	-2.6	6.8
9	1.0	-2.6	6.8
10	1.0	-2.6	6.5
11	1.0	-2.6	6.5
12	1.0	-2.6	6.5
13	1.0	-2.6	6.5
14	1.0	-2.6	6.5
15	1.0	-2.6	6.5
16	1.0	-2.6	6.5
17	1.0	-2.6	6.5
18	1.0	-2.6	6.5
19	1.0	-2.6	6.5
20	1.0	-2.6	6.5
21	1.0	-2.6	6.5
22	1.0	-2.6	6.5
23	1.0	-2.6	6.5
24	1.0	-2.6	6.5
25	1.0	-2.6	6.5
26	1.0	-2.6	6.5
27	1.0	-2.6	6.5
28	1.0	-2.6	6.5
29	1.0	-2.5	6.5
30	1.0	-2.5	6.5
31	1.0	-2.5	6.4
32	1.1	-2.5	6.3
33	1.1	-2.5	6.3
34	1.1	-2.5	6.1
35	1.1	-2.5	6.1
36	1.1	-2.5	6.0
37	1.1	-2.4	5.9
38	1.1	-2.4	5.9
39	1.1	-2.4	5.8
40	1.2	-2.4	5.8
41	1.2	-2.4	5.7
42	1.2	-2.4	5.6
43	1.2	-2.3	5.5
44	1.2	-2.3	5.4
45	1.2	-2.3	5.3
46	1.3	-2.3	5.3
47	1.3	-2.3	5.2
48	1.3	-2.3	5.2
49	1.3	-2.3	5.2
50	1.3	-2.3	5.2
P2	73.1		218.5
P2	85.0		171.3
P3	92.1		146.0
P3	98.6		124.7
P4	100.1		120.0
P4	102.9		111.6
P5	106.8		98.1
P5	111.1		88.4
P6	115.6		76.9
P6	121.1		63.8
P7	126.6		52.0
P7	132.4		40.8
P8	138.2		30.9
P8	144.9		21.5
P9	150.0		15.2
P9	150.2		15.0
P10	157.6		8.2
P10	182.0		4.2
P11	200.0		10.1
P11	203.7		16.6
P12	250.0		105.0
P12	250.0		105.0
P13	260.8		146.6
P13	300.0		300.0
P14	314.0		382.5
P14	350.0		594.9
P15	410.4		1095.3
P15	267.0		2087.7
total	5045.56		6568.8
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **1421**

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **3.55**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **2.15**

2 Std Deviations: **4.30**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.645**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **3.64** pCi/gU TOTAL U

GUIDELINE VALUE: **30** pCi/gU TOTAL U

Acceptable Level: **34.0** pCi/gU TOTAL U

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	1420	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) + (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	1420	1.645	95%

PERFORMED BY: DKgm DATE: 12-19-01

REVIEWED BY: W.a Rogers DATE: 12-19-01

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
51	1.3	-0.59	0.35
52	1.3	-0.58	0.34
53	1.3	-0.58	0.34
54	1.3	-0.55	0.30
55	1.3	-0.55	0.30
56	1.3	-0.54	0.29
57	1.3	-0.53	0.28
58	1.4	-0.50	0.25
59	1.4	-0.50	0.25
60	1.4	-0.49	0.24
61	1.4	-0.48	0.23
62	1.4	-0.47	0.22
63	1.4	-0.47	0.22
64	1.4	-0.47	0.22
65	1.4	-0.47	0.22
66	1.4	-0.46	0.21
67	1.4	-0.44	0.19
68	1.4	-0.43	0.19
69	1.4	-0.42	0.18
70	1.4	-0.42	0.18
71	1.4	-0.42	0.18
72	1.5	-0.41	0.17
73	1.5	-0.40	0.16
74	1.5	-0.39	0.15
75	1.5	-0.39	0.15
76	1.5	-0.39	0.15
77	1.5	-0.39	0.15
78	1.5	-0.37	0.14
79	1.5	-0.37	0.14
80	1.5	-0.37	0.14
81	1.5	-0.36	0.13
82	1.5	-0.36	0.13
83	1.5	-0.35	0.12
84	1.5	-0.34	0.12
85	1.5	-0.33	0.11
86	1.5	-0.33	0.11
87	1.5	-0.32	0.10
88	1.5	-0.32	0.10
89	1.5	-0.32	0.10
90	1.6	-0.31	0.10
91	1.6	-0.30	0.09
92	1.6	-0.29	0.08
93	1.6	-0.28	0.08
94	1.6	-0.28	0.08
95	1.6	-0.27	0.07
96	1.6	-0.27	0.07
97	1.6	-0.26	0.07
98	1.6	-0.25	0.06
99	1.6	-0.25	0.06
100	1.6	-0.25	0.06
	73.1		8.4
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
101	1.6	-0.25	0.06
102	1.6	-0.25	0.06
103	1.6	-0.24	0.06
104	1.6	-0.24	0.06
105	1.6	-0.23	0.05
106	1.6	-0.23	0.05
107	1.6	-0.22	0.05
108	1.6	-0.22	0.05
109	1.6	-0.22	0.05
110	1.6	-0.22	0.05
111	1.7	-0.21	0.04
112	1.7	-0.21	0.04
113	1.7	-0.21	0.04
114	1.7	-0.21	0.04
115	1.7	-0.20	0.04
116	1.7	-0.20	0.04
117	1.7	-0.19	0.04
118	1.7	-0.19	0.04
119	1.7	-0.19	0.04
120	1.7	-0.19	0.04
121	1.7	-0.18	0.03
122	1.7	-0.18	0.03
123	1.7	-0.17	0.03
124	1.7	-0.17	0.03
125	1.7	-0.16	0.03
126	1.7	-0.16	0.03
127	1.7	-0.16	0.03
128	1.7	-0.14	0.02
129	1.7	-0.13	0.02
130	1.7	-0.13	0.02
131	1.7	-0.12	0.01
132	1.7	-0.12	0.01
133	1.7	-0.12	0.01
134	1.7	-0.12	0.01
135	1.7	-0.12	0.01
136	1.8	-0.11	0.01
137	1.8	-0.11	0.01
138	1.8	-0.11	0.01
139	1.8	-0.11	0.01
140	1.8	-0.11	0.01
141	1.8	-0.11	0.01
142	1.8	-0.10	0.01
143	1.8	-0.10	0.01
144	1.8	-0.10	0.01
145	1.8	-0.09	0.01
146	1.8	-0.09	0.01
147	1.8	-0.08	0.01
148	1.8	-0.08	0.01
149	1.8	-0.08	0.01
150	1.8	-0.08	0.01
	85.0		1.4
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
151	1.8	-0.08	0.01
152	1.8	-0.08	0.01
153	1.8	-0.07	0.00
154	1.8	-0.07	0.00
155	1.8	-0.07	0.00
156	1.8	-0.07	0.00
157	1.8	-0.06	0.00
158	1.8	-0.06	0.00
159	1.8	-0.06	0.00
160	1.8	-0.06	0.00
161	1.8	-0.06	0.00
162	1.8	-0.05	0.00
163	1.8	-0.05	0.00
164	1.8	-0.05	0.00
165	1.8	-0.04	0.00
166	1.8	-0.04	0.00
167	1.8	-0.04	0.00
168	1.8	-0.04	0.00
169	1.8	-0.04	0.00
170	1.8	-0.03	0.00
171	1.8	-0.03	0.00
172	1.8	-0.03	0.00
173	1.8	-0.02	0.00
174	1.8	-0.02	0.00
175	1.8	-0.02	0.00
176	1.8	-0.02	0.00
177	1.8	-0.02	0.00
178	1.9	-0.01	0.00
179	1.9	-0.01	0.00
180	1.9	-0.01	0.00
181	1.9	-0.01	0.00
182	1.9	-0.01	0.00
183	1.9	-0.00	0.00
184	1.9	-0.00	0.00
185	1.9	0.01	0.00
186	1.9	0.01	0.00
187	1.9	0.01	0.00
188	1.9	0.02	0.00
189	1.9	0.02	0.00
190	1.9	0.02	0.00
191	1.9	0.03	0.00
192	1.9	0.03	0.00
193	1.9	0.03	0.00
194	1.9	0.03	0.00
195	1.9	0.03	0.00
196	1.9	0.04	0.00
197	1.9	0.04	0.00
198	1.9	0.04	0.00
199	1.9	0.05	0.00
200	1.9	0.05	0.00
	92.1		0.1
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
201	1.9	0.06	0.00
202	1.9	0.06	0.00
203	1.9	0.06	0.00
204	1.9	0.06	0.00
205	1.9	0.06	0.00
206	1.9	0.06	0.00
207	1.9	0.06	0.00
208	1.9	0.07	0.00
209	1.9	0.07	0.00
210	1.9	0.07	0.00
211	1.9	0.08	0.01
212	2.0	0.09	0.01
213	2.0	0.09	0.01
214	2.0	0.09	0.01
215	2.0	0.10	0.01
216	2.0	0.10	0.01
217	2.0	0.10	0.01
218	2.0	0.10	0.01
219	2.0	0.10	0.01
220	2.0	0.11	0.01
221	2.0	0.11	0.01
222	2.0	0.11	0.01
223	2.0	0.11	0.01
224	2.0	0.11	0.01
225	2.0	0.11	0.01
226	2.0	0.13	0.02
227	2.0	0.13	0.02
228	2.0	0.13	0.02
229	2.0	0.13	0.02
230	2.0	0.13	0.02
231	2.0	0.14	0.02
232	2.0	0.14	0.02
233	2.0	0.14	0.02
234	2.0	0.14	0.02
235	2.0	0.14	0.02
236	2.0	0.14	0.02
237	2.0	0.14	0.02
238	2.0	0.14	0.02
239	2.0	0.14	0.02
240	2.0	0.14	0.02
241	2.0	0.14	0.02
242	2.0	0.14	0.02
243	2.0	0.14	0.02
244	2.0	0.14	0.02
245	2.0	0.14	0.02
246	2.0	0.14	0.02
247	2.0	0.14	0.02
248	2.0	0.14	0.02
249	2.0	0.14	0.02
250	2.0	0.14	0.02
	98.6		0.7
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
251	2.0	0.14	0.02
252	2.0	0.14	0.02
253	2.0	0.14	0.02
254	2.0	0.14	0.02
255	2.0	0.14	0.02
256	2.0	0.14	0.02
257	2.0	0.14	0.02
258	2.0	0.14	0.02
259	2.0	0.14	0.02
260	2.0	0.14	0.02
261	2.0	0.14	0.02
262	2.0	0.14	0.02
263	2.0	0.14	0.02
264	2.0	0.14	0.02
265	2.0	0.14	0.02
266	2.0	0.14	0.02
267	2.0	0.14	0.02
268	2.0	0.14	0.02
269	2.0	0.14	0.02
270	2.0	0.14	0.02
271	2.0	0.14	0.02
272	2.0	0.14	0.02
273	2.0	0.14	0.02
274	2.0	0.14	0.02
275	2.0	0.14	0.02
276	2.0	0.14	0.02
277	2.0	0.14	0.02
278	2.0	0.14	0.02
279	2.0	0.14	0.02
280	2.0	0.14	0.02
281	2.0	0.14	0.02
282	2.0	0.14	0.02
283	2.0	0.14	0.02
284	2.0	0.14	0.02
285	2.0	0.14	0.02
286	2.0	0.14	0.02
287	2.0	0.14	0.02
288	2.0	0.14	0.02
289	2.0	0.14	0.02
290	2.0	0.14	0.02
291	2.0	0.14	0.02
292	2.0	0.14	0.02
293	2.0	0.14	0.02
294	2.0	0.15	0.02
295	2.0	0.15	0.02
296	2.0	0.15	0.02
297	2.0	0.15	0.02
298	2.0	0.15	0.02
299	2.0	0.15	0.02
300	2.0	0.16	0.03
	100.1		1.0
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
301	2.0	0.16	0.03
302	2.0	0.16	0.03
303	2.0	0.16	0.03
304	2.0	0.16	0.03
305	2.0	0.17	0.03
306	2.0	0.17	0.03
307	2.0	0.17	0.03
308	2.0	0.17	0.03
309	2.0	0.17	0.03
310	2.0	0.17	0.03
311	2.0	0.17	0.03
312	2.0	0.17	0.03
313	2.1	0.19	0.04
314	2.1	0.19	0.04
315	2.1	0.19	0.04
316	2.1	0.19	0.04
317	2.1	0.19	0.04
318	2.1	0.19	0.04
319	2.1	0.19	0.04
320	2.1	0.19	0.04
321	2.1	0.20	0.04
322	2.1	0.20	0.04
323	2.1	0.20	0.04
324	2.1	0.20	0.04
325	2.1	0.20	0.04
326	2.1	0.20	0.04
327	2.1	0.20	0.04
328	2.1	0.20	0.04
329	2.1	0.20	0.04
330	2.1	0.20	0.04
331	2.1	0.20	0.04
332	2.1	0.20	0.04
333	2.1	0.21	0.04
334	2.1	0.21	0.04
335	2.1	0.21	0.04
336	2.1	0.21	0.04
337	2.1	0.21	0.04
338	2.1	0.21	0.04
339	2.1	0.22	0.05
340	2.1	0.22	0.05
341	2.1	0.22	0.05
342	2.1	0.22	0.05
343	2.1	0.22	0.05
344	2.1	0.22	0.05
345	2.1	0.22	0.05
346	2.1	0.22	0.05
347	2.1	0.22	0.05
348	2.1	0.23	0.05
349	2.1	0.23	0.05
350	2.1	0.23	0.05
	102.9		2.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	$(n-N)^2$
351	2.1	0.00	0.00
352	2.1	0.24	0.06
353	2.1	0.24	0.06
354	2.1	0.24	0.06
355	2.1	0.24	0.06
356	2.1	0.24	0.06
357	2.1	0.25	0.06
358	2.1	0.25	0.06
359	2.1	0.25	0.06
360	2.1	0.25	0.06
361	2.1	0.25	0.06
362	2.1	0.25	0.06
363	2.1	0.25	0.06
364	2.1	0.25	0.06
365	2.1	0.26	0.07
366	2.1	0.26	0.07
367	2.1	0.26	0.07
368	2.1	0.26	0.07
369	2.1	0.26	0.07
370	2.1	0.26	0.07
371	2.1	0.27	0.07
372	2.1	0.27	0.07
373	2.1	0.27	0.07
374	2.1	0.27	0.07
375	2.1	0.27	0.07
376	2.1	0.28	0.08
377	2.1	0.28	0.08
378	2.1	0.28	0.08
379	2.1	0.28	0.08
380	2.1	0.28	0.08
381	2.2	0.29	0.08
382	2.2	0.29	0.08
383	2.2	0.29	0.08
384	2.2	0.29	0.08
385	2.2	0.29	0.08
386	2.2	0.30	0.09
387	2.2	0.30	0.09
388	2.2	0.30	0.09
389	2.2	0.30	0.09
390	2.2	0.30	0.09
391	2.2	0.30	0.09
392	2.2	0.30	0.09
393	2.2	0.30	0.09
394	2.2	0.31	0.10
395	2.2	0.31	0.10
396	2.2	0.31	0.10
397	2.2	0.31	0.10
398	2.2	0.31	0.10
399	2.2	0.31	0.10
400	2.2	0.31	0.10
	106.8		3.8
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
401	2.2	0.32	0.10
402	2.2	0.32	0.10
403	2.2	0.33	0.11
404	2.2	0.33	0.11
405	2.2	0.33	0.11
406	2.2	0.33	0.11
407	2.2	0.33	0.11
408	2.2	0.33	0.11
409	2.2	0.34	0.12
410	2.2	0.34	0.12
411	2.2	0.34	0.12
412	2.2	0.34	0.12
413	2.2	0.34	0.12
414	2.2	0.34	0.12
415	2.2	0.34	0.12
416	2.2	0.35	0.12
417	2.2	0.35	0.12
418	2.2	0.35	0.12
419	2.2	0.35	0.12
420	2.2	0.35	0.12
421	2.2	0.35	0.12
422	2.2	0.36	0.13
423	2.2	0.36	0.13
424	2.2	0.36	0.13
425	2.2	0.36	0.13
426	2.2	0.36	0.13
427	2.2	0.36	0.13
428	2.2	0.36	0.13
429	2.2	0.37	0.14
430	2.2	0.37	0.14
431	2.2	0.37	0.14
432	2.2	0.37	0.14
433	2.2	0.37	0.14
434	2.2	0.37	0.14
435	2.2	0.37	0.14
436	2.2	0.37	0.14
437	2.2	0.38	0.14
438	2.2	0.38	0.14
439	2.2	0.38	0.14
440	2.3	0.39	0.15
441	2.3	0.39	0.15
442	2.3	0.39	0.15
443	2.3	0.39	0.15
444	2.3	0.39	0.15
445	2.3	0.40	0.16
446	2.3	0.40	0.16
447	2.3	0.40	0.16
448	2.3	0.40	0.16
449	2.3	0.40	0.16
450	2.3	0.40	0.16
	111.1		6.5
	Sum(n)		$Sum(n-N)^2$

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
451	2.3	0.40	0.16
452	2.3	0.40	0.16
453	2.3	0.40	0.16
454	2.3	0.40	0.16
455	2.3	0.40	0.16
456	2.3	0.40	0.16
457	2.3	0.41	0.17
458	2.3	0.41	0.17
459	2.3	0.41	0.17
460	2.3	0.42	0.18
461	2.3	0.42	0.18
462	2.3	0.42	0.18
463	2.3	0.43	0.18
464	2.3	0.43	0.18
465	2.3	0.43	0.18
466	2.3	0.44	0.19
467	2.3	0.44	0.19
468	2.3	0.44	0.19
469	2.3	0.44	0.19
470	2.3	0.44	0.19
471	2.3	0.44	0.19
472	2.3	0.45	0.20
473	2.3	0.45	0.20
474	2.3	0.45	0.20
475	2.3	0.45	0.20
476	2.3	0.45	0.20
477	2.3	0.45	0.20
478	2.3	0.45	0.20
479	2.3	0.46	0.21
480	2.3	0.46	0.21
481	2.3	0.47	0.22
482	2.3	0.47	0.22
483	2.3	0.47	0.22
484	2.3	0.47	0.22
485	2.3	0.47	0.22
486	2.3	0.47	0.22
487	2.3	0.48	0.23
488	2.3	0.48	0.23
489	2.3	0.48	0.23
490	2.3	0.48	0.23
491	2.4	0.49	0.24
492	2.4	0.49	0.24
493	2.4	0.49	0.24
494	2.4	0.49	0.24
495	2.4	0.49	0.24
496	2.4	0.49	0.24
497	2.4	0.49	0.24
498	2.4	0.49	0.24
499	2.4	0.50	0.25
500	2.4	0.50	0.25
	115.6		10.2
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
501	2.4	0.51	0.26
502	2.4	0.51	0.26
503	2.4	0.51	0.26
504	2.4	0.52	0.27
505	2.4	0.52	0.27
506	2.4	0.52	0.27
507	2.4	0.52	0.27
508	2.4	0.53	0.28
509	2.4	0.53	0.28
510	2.4	0.53	0.28
511	2.4	0.53	0.28
512	2.4	0.53	0.28
513	2.4	0.53	0.28
514	2.4	0.54	0.29
515	2.4	0.54	0.29
516	2.4	0.54	0.29
517	2.4	0.54	0.29
518	2.4	0.54	0.29
519	2.4	0.54	0.29
520	2.4	0.54	0.29
521	2.4	0.55	0.30
522	2.4	0.55	0.30
523	2.4	0.55	0.30
524	2.4	0.55	0.30
525	2.4	0.55	0.30
526	2.4	0.56	0.31
527	2.4	0.56	0.31
528	2.4	0.56	0.31
529	2.4	0.56	0.31
530	2.4	0.57	0.32
531	2.4	0.57	0.32
532	2.4	0.57	0.32
533	2.4	0.57	0.32
534	2.4	0.57	0.32
535	2.4	0.58	0.34
536	2.4	0.58	0.34
537	2.4	0.58	0.34
538	2.4	0.58	0.34
539	2.5	0.59	0.35
540	2.5	0.60	0.36
541	2.5	0.60	0.36
542	2.5	0.61	0.37
543	2.5	0.61	0.37
544	2.5	0.61	0.37
545	2.5	0.62	0.38
546	2.5	0.62	0.38
547	2.5	0.62	0.38
548	2.5	0.62	0.38
549	2.5	0.62	0.38
550	2.5	0.63	0.40
	121.1		15.8
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
551	2.5	0.63	0.40
552	2.5	0.63	0.40
553	2.5	0.63	0.40
554	2.5	0.63	0.40
555	2.5	0.64	0.41
556	2.5	0.64	0.41
557	2.5	0.64	0.41
558	2.5	0.64	0.41
559	2.5	0.64	0.41
560	2.5	0.64	0.41
561	2.5	0.64	0.41
562	2.5	0.64	0.41
563	2.5	0.64	0.41
564	2.5	0.65	0.42
565	2.5	0.65	0.42
566	2.5	0.65	0.42
567	2.5	0.65	0.42
568	2.5	0.66	0.44
569	2.5	0.66	0.44
570	2.5	0.66	0.44
571	2.5	0.66	0.44
572	2.5	0.66	0.44
573	2.5	0.66	0.44
574	2.5	0.67	0.45
575	2.5	0.67	0.45
576	2.5	0.67	0.45
577	2.5	0.67	0.45
578	2.5	0.67	0.45
579	2.5	0.68	0.46
580	2.5	0.68	0.46
581	2.5	0.68	0.46
582	2.5	0.68	0.46
583	2.5	0.68	0.46
584	2.6	0.69	0.48
585	2.6	0.69	0.48
586	2.6	0.69	0.48
587	2.6	0.70	0.49
588	2.6	0.70	0.49
589	2.6	0.70	0.49
590	2.6	0.70	0.49
591	2.6	0.70	0.49
592	2.6	0.70	0.49
593	2.6	0.71	0.50
594	2.6	0.71	0.50
595	2.6	0.71	0.50
596	2.6	0.71	0.50
597	2.6	0.72	0.52
598	2.6	0.72	0.52
599	2.6	0.72	0.52
600	2.6	0.72	0.52
	126.6		22.6
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
601	2.6	0.73	0.53
602	2.6	0.73	0.53
603	2.6	0.73	0.53
604	2.6	0.73	0.53
605	2.6	0.74	0.55
606	2.6	0.74	0.55
607	2.6	0.74	0.55
608	2.6	0.75	0.56
609	2.6	0.75	0.56
610	2.6	0.75	0.56
611	2.6	0.75	0.56
612	2.6	0.75	0.56
613	2.6	0.76	0.58
614	2.6	0.76	0.58
615	2.6	0.76	0.58
616	2.6	0.76	0.58
617	2.6	0.77	0.59
618	2.6	0.77	0.59
619	2.6	0.77	0.59
620	2.6	0.77	0.59
621	2.6	0.77	0.59
622	2.6	0.77	0.59
623	2.6	0.77	0.59
624	2.6	0.78	0.61
625	2.7	0.79	0.62
626	2.7	0.79	0.62
627	2.7	0.80	0.64
628	2.7	0.80	0.64
629	2.7	0.80	0.64
630	2.7	0.80	0.64
631	2.7	0.81	0.66
632	2.7	0.81	0.66
633	2.7	0.81	0.66
634	2.7	0.81	0.66
635	2.7	0.81	0.66
636	2.7	0.82	0.67
637	2.7	0.82	0.67
638	2.7	0.82	0.67
639	2.7	0.82	0.67
640	2.7	0.82	0.67
641	2.7	0.83	0.69
642	2.7	0.83	0.69
643	2.7	0.83	0.69
644	2.7	0.83	0.69
645	2.7	0.84	0.71
646	2.7	0.84	0.71
647	2.7	0.85	0.72
648	2.7	0.85	0.72
649	2.7	0.85	0.72
650	2.7	0.85	0.72
	132.4		31.1
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
651	2.7	0.86	0.74
652	2.7	0.86	0.74
653	2.7	0.86	0.74
654	2.7	0.86	0.74
655	2.7	0.86	0.74
656	2.7	0.87	0.76
657	2.7	0.87	0.76
658	2.7	0.87	0.76
659	2.7	0.87	0.76
660	2.7	0.87	0.76
661	2.7	0.87	0.76
662	2.7	0.87	0.76
663	2.7	0.88	0.77
664	2.7	0.88	0.77
665	2.7	0.88	0.77
666	2.7	0.88	0.77
667	2.7	0.88	0.77
668	2.7	0.88	0.77
669	2.7	0.88	0.77
670	2.7	0.88	0.77
671	2.8	0.89	0.79
672	2.8	0.89	0.79
673	2.8	0.89	0.79
674	2.8	0.89	0.79
675	2.8	0.91	0.83
676	2.8	0.92	0.85
677	2.8	0.92	0.85
678	2.8	0.92	0.85
679	2.8	0.92	0.85
680	2.8	0.92	0.85
681	2.8	0.92	0.85
682	2.8	0.93	0.86
683	2.8	0.93	0.86
684	2.8	0.93	0.86
685	2.8	0.93	0.86
686	2.8	0.93	0.86
687	2.8	0.93	0.86
688	2.8	0.93	0.86
689	2.8	0.93	0.86
690	2.8	0.94	0.88
691	2.8	0.94	0.88
692	2.8	0.94	0.88
693	2.8	0.94	0.88
694	2.8	0.94	0.88
695	2.8	0.94	0.88
696	2.8	0.94	0.88
697	2.8	0.94	0.88
698	2.8	0.95	0.90
699	2.8	0.95	0.90
700	2.8	0.96	0.92
	138.2		41.0
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
701	2.8	0.96	0.92
702	2.8	0.96	0.92
703	2.8	0.96	0.92
704	2.8	0.97	0.94
705	2.8	0.97	0.94
706	2.8	0.98	0.96
707	2.8	0.98	0.96
708	2.8	0.98	0.96
709	2.8	0.98	0.96
710	2.9	0.99	0.98
711	2.9	0.99	0.98
712	2.9	0.99	0.98
713	2.9	1.00	1.00
714	2.9	1.00	1.00
715	2.9	1.00	1.00
716	2.9	1.01	1.02
717	2.9	1.01	1.02
718	2.9	1.01	1.02
719	2.9	1.01	1.02
720	2.9	1.02	1.04
721	2.9	1.02	1.04
722	2.9	1.02	1.04
723	2.9	1.02	1.04
724	2.9	1.02	1.04
725	2.9	1.02	1.04
726	2.9	1.03	1.06
727	2.9	1.04	1.08
728	2.9	1.04	1.08
729	2.9	1.04	1.08
730	2.9	1.04	1.08
731	2.9	1.05	1.10
732	2.9	1.06	1.12
733	2.9	1.06	1.12
734	2.9	1.07	1.14
735	2.9	1.07	1.14
736	2.9	1.07	1.14
737	2.9	1.08	1.17
738	2.9	1.08	1.17
739	2.9	1.08	1.17
740	2.9	1.08	1.17
741	3.0	1.10	1.21
742	3.0	1.10	1.21
743	3.0	1.10	1.21
744	3.0	1.10	1.21
745	3.0	1.10	1.21
746	3.0	1.10	1.21
747	3.0	1.12	1.25
748	3.0	1.13	1.28
749	3.0	1.13	1.28
750	3.0	1.13	1.28
	144.9		53.9
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
751	3.0	1.13	1.28
752	3.0	1.14	1.30
753	3.0	1.14	1.30
754	3.0	1.14	1.30
755	3.0	1.14	1.30
756	3.0	1.14	1.30
757	3.0	1.14	1.30
758	3.0	1.14	1.30
759	3.0	1.14	1.30
760	3.0	1.14	1.30
761	3.0	1.14	1.30
762	3.0	1.14	1.30
763	3.0	1.14	1.30
764	3.0	1.14	1.30
765	3.0	1.14	1.30
766	3.0	1.14	1.30
767	3.0	1.14	1.30
768	3.0	1.14	1.30
769	3.0	1.14	1.30
770	3.0	1.14	1.30
771	3.0	1.14	1.30
772	3.0	1.14	1.30
773	3.0	1.14	1.30
774	3.0	1.14	1.30
775	3.0	1.14	1.30
776	3.0	1.14	1.30
777	3.0	1.14	1.30
778	3.0	1.14	1.30
779	3.0	1.14	1.30
780	3.0	1.14	1.30
781	3.0	1.14	1.30
782	3.0	1.14	1.30
783	3.0	1.14	1.30
784	3.0	1.14	1.30
785	3.0	1.14	1.30
786	3.0	1.14	1.30
787	3.0	1.14	1.30
788	3.0	1.14	1.30
789	3.0	1.14	1.30
790	3.0	1.14	1.30
791	3.0	1.14	1.30
792	3.0	1.14	1.30
793	3.0	1.14	1.30
794	3.0	1.14	1.30
795	3.0	1.14	1.30
796	3.0	1.14	1.30
797	3.0	1.14	1.30
798	3.0	1.14	1.30
799	3.0	1.14	1.30
800	3.0	1.14	1.30
	150.0		64.9
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
801	3.0	1.14	1.30
802	3.0	1.14	1.30
803	3.0	1.14	1.30
804	3.0	1.14	1.30
805	3.0	1.14	1.30
806	3.0	1.14	1.30
807	3.0	1.14	1.30
808	3.0	1.14	1.30
809	3.0	1.14	1.30
810	3.0	1.14	1.30
811	3.0	1.14	1.30
812	3.0	1.14	1.30
813	3.0	1.14	1.30
814	3.0	1.14	1.30
815	3.0	1.14	1.30
816	3.0	1.14	1.30
817	3.0	1.14	1.30
818	3.0	1.14	1.30
819	3.0	1.14	1.30
820	3.0	1.14	1.30
821	3.0	1.14	1.30
822	3.0	1.14	1.30
823	3.0	1.14	1.30
824	3.0	1.14	1.30
825	3.0	1.14	1.30
826	3.0	1.14	1.30
827	3.0	1.14	1.30
828	3.0	1.14	1.30
829	3.0	1.14	1.30
830	3.0	1.14	1.30
831	3.0	1.14	1.30
832	3.0	1.14	1.30
833	3.0	1.14	1.30
834	3.0	1.14	1.30
835	3.0	1.14	1.30
836	3.0	1.14	1.30
837	3.0	1.14	1.30
838	3.0	1.14	1.30
839	3.0	1.14	1.30
840	3.0	1.14	1.30
841	3.0	1.14	1.30
842	3.0	1.14	1.30
843	3.0	1.15	1.32
844	3.0	1.15	1.32
845	3.0	1.15	1.32
846	3.0	1.15	1.32
847	3.0	1.16	1.34
848	3.0	1.18	1.39
849	3.0	1.18	1.39
850	3.0	1.18	1.39
	150.2		65.4
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
851	3.0	1.18	1.39
852	3.0	1.18	1.39
853	3.1	1.19	1.42
854	3.1	1.19	1.42
855	3.1	1.20	1.44
856	3.1	1.20	1.44
857	3.1	1.20	1.44
858	3.1	1.21	1.46
859	3.1	1.21	1.46
860	3.1	1.21	1.46
861	3.1	1.23	1.51
862	3.1	1.24	1.54
863	3.1	1.24	1.54
864	3.1	1.25	1.56
865	3.1	1.25	1.56
866	3.1	1.25	1.56
867	3.1	1.25	1.56
868	3.1	1.25	1.56
869	3.1	1.25	1.56
870	3.1	1.26	1.59
871	3.1	1.26	1.59
872	3.1	1.27	1.61
873	3.1	1.27	1.61
874	3.1	1.28	1.64
875	3.2	1.29	1.66
876	3.2	1.29	1.66
877	3.2	1.29	1.66
878	3.2	1.30	1.69
879	3.2	1.31	1.72
880	3.2	1.31	1.72
881	3.2	1.31	1.72
882	3.2	1.31	1.72
883	3.2	1.31	1.72
884	3.2	1.32	1.74
885	3.2	1.32	1.74
886	3.2	1.32	1.74
887	3.2	1.34	1.79
888	3.2	1.35	1.82
889	3.2	1.36	1.85
890	3.2	1.37	1.88
891	3.2	1.37	1.88
892	3.2	1.37	1.88
893	3.3	1.39	1.93
894	3.3	1.39	1.93
895	3.3	1.39	1.93
896	3.3	1.39	1.93
897	3.3	1.40	1.96
898	3.3	1.41	1.99
899	3.3	1.41	1.99
900	3.3	1.42	2.02
	157.6		83.6
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
901	3.3	1.42	2.02
902	3.3	1.42	2.02
903	3.3	1.44	2.07
904	3.3	1.44	2.07
905	3.3	1.45	2.10
906	3.3	1.45	2.10
907	3.3	1.46	2.13
908	3.3	1.46	2.13
909	3.3	1.47	2.16
910	3.3	1.48	2.19
911	3.3	1.48	2.19
912	3.4	1.50	2.25
913	3.4	1.51	2.28
914	3.4	1.52	2.31
915	3.4	1.53	2.34
916	3.4	1.56	2.43
917	3.4	1.57	2.46
918	3.5	1.59	2.53
919	3.5	1.60	2.56
920	3.5	1.60	2.56
921	3.5	1.62	2.62
922	3.5	1.65	2.72
923	3.6	1.69	2.86
924	3.6	1.71	2.92
925	3.6	1.73	2.99
926	3.6	1.73	2.99
927	3.6	1.76	3.10
928	3.6	1.76	3.10
929	3.7	1.79	3.20
930	3.7	1.83	3.35
931	3.7	1.84	3.38
932	3.8	1.91	3.65
933	3.8	1.93	3.72
934	3.8	1.94	3.76
935	3.9	2.08	4.33
936	4.0	2.14	4.58
937	4.0	2.14	4.58
938	4.0	2.14	4.58
939	4.0	2.14	4.58
940	4.0	2.14	4.58
941	4.0	2.14	4.58
942	4.0	2.14	4.58
943	4.0	2.14	4.58
944	4.0	2.14	4.58
945	4.0	2.14	4.58
946	4.0	2.14	4.58
947	4.0	2.14	4.58
948	4.0	2.14	4.58
949	4.0	2.14	4.58
950	4.0	2.14	4.58
	182.0		162.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
951	4.0	2.14	4.58
952	4.0	2.14	4.58
953	4.0	2.14	4.58
954	4.0	2.14	4.58
955	4.0	2.14	4.58
956	4.0	2.14	4.58
957	4.0	2.14	4.58
958	4.0	2.14	4.58
959	4.0	2.14	4.58
960	4.0	2.14	4.58
961	4.0	2.14	4.58
962	4.0	2.14	4.58
963	4.0	2.14	4.58
964	4.0	2.14	4.58
965	4.0	2.14	4.58
966	4.0	2.14	4.58
967	4.0	2.14	4.58
968	4.0	2.14	4.58
969	4.0	2.14	4.58
970	4.0	2.14	4.58
971	4.0	2.14	4.58
972	4.0	2.14	4.58
973	4.0	2.14	4.58
974	4.0	2.14	4.58
975	4.0	2.14	4.58
976	4.0	2.14	4.58
977	4.0	2.14	4.58
978	4.0	2.14	4.58
979	4.0	2.14	4.58
980	4.0	2.14	4.58
981	4.0	2.14	4.58
982	4.0	2.14	4.58
983	4.0	2.14	4.58
984	4.0	2.14	4.58
985	4.0	2.14	4.58
986	4.0	2.14	4.58
987	4.0	2.14	4.58
988	4.0	2.14	4.58
989	4.0	2.14	4.58
990	4.0	2.14	4.58
991	4.0	2.14	4.58
992	4.0	2.14	4.58
993	4.0	2.14	4.58
994	4.0	2.14	4.58
995	4.0	2.14	4.58
996	4.0	2.14	4.58
997	4.0	2.14	4.58
998	4.0	2.14	4.58
999	4.0	2.14	4.58
1000	4.0	2.14	4.58
	200.0		228.9
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1001	4.0	2.14	4.58
1002	4.0	2.14	4.58
1003	4.0	2.14	4.58
1004	4.0	2.14	4.58
1005	4.0	2.14	4.58
1006	4.0	2.14	4.58
1007	4.0	2.14	4.58
1008	4.0	2.14	4.58
1009	4.0	2.14	4.58
1010	4.0	2.14	4.58
1011	4.0	2.14	4.58
1012	4.0	2.14	4.58
1013	4.0	2.14	4.58
1014	4.0	2.14	4.58
1015	4.0	2.14	4.58
1016	4.0	2.14	4.58
1017	4.0	2.14	4.58
1018	4.0	2.14	4.58
1019	4.0	2.14	4.58
1020	4.0	2.14	4.58
1021	4.0	2.14	4.58
1022	4.0	2.14	4.58
1023	4.0	2.14	4.58
1024	4.0	2.14	4.58
1025	4.0	2.14	4.58
1026	4.0	2.14	4.58
1027	4.0	2.14	4.58
1028	4.0	2.14	4.58
1029	4.0	2.14	4.58
1030	4.0	2.14	4.58
1031	4.0	2.14	4.58
1032	4.0	2.14	4.58
1033	4.0	2.14	4.58
1034	4.0	2.14	4.58
1035	4.0	2.14	4.58
1036	4.0	2.14	4.58
1037	4.0	2.14	4.58
1038	4.0	2.14	4.58
1039	4.0	2.14	4.58
1040	4.0	2.14	4.58
1041	4.0	2.14	4.58
1042	4.0	2.14	4.58
1043	4.0	2.14	4.58
1044	4.0	2.14	4.58
1045	4.0	2.14	4.58
1046	4.3	2.46	6.05
1047	4.5	2.60	6.76
1048	4.9	3.07	9.42
1049	5.0	3.14	9.86
1050	5.0	3.14	9.86
	203.7		248.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	$(n-N)^2$
1051	5.0	3.14	9.86
1052	5.0	3.14	9.86
1053	5.0	3.14	9.86
1054	5.0	3.14	9.86
1055	5.0	3.14	9.86
1056	5.0	3.14	9.86
1057	5.0	3.14	9.86
1058	5.0	3.14	9.86
1059	5.0	3.14	9.86
1060	5.0	3.14	9.86
1061	5.0	3.14	9.86
1062	5.0	3.14	9.86
1063	5.0	3.14	9.86
1064	5.0	3.14	9.86
1065	5.0	3.14	9.86
1066	5.0	3.14	9.86
1067	5.0	3.14	9.86
1068	5.0	3.14	9.86
1069	5.0	3.14	9.86
1070	5.0	3.14	9.86
1071	5.0	3.14	9.86
1072	5.0	3.14	9.86
1073	5.0	3.14	9.86
1074	5.0	3.14	9.86
1075	5.0	3.14	9.86
1076	5.0	3.14	9.86
1077	5.0	3.14	9.86
1078	5.0	3.14	9.86
1079	5.0	3.14	9.86
1080	5.0	3.14	9.86
1081	5.0	3.14	9.86
1082	5.0	3.14	9.86
1083	5.0	3.14	9.86
1084	5.0	3.14	9.86
1085	5.0	3.14	9.86
1086	5.0	3.14	9.86
1087	5.0	3.14	9.86
1088	5.0	3.14	9.86
1089	5.0	3.14	9.86
1090	5.0	3.14	9.86
1091	5.0	3.14	9.86
1092	5.0	3.14	9.86
1093	5.0	3.14	9.86
1094	5.0	3.14	9.86
1095	5.0	3.14	9.86
1096	5.0	3.14	9.86
1097	5.0	3.14	9.86
1098	5.0	3.14	9.86
1099	5.0	3.14	9.86
1100	5.0	3.14	9.86
	250.0		492.9
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
1101	5.0	3.14	9.86
1102	5.0	3.14	9.86
1103	5.0	3.14	9.86
1104	5.0	3.14	9.86
1105	5.0	3.14	9.86
1106	5.0	3.14	9.86
1107	5.0	3.14	9.86
1108	5.0	3.14	9.86
1109	5.0	3.14	9.86
1110	5.0	3.14	9.86
1111	5.0	3.14	9.86
1112	5.0	3.14	9.86
1113	5.0	3.14	9.86
1114	5.0	3.14	9.86
1115	5.0	3.14	9.86
1116	5.0	3.14	9.86
1117	5.0	3.14	9.86
1118	5.0	3.14	9.86
1119	5.0	3.14	9.86
1120	5.0	3.14	9.86
1121	5.0	3.14	9.86
1122	5.0	3.14	9.86
1123	5.0	3.14	9.86
1124	5.0	3.14	9.86
1125	5.0	3.14	9.86
1126	5.0	3.14	9.86
1127	5.0	3.14	9.86
1128	5.0	3.14	9.86
1129	5.0	3.14	9.86
1130	5.0	3.14	9.86
1131	5.0	3.14	9.86
1132	5.0	3.14	9.86
1133	5.0	3.14	9.86
1134	5.0	3.14	9.86
1135	5.0	3.14	9.86
1136	5.0	3.14	9.86
1137	5.0	3.14	9.86
1138	5.0	3.14	9.86
1139	5.0	3.14	9.86
1140	5.0	3.14	9.86
1141	5.0	3.14	9.86
1142	5.0	3.14	9.86
1143	5.0	3.14	9.86
1144	5.0	3.14	9.86
1145	5.0	3.14	9.86
1146	5.0	3.14	9.86
1147	5.0	3.14	9.86
1148	5.0	3.14	9.86
1149	5.0	3.14	9.86
1150	5.0	3.14	9.86
	250.0		492.9
	Sum(n)		$Sum(n-N)^2$

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	$(n-N)^2$
1151	5.0	3.14	9.86
1152	5.0	3.14	9.86
1153	5.0	3.14	9.86
1154	5.0	3.14	9.86
1155	5.0	3.14	9.86
1156	5.0	3.14	9.86
1157	5.0	3.14	9.86
1158	5.0	3.14	9.86
1159	5.0	3.14	9.86
1160	5.0	3.14	9.86
1161	5.0	3.14	9.86
1162	5.0	3.14	9.86
1163	5.0	3.14	9.86
1164	5.0	3.14	9.86
1165	5.0	3.14	9.86
1166	5.0	3.14	9.86
1167	5.0	3.14	9.86
1168	5.0	3.14	9.86
1169	5.0	3.14	9.86
1170	5.0	3.14	9.86
1171	5.0	3.14	9.86
1172	5.0	3.14	9.86
1173	5.0	3.14	9.86
1174	5.0	3.14	9.86
1175	5.0	3.14	9.86
1176	5.0	3.14	9.86
1177	5.0	3.14	9.86
1178	5.0	3.14	9.86
1179	5.0	3.14	9.86
1180	5.0	3.14	9.86
1181	5.0	3.14	9.86
1182	5.0	3.14	9.86
1183	5.0	3.14	9.86
1184	5.0	3.14	9.86
1185	5.0	3.14	9.86
1186	5.0	3.14	9.86
1187	5.0	3.14	9.86
1188	5.0	3.14	9.86
1189	5.2	3.33	11.09
1190	5.6	3.71	13.76
1191	6.0	4.14	17.14
1192	6.0	4.14	17.14
1193	6.0	4.14	17.14
1194	6.0	4.14	17.14
1195	6.0	4.14	17.14
1196	6.0	4.14	17.14
1197	6.0	4.14	17.14
1198	6.0	4.14	17.14
1199	6.0	4.14	17.14
1200	6.0	4.14	17.14
	260.8		570.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	$(n-N)^2$
1201	6.0	4.14	17.14
1202	6.0	4.14	17.14
1203	6.0	4.14	17.14
1204	6.0	4.14	17.14
1205	6.0	4.14	17.14
1206	6.0	4.14	17.14
1207	6.0	4.14	17.14
1208	6.0	4.14	17.14
1209	6.0	4.14	17.14
1210	6.0	4.14	17.14
1211	6.0	4.14	17.14
1212	6.0	4.14	17.14
1213	6.0	4.14	17.14
1214	6.0	4.14	17.14
1215	6.0	4.14	17.14
1216	6.0	4.14	17.14
1217	6.0	4.14	17.14
1218	6.0	4.14	17.14
1219	6.0	4.14	17.14
1220	6.0	4.14	17.14
1221	6.0	4.14	17.14
1222	6.0	4.14	17.14
1223	6.0	4.14	17.14
1224	6.0	4.14	17.14
1225	6.0	4.14	17.14
1226	6.0	4.14	17.14
1227	6.0	4.14	17.14
1228	6.0	4.14	17.14
1229	6.0	4.14	17.14
1230	6.0	4.14	17.14
1231	6.0	4.14	17.14
1232	6.0	4.14	17.14
1233	6.0	4.14	17.14
1234	6.0	4.14	17.14
1235	6.0	4.14	17.14
1236	6.0	4.14	17.14
1237	6.0	4.14	17.14
1238	6.0	4.14	17.14
1239	6.0	4.14	17.14
1240	6.0	4.14	17.14
1241	6.0	4.14	17.14
1242	6.0	4.14	17.14
1243	6.0	4.14	17.14
1244	6.0	4.14	17.14
1245	6.0	4.14	17.14
1246	6.0	4.14	17.14
1247	6.0	4.14	17.14
1248	6.0	4.14	17.14
1249	6.0	4.14	17.14
1250	6.0	4.14	17.14
	300.0		856.9
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
1251	6.0	4.14	17.14
1252	6.0	4.14	17.14
1253	6.0	4.14	17.14
1254	6.0	4.14	17.14
1255	6.0	4.14	17.14
1256	6.0	4.14	17.14
1257	6.0	4.14	17.14
1258	6.0	4.14	17.14
1259	6.0	4.14	17.14
1260	6.0	4.14	17.14
1261	6.0	4.14	17.14
1262	6.0	4.14	17.14
1263	6.0	4.14	17.14
1264	6.0	4.14	17.14
1265	6.0	4.14	17.14
1266	6.0	4.14	17.14
1267	6.0	4.14	17.14
1268	6.0	4.14	17.14
1269	6.0	4.14	17.14
1270	6.0	4.14	17.14
1271	6.0	4.14	17.14
1272	6.0	4.14	17.14
1273	6.0	4.14	17.14
1274	6.0	4.14	17.14
1275	6.0	4.14	17.14
1276	6.0	4.14	17.14
1277	6.0	4.14	17.14
1278	6.0	4.14	17.14
1279	6.0	4.14	17.14
1280	6.0	4.14	17.14
1281	6.0	4.14	17.14
1282	6.0	4.14	17.14
1283	6.0	4.14	17.14
1284	6.0	4.14	17.14
1285	6.0	4.14	17.14
1286	6.0	4.14	17.14
1287	7.0	5.14	26.42
1288	7.0	5.14	26.42
1289	7.0	5.14	26.42
1290	7.0	5.14	26.42
1291	7.0	5.14	26.42
1292	7.0	5.14	26.42
1293	7.0	5.14	26.42
1294	7.0	5.14	26.42
1295	7.0	5.14	26.42
1296	7.0	5.14	26.42
1297	7.0	5.14	26.42
1298	7.0	5.14	26.42
1299	7.0	5.14	26.42
1300	7.0	5.14	26.42
	314.0		986.8
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1301	7.0	5.14	26.42
1302	7.0	5.14	26.42
1303	7.0	5.14	26.42
1304	7.0	5.14	26.42
1305	7.0	5.14	26.42
1306	7.0	5.14	26.42
1307	7.0	5.14	26.42
1308	7.0	5.14	26.42
1309	7.0	5.14	26.42
1310	7.0	5.14	26.42
1311	7.0	5.14	26.42
1312	7.0	5.14	26.42
1313	7.0	5.14	26.42
1314	7.0	5.14	26.42
1315	7.0	5.14	26.42
1316	7.0	5.14	26.42
1317	7.0	5.14	26.42
1318	7.0	5.14	26.42
1319	7.0	5.14	26.42
1320	7.0	5.14	26.42
1321	7.0	5.14	26.42
1322	7.0	5.14	26.42
1323	7.0	5.14	26.42
1324	7.0	5.14	26.42
1325	7.0	5.14	26.42
1326	7.0	5.14	26.42
1327	7.0	5.14	26.42
1328	7.0	5.14	26.42
1329	7.0	5.14	26.42
1330	7.0	5.14	26.42
1331	7.0	5.14	26.42
1332	7.0	5.14	26.42
1333	7.0	5.14	26.42
1334	7.0	5.14	26.42
1335	7.0	5.14	26.42
1336	7.0	5.14	26.42
1337	7.0	5.14	26.42
1338	7.0	5.14	26.42
1339	7.0	5.14	26.42
1340	7.0	5.14	26.42
1341	7.0	5.14	26.42
1342	7.0	5.14	26.42
1343	7.0	5.14	26.42
1344	7.0	5.14	26.42
1345	7.0	5.14	26.42
1346	7.0	5.14	26.42
1347	7.0	5.14	26.42
1348	7.0	5.14	26.42
1349	7.0	5.14	26.42
1350	7.0	5.14	26.42
	350.0		1320.8
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
1351	7.0	5.14	26.42
1352	7.4	5.49	30.14
1353	8.0	6.14	37.70
1354	8.0	6.14	37.70
1355	8.0	6.14	37.70
1356	8.0	6.14	37.70
1357	8.0	6.14	37.70
1358	8.0	6.14	37.70
1359	8.0	6.14	37.70
1360	8.0	6.14	37.70
1361	8.0	6.14	37.70
1362	8.0	6.14	37.70
1363	8.0	6.14	37.70
1364	8.0	6.14	37.70
1365	8.0	6.14	37.70
1366	8.0	6.14	37.70
1367	8.0	6.14	37.70
1368	8.0	6.14	37.70
1369	8.0	6.14	37.70
1370	8.0	6.14	37.70
1371	8.0	6.14	37.70
1372	8.0	6.14	37.70
1373	8.0	6.14	37.70
1374	8.0	6.14	37.70
1375	8.0	6.14	37.70
1376	8.0	6.14	37.70
1377	8.0	6.14	37.70
1378	8.0	6.14	37.70
1379	8.0	6.14	37.70
1380	8.0	6.14	37.70
1381	8.0	6.14	37.70
1382	8.0	6.14	37.70
1383	8.0	6.14	37.70
1384	8.0	6.14	37.70
1385	8.0	6.14	37.70
1386	8.0	6.14	37.70
1387	8.0	6.14	37.70
1388	8.0	6.14	37.70
1389	9.0	7.14	50.98
1390	9.0	7.14	50.98
1391	9.0	7.14	50.98
1392	9.0	7.14	50.98
1393	9.0	7.14	50.98
1394	9.0	7.14	50.98
1395	9.0	7.14	50.98
1396	9.0	7.14	50.98
1397	9.0	7.14	50.98
1398	9.0	7.14	50.98
1399	9.0	7.14	50.98
1400	9.0	7.14	50.98
	410.4		2025.3
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1401	9.0	7.14	50.98
1402	9.0	7.14	50.98
1403	10.0	8.14	66.26
1404	10.0	8.14	66.26
1405	10.0	8.14	66.26
1406	10.0	8.14	66.26
1407	10.0	8.14	66.26
1408	10.0	8.14	66.26
1409	11.0	9.14	83.53
1410	11.0	9.14	83.53
1411	11.0	9.14	83.53
1412	11.0	9.14	83.53
1413	11.0	9.14	83.53
1414	12.0	10.14	102.81
1415	13.0	11.14	124.09
1416	14.0	12.14	147.37
1417	16.0	14.14	199.93
1418	17.0	15.14	229.21
1419	19.0	17.14	293.77
1420	19.0	17.14	293.77
1421	24.0	22.14	490.17
1422	0.0	0.00	0.00
1423	0.0	0.00	0.00
1424	0.0	0.00	0.00
1425	0.0	0.00	0.00
1426	0.0	0.00	0.00
1427	0.0	0.00	0.00
1428	0.0	0.00	0.00
1429	0.0	0.00	0.00
1430	0.0	0.00	0.00
1431	0.0	0.00	0.00
1432	0.0	0.00	0.00
1433	0.0	0.00	0.00
1434	0.0	0.00	0.00
1435	0.0	0.00	0.00
1436	0.0	0.00	0.00
1437	0.0	0.00	0.00
1438	0.0	0.00	0.00
1439	0.0	0.00	0.00
1440	0.0	0.00	0.00
1441	0.0	0.00	0.00
1442	0.0	0.00	0.00
1443	0.0	0.00	0.00
1444	0.0	0.00	0.00
1445	0.0	0.00	0.00
1446	0.0	0.00	0.00
1447	0.0	0.00	0.00
1448	0.0	0.00	0.00
1449	0.0	0.00	0.00
1450	0.0	0.00	0.00
	267.0		2798.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
1	1.0	-0.6	0.4
2	1.0	-0.6	0.4
3	1.0	-0.6	0.4
4	1.0	-0.6	0.4
5	1.0	-0.6	0.4
6	1.0	-0.6	0.4
7	1.0	-0.6	0.4
8	1.0	-0.6	0.4
9	1.0	-0.6	0.4
10	1.0	-0.6	0.4
11	1.0	-0.6	0.4
12	1.0	-0.6	0.4
13	1.0	-0.6	0.4
14	1.0	-0.6	0.4
15	1.0	-0.6	0.4
16	1.0	-0.6	0.4
17	1.0	-0.6	0.4
18	1.0	-0.6	0.4
19	1.0	-0.6	0.4
20	1.0	-0.6	0.4
21	1.0	-0.6	0.4
22	1.0	-0.6	0.4
23	1.0	-0.6	0.4
24	1.0	-0.6	0.4
25	1.0	-0.6	0.4
26	1.0	-0.6	0.4
27	1.0	-0.6	0.4
28	1.0	-0.6	0.4
29	1.0	-0.6	0.4
30	1.0	-0.6	0.4
31	1.0	-0.6	0.4
32	1.0	-0.6	0.4
33	1.0	-0.6	0.4
34	1.0	-0.6	0.4
35	1.0	-0.6	0.4
36	1.0	-0.6	0.4
37	1.0	-0.6	0.4
38	1.0	-0.6	0.4
39	1.0	-0.6	0.4
40	1.0	-0.6	0.4
41	1.0	-0.6	0.4
42	1.0	-0.6	0.4
43	1.0	-0.6	0.4
44	1.0	-0.6	0.4
45	1.0	-0.6	0.4
46	1.0	-0.6	0.4
47	1.0	-0.6	0.4
48	1.0	-0.6	0.4
49	1.0	-0.6	0.4
50	1.0	-0.6	0.4
	50.0		18.1
	50.0		18.1
	50.0		18.1
	50.0		18.1
	50.0		18.1
	50.0		18.1
	63.6		6.8
	76.5		0.3
	79.6		0.0
	81.5		0.0
	82.9		0.2
	84.1		0.3
	85.5		0.6
	86.6		0.8
	87.6		1.1
	88.5		1.4
	89.5		1.8
	91.3		2.5
	92.5		3.1
	94.2		4.0
	96.4		5.4
	99.7		7.6
	100.0		7.9
	100.0		7.9
	100.0		7.9
	100.0		7.9
	100.1		8.0
	46.4		9.3
total	2276.56		211.8
	Sum(n)		$Sum(n-N)^2$

No. of Samples (x) : **1421**

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **1.60**

Standard Deviation (Sd) = SQRT $[(n-N)^2 \div (x-1)]$

Standard Deviation:	0.39
2 Std Deviations:	0.77

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = 1.645

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) =	1.62	pCi/gTh (NAT)
GUIDELINE VALUE:	10	pCi/gTh (NAT)
Acceptable Level:	4.0	pCi/gTh (NAT)

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	1420	is calculated as follow:		
EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]				
The (df) value for (X)	1420	1.645	95%	

PERFORMED BY: J. Kogan DATE: 12-19-01

REVIEWED BY: W. A. Rogers DATE: 12-19-01

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
51	1.0	-0.08	0.01
52	1.0	-0.08	0.01
53	1.0	-0.08	0.01
54	1.0	-0.08	0.01
55	1.0	-0.08	0.01
56	1.0	-0.08	0.01
57	1.0	-0.08	0.01
58	1.0	-0.08	0.01
59	1.0	-0.08	0.01
60	1.0	-0.08	0.01
61	1.0	-0.08	0.01
62	1.0	-0.08	0.01
63	1.0	-0.08	0.01
64	1.0	-0.08	0.01
65	1.0	-0.08	0.01
66	1.0	-0.08	0.01
67	1.0	-0.08	0.01
68	1.0	-0.08	0.01
69	1.0	-0.08	0.01
70	1.0	-0.08	0.01
71	1.0	-0.08	0.01
72	1.0	-0.08	0.01
73	1.0	-0.08	0.01
74	1.0	-0.08	0.01
75	1.0	-0.08	0.01
76	1.0	-0.08	0.01
77	1.0	-0.08	0.01
78	1.0	-0.08	0.01
79	1.0	-0.08	0.01
80	1.0	-0.08	0.01
81	1.0	-0.08	0.01
82	1.0	-0.08	0.01
83	1.0	-0.08	0.01
84	1.0	-0.08	0.01
85	1.0	-0.08	0.01
86	1.0	-0.08	0.01
87	1.0	-0.08	0.01
88	1.0	-0.08	0.01
89	1.0	-0.08	0.01
90	1.0	-0.08	0.01
91	1.0	-0.08	0.01
92	1.0	-0.08	0.01
93	1.0	-0.08	0.01
94	1.0	-0.08	0.01
95	1.0	-0.08	0.01
96	1.0	-0.08	0.01
97	1.0	-0.08	0.01
98	1.0	-0.08	0.01
99	1.0	-0.08	0.01
100	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
101	1.0	-0.08	0.01
102	1.0	-0.08	0.01
103	1.0	-0.08	0.01
104	1.0	-0.08	0.01
105	1.0	-0.08	0.01
106	1.0	-0.08	0.01
107	1.0	-0.08	0.01
108	1.0	-0.08	0.01
109	1.0	-0.08	0.01
110	1.0	-0.08	0.01
111	1.0	-0.08	0.01
112	1.0	-0.08	0.01
113	1.0	-0.08	0.01
114	1.0	-0.08	0.01
115	1.0	-0.08	0.01
116	1.0	-0.08	0.01
117	1.0	-0.08	0.01
118	1.0	-0.08	0.01
119	1.0	-0.08	0.01
120	1.0	-0.08	0.01
121	1.0	-0.08	0.01
122	1.0	-0.08	0.01
123	1.0	-0.08	0.01
124	1.0	-0.08	0.01
125	1.0	-0.08	0.01
126	1.0	-0.08	0.01
127	1.0	-0.08	0.01
128	1.0	-0.08	0.01
129	1.0	-0.08	0.01
130	1.0	-0.08	0.01
131	1.0	-0.08	0.01
132	1.0	-0.08	0.01
133	1.0	-0.08	0.01
134	1.0	-0.08	0.01
135	1.0	-0.08	0.01
136	1.0	-0.08	0.01
137	1.0	-0.08	0.01
138	1.0	-0.08	0.01
139	1.0	-0.08	0.01
140	1.0	-0.08	0.01
141	1.0	-0.08	0.01
142	1.0	-0.08	0.01
143	1.0	-0.08	0.01
144	1.0	-0.08	0.01
145	1.0	-0.08	0.01
146	1.0	-0.08	0.01
147	1.0	-0.08	0.01
148	1.0	-0.08	0.01
149	1.0	-0.08	0.01
150	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		Sum(n-N)²

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PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
151	1.0	-0.08	0.01
152	1.0	-0.08	0.01
153	1.0	-0.08	0.01
154	1.0	-0.08	0.01
155	1.0	-0.08	0.01
156	1.0	-0.08	0.01
157	1.0	-0.08	0.01
158	1.0	-0.08	0.01
159	1.0	-0.08	0.01
160	1.0	-0.08	0.01
161	1.0	-0.08	0.01
162	1.0	-0.08	0.01
163	1.0	-0.08	0.01
164	1.0	-0.08	0.01
165	1.0	-0.08	0.01
166	1.0	-0.08	0.01
167	1.0	-0.08	0.01
168	1.0	-0.08	0.01
169	1.0	-0.08	0.01
170	1.0	-0.08	0.01
171	1.0	-0.08	0.01
172	1.0	-0.08	0.01
173	1.0	-0.08	0.01
174	1.0	-0.08	0.01
175	1.0	-0.08	0.01
176	1.0	-0.08	0.01
177	1.0	-0.08	0.01
178	1.0	-0.08	0.01
179	1.0	-0.08	0.01
180	1.0	-0.08	0.01
181	1.0	-0.08	0.01
182	1.0	-0.08	0.01
183	1.0	-0.08	0.01
184	1.0	-0.08	0.01
185	1.0	-0.08	0.01
186	1.0	-0.08	0.01
187	1.0	-0.08	0.01
188	1.0	-0.08	0.01
189	1.0	-0.08	0.01
190	1.0	-0.08	0.01
191	1.0	-0.08	0.01
192	1.0	-0.08	0.01
193	1.0	-0.08	0.01
194	1.0	-0.08	0.01
195	1.0	-0.08	0.01
196	1.0	-0.08	0.01
197	1.0	-0.08	0.01
198	1.0	-0.08	0.01
199	1.0	-0.08	0.01
200	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
201	1.0	-0.08	0.01
202	1.0	-0.08	0.01
203	1.0	-0.08	0.01
204	1.0	-0.08	0.01
205	1.0	-0.08	0.01
206	1.0	-0.08	0.01
207	1.0	-0.08	0.01
208	1.0	-0.08	0.01
209	1.0	-0.08	0.01
210	1.0	-0.08	0.01
211	1.0	-0.08	0.01
212	1.0	-0.08	0.01
213	1.0	-0.08	0.01
214	1.0	-0.08	0.01
215	1.0	-0.08	0.01
216	1.0	-0.08	0.01
217	1.0	-0.08	0.01
218	1.0	-0.08	0.01
219	1.0	-0.08	0.01
220	1.0	-0.08	0.01
221	1.0	-0.08	0.01
222	1.0	-0.08	0.01
223	1.0	-0.08	0.01
224	1.0	-0.08	0.01
225	1.0	-0.08	0.01
226	1.0	-0.08	0.01
227	1.0	-0.08	0.01
228	1.0	-0.08	0.01
229	1.0	-0.08	0.01
230	1.0	-0.08	0.01
231	1.0	-0.08	0.01
232	1.0	-0.08	0.01
233	1.0	-0.08	0.01
234	1.0	-0.08	0.01
235	1.0	-0.08	0.01
236	1.0	-0.08	0.01
237	1.0	-0.08	0.01
238	1.0	-0.08	0.01
239	1.0	-0.08	0.01
240	1.0	-0.08	0.01
241	1.0	-0.08	0.01
242	1.0	-0.08	0.01
243	1.0	-0.08	0.01
244	1.0	-0.08	0.01
245	1.0	-0.08	0.01
246	1.0	-0.08	0.01
247	1.0	-0.08	0.01
248	1.0	-0.08	0.01
249	1.0	-0.08	0.01
250	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		$Sum(n-N)^2$

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PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
251	1.0	-0.08	0.01
252	1.0	-0.08	0.01
253	1.0	-0.08	0.01
254	1.0	-0.08	0.01
255	1.0	-0.08	0.01
256	1.0	-0.08	0.01
257	1.0	-0.08	0.01
258	1.0	-0.08	0.01
259	1.0	-0.08	0.01
260	1.0	-0.08	0.01
261	1.0	-0.08	0.01
262	1.0	-0.08	0.01
263	1.0	-0.08	0.01
264	1.0	-0.08	0.01
265	1.0	-0.08	0.01
266	1.0	-0.08	0.01
267	1.0	-0.08	0.01
268	1.0	-0.08	0.01
269	1.0	-0.08	0.01
270	1.0	-0.08	0.01
271	1.0	-0.08	0.01
272	1.0	-0.08	0.01
273	1.0	-0.08	0.01
274	1.0	-0.08	0.01
275	1.0	-0.08	0.01
276	1.0	-0.08	0.01
277	1.0	-0.08	0.01
278	1.0	-0.08	0.01
279	1.0	-0.08	0.01
280	1.0	-0.08	0.01
281	1.0	-0.08	0.01
282	1.0	-0.08	0.01
283	1.0	-0.08	0.01
284	1.0	-0.08	0.01
285	1.0	-0.08	0.01
286	1.0	-0.08	0.01
287	1.0	-0.08	0.01
288	1.0	-0.08	0.01
289	1.0	-0.08	0.01
290	1.0	-0.08	0.01
291	1.0	-0.08	0.01
292	1.0	-0.08	0.01
293	1.0	-0.08	0.01
294	1.0	-0.08	0.01
295	1.0	-0.08	0.01
296	1.0	-0.08	0.01
297	1.0	-0.08	0.01
298	1.0	-0.08	0.01
299	1.0	-0.08	0.01
300	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
301	1.0	-0.08	0.01
302	1.0	-0.08	0.01
303	1.0	-0.08	0.01
304	1.0	-0.08	0.01
305	1.0	-0.08	0.01
306	1.0	-0.08	0.01
307	1.0	-0.08	0.01
308	1.0	-0.08	0.01
309	1.0	-0.08	0.01
310	1.0	-0.08	0.01
311	1.0	-0.08	0.01
312	1.0	-0.08	0.01
313	1.0	-0.08	0.01
314	1.0	-0.08	0.01
315	1.0	-0.08	0.01
316	1.0	-0.08	0.01
317	1.0	-0.08	0.01
318	1.0	-0.08	0.01
319	1.0	-0.08	0.01
320	1.0	-0.08	0.01
321	1.0	-0.08	0.01
322	1.0	-0.08	0.01
323	1.0	-0.08	0.01
324	1.0	-0.08	0.01
325	1.0	-0.08	0.01
326	1.0	-0.08	0.01
327	1.0	-0.08	0.01
328	1.0	-0.08	0.01
329	1.0	-0.08	0.01
330	1.0	-0.08	0.01
331	1.0	-0.08	0.01
332	1.0	-0.08	0.01
333	1.0	-0.08	0.01
334	1.0	-0.08	0.01
335	1.0	-0.08	0.01
336	1.0	-0.08	0.01
337	1.0	-0.08	0.01
338	1.0	-0.08	0.01
339	1.0	-0.08	0.01
340	1.0	-0.08	0.01
341	1.0	-0.08	0.01
342	1.0	-0.08	0.01
343	1.0	-0.08	0.01
344	1.0	-0.08	0.01
345	1.0	-0.08	0.01
346	1.0	-0.08	0.01
347	1.0	-0.08	0.01
348	1.0	-0.08	0.01
349	1.0	-0.08	0.01
350	1.0	-0.08	0.01
	50.0		0.3
	Sum(n)		Sum(n-N)²

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PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
351	1.0	0.00	0.00
352	1.0	-0.08	0.01
353	1.0	-0.08	0.01
354	1.0	-0.08	0.01
355	1.0	-0.08	0.01
356	1.0	-0.08	0.01
357	1.0	-0.08	0.01
358	1.0	-0.08	0.01
359	1.0	-0.08	0.01
360	1.0	-0.08	0.01
361	1.0	-0.08	0.01
362	1.0	-0.08	0.01
363	1.0	-0.08	0.01
364	1.0	-0.08	0.01
365	1.2	0.11	0.01
366	1.2	0.13	0.02
367	1.2	0.13	0.02
368	1.2	0.14	0.02
369	1.2	0.15	0.02
370	1.3	0.18	0.03
371	1.3	0.21	0.04
372	1.3	0.22	0.05
373	1.3	0.23	0.05
374	1.3	0.25	0.06
375	1.3	0.25	0.06
376	1.4	0.29	0.08
377	1.4	0.29	0.08
378	1.4	0.30	0.09
379	1.4	0.30	0.09
380	1.4	0.31	0.10
381	1.4	0.31	0.10
382	1.4	0.31	0.10
383	1.4	0.32	0.10
384	1.4	0.33	0.11
385	1.4	0.33	0.11
386	1.4	0.34	0.12
387	1.4	0.35	0.12
388	1.4	0.35	0.12
389	1.4	0.35	0.12
390	1.4	0.36	0.13
391	1.5	0.37	0.14
392	1.5	0.38	0.14
393	1.5	0.38	0.14
394	1.5	0.38	0.14
395	1.5	0.38	0.14
396	1.5	0.39	0.15
397	1.5	0.40	0.16
398	1.5	0.40	0.16
399	1.5	0.40	0.16
400	1.5	0.40	0.16
	63.6		3.6
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
401	1.5	0.40	0.16
402	1.5	0.41	0.17
403	1.5	0.41	0.17
404	1.5	0.41	0.17
405	1.5	0.41	0.17
406	1.5	0.41	0.17
407	1.5	0.42	0.18
408	1.5	0.42	0.18
409	1.5	0.42	0.18
410	1.5	0.42	0.18
411	1.5	0.42	0.18
412	1.5	0.42	0.18
413	1.5	0.42	0.18
414	1.5	0.42	0.18
415	1.5	0.43	0.19
416	1.5	0.43	0.19
417	1.5	0.43	0.19
418	1.5	0.44	0.19
419	1.5	0.44	0.19
420	1.5	0.44	0.19
421	1.5	0.44	0.19
422	1.5	0.44	0.19
423	1.5	0.45	0.20
424	1.5	0.45	0.20
425	1.5	0.45	0.20
426	1.5	0.45	0.20
427	1.5	0.46	0.21
428	1.5	0.46	0.21
429	1.5	0.46	0.21
430	1.5	0.46	0.21
431	1.5	0.46	0.21
432	1.6	0.47	0.22
433	1.6	0.47	0.22
434	1.6	0.47	0.22
435	1.6	0.47	0.22
436	1.6	0.47	0.22
437	1.6	0.47	0.22
438	1.6	0.48	0.23
439	1.6	0.48	0.23
440	1.6	0.48	0.23
441	1.6	0.48	0.23
442	1.6	0.48	0.23
443	1.6	0.48	0.23
444	1.6	0.48	0.23
445	1.6	0.49	0.24
446	1.6	0.49	0.24
447	1.6	0.49	0.24
448	1.6	0.49	0.24
449	1.6	0.49	0.24
450	1.6	0.49	0.24
	76.5		10.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
451	1.6	0.49	0.24
452	1.6	0.49	0.24
453	1.6	0.49	0.24
454	1.6	0.49	0.24
455	1.6	0.50	0.25
456	1.6	0.50	0.25
457	1.6	0.50	0.25
458	1.6	0.50	0.25
459	1.6	0.50	0.25
460	1.6	0.50	0.25
461	1.6	0.50	0.25
462	1.6	0.50	0.25
463	1.6	0.50	0.25
464	1.6	0.50	0.25
465	1.6	0.51	0.26
466	1.6	0.51	0.26
467	1.6	0.51	0.26
468	1.6	0.51	0.26
469	1.6	0.51	0.26
470	1.6	0.51	0.26
471	1.6	0.51	0.26
472	1.6	0.51	0.26
473	1.6	0.51	0.26
474	1.6	0.51	0.26
475	1.6	0.51	0.26
476	1.6	0.51	0.26
477	1.6	0.51	0.26
478	1.6	0.51	0.26
479	1.6	0.51	0.26
480	1.6	0.51	0.26
481	1.6	0.52	0.27
482	1.6	0.52	0.27
483	1.6	0.52	0.27
484	1.6	0.52	0.27
485	1.6	0.52	0.27
486	1.6	0.52	0.27
487	1.6	0.52	0.27
488	1.6	0.52	0.27
489	1.6	0.52	0.27
490	1.6	0.53	0.28
491	1.6	0.53	0.28
492	1.6	0.53	0.28
493	1.6	0.53	0.28
494	1.6	0.53	0.28
495	1.6	0.53	0.28
496	1.6	0.53	0.28
497	1.6	0.53	0.28
498	1.6	0.53	0.28
499	1.6	0.53	0.28
500	1.6	0.53	0.28
	79.6		13.2
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
501	1.6	0.53	0.28
502	1.6	0.53	0.28
503	1.6	0.53	0.28
504	1.6	0.54	0.29
505	1.6	0.54	0.29
506	1.6	0.54	0.29
507	1.6	0.54	0.29
508	1.6	0.54	0.29
509	1.6	0.54	0.29
510	1.6	0.54	0.29
511	1.6	0.54	0.29
512	1.6	0.54	0.29
513	1.6	0.54	0.29
514	1.6	0.54	0.29
515	1.6	0.55	0.30
516	1.6	0.55	0.30
517	1.6	0.55	0.30
518	1.6	0.55	0.30
519	1.6	0.55	0.30
520	1.6	0.55	0.30
521	1.6	0.55	0.30
522	1.6	0.55	0.30
523	1.6	0.55	0.30
524	1.6	0.55	0.30
525	1.6	0.55	0.30
526	1.6	0.55	0.30
527	1.6	0.55	0.30
528	1.6	0.55	0.30
529	1.6	0.55	0.30
530	1.6	0.56	0.31
531	1.6	0.56	0.31
532	1.6	0.56	0.31
533	1.6	0.56	0.31
534	1.6	0.56	0.31
535	1.6	0.56	0.31
536	1.6	0.56	0.31
537	1.6	0.56	0.31
538	1.6	0.56	0.31
539	1.6	0.56	0.31
540	1.6	0.56	0.31
541	1.6	0.56	0.31
542	1.6	0.56	0.31
543	1.6	0.56	0.31
544	1.6	0.56	0.31
545	1.6	0.56	0.31
546	1.6	0.56	0.31
547	1.6	0.56	0.31
548	1.6	0.56	0.31
549	1.6	0.56	0.31
550	1.6	0.56	0.31
	81.5		15.2
	Sum(n)		$Sum(n-N)^2$

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
551	1.6	0.56	0.31
552	1.6	0.56	0.31
553	1.7	0.57	0.33
554	1.7	0.57	0.33
555	1.7	0.57	0.33
556	1.7	0.57	0.33
557	1.7	0.57	0.33
558	1.7	0.57	0.33
559	1.7	0.57	0.33
560	1.7	0.57	0.33
561	1.7	0.57	0.33
562	1.7	0.57	0.33
563	1.7	0.57	0.33
564	1.7	0.57	0.33
565	1.7	0.57	0.33
566	1.7	0.57	0.33
567	1.7	0.57	0.33
568	1.7	0.57	0.33
569	1.7	0.57	0.33
570	1.7	0.57	0.33
571	1.7	0.57	0.33
572	1.7	0.57	0.33
573	1.7	0.57	0.33
574	1.7	0.57	0.33
575	1.7	0.58	0.34
576	1.7	0.58	0.34
577	1.7	0.58	0.34
578	1.7	0.58	0.34
579	1.7	0.58	0.34
580	1.7	0.58	0.34
581	1.7	0.58	0.34
582	1.7	0.58	0.34
583	1.7	0.58	0.34
584	1.7	0.58	0.34
585	1.7	0.58	0.34
586	1.7	0.58	0.34
587	1.7	0.58	0.34
588	1.7	0.58	0.34
589	1.7	0.58	0.34
590	1.7	0.59	0.35
591	1.7	0.59	0.35
592	1.7	0.59	0.35
593	1.7	0.59	0.35
594	1.7	0.59	0.35
595	1.7	0.59	0.35
596	1.7	0.59	0.35
597	1.7	0.59	0.35
598	1.7	0.59	0.35
599	1.7	0.59	0.35
600	1.7	0.59	0.35
	82.9		16.7
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
601	1.7	0.59	0.35
602	1.7	0.59	0.35
603	1.7	0.59	0.35
604	1.7	0.59	0.35
605	1.7	0.59	0.35
606	1.7	0.59	0.35
607	1.7	0.59	0.35
608	1.7	0.59	0.35
609	1.7	0.59	0.35
610	1.7	0.59	0.35
611	1.7	0.59	0.35
612	1.7	0.60	0.36
613	1.7	0.60	0.36
614	1.7	0.60	0.36
615	1.7	0.60	0.36
616	1.7	0.60	0.36
617	1.7	0.60	0.36
618	1.7	0.60	0.36
619	1.7	0.60	0.36
620	1.7	0.60	0.36
621	1.7	0.60	0.36
622	1.7	0.60	0.36
623	1.7	0.60	0.36
624	1.7	0.60	0.36
625	1.7	0.60	0.36
626	1.7	0.60	0.36
627	1.7	0.60	0.36
628	1.7	0.60	0.36
629	1.7	0.60	0.36
630	1.7	0.60	0.36
631	1.7	0.60	0.36
632	1.7	0.61	0.37
633	1.7	0.61	0.37
634	1.7	0.61	0.37
635	1.7	0.61	0.37
636	1.7	0.61	0.37
637	1.7	0.61	0.37
638	1.7	0.61	0.37
639	1.7	0.61	0.37
640	1.7	0.61	0.37
641	1.7	0.61	0.37
642	1.7	0.61	0.37
643	1.7	0.61	0.37
644	1.7	0.61	0.37
645	1.7	0.61	0.37
646	1.7	0.61	0.37
647	1.7	0.61	0.37
648	1.7	0.61	0.37
649	1.7	0.62	0.39
650	1.7	0.62	0.39
	84.1		18.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
651	1.7	0.62	0.39
652	1.7	0.62	0.39
653	1.7	0.62	0.39
654	1.7	0.62	0.39
655	1.7	0.62	0.39
656	1.7	0.62	0.39
657	1.7	0.62	0.39
658	1.7	0.62	0.39
659	1.7	0.62	0.39
660	1.7	0.62	0.39
661	1.7	0.62	0.39
662	1.7	0.62	0.39
663	1.7	0.62	0.39
664	1.7	0.62	0.39
665	1.7	0.62	0.39
666	1.7	0.62	0.39
667	1.7	0.63	0.40
668	1.7	0.63	0.40
669	1.7	0.63	0.40
670	1.7	0.63	0.40
671	1.7	0.63	0.40
672	1.7	0.63	0.40
673	1.7	0.63	0.40
674	1.7	0.63	0.40
675	1.7	0.63	0.40
676	1.7	0.63	0.40
677	1.7	0.63	0.40
678	1.7	0.63	0.40
679	1.7	0.63	0.40
680	1.7	0.63	0.40
681	1.7	0.63	0.40
682	1.7	0.64	0.41
683	1.7	0.64	0.41
684	1.7	0.64	0.41
685	1.7	0.64	0.41
686	1.7	0.64	0.41
687	1.7	0.64	0.41
688	1.7	0.64	0.41
689	1.7	0.64	0.41
690	1.7	0.64	0.41
691	1.7	0.64	0.41
692	1.7	0.64	0.41
693	1.7	0.64	0.41
694	1.7	0.64	0.41
695	1.7	0.64	0.41
696	1.7	0.64	0.41
697	1.7	0.64	0.41
698	1.7	0.64	0.41
699	1.7	0.64	0.41
700	1.7	0.64	0.41
	85.5		19.9
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
701	1.7	0.64	0.41
702	1.7	0.64	0.41
703	1.7	0.64	0.41
704	1.7	0.64	0.41
705	1.7	0.64	0.41
706	1.7	0.64	0.41
707	1.7	0.64	0.41
708	1.7	0.64	0.41
709	1.7	0.64	0.41
710	1.7	0.65	0.42
711	1.7	0.65	0.42
712	1.7	0.65	0.42
713	1.7	0.65	0.42
714	1.7	0.65	0.42
715	1.7	0.65	0.42
716	1.7	0.65	0.42
717	1.7	0.65	0.42
718	1.7	0.65	0.42
719	1.7	0.65	0.42
720	1.7	0.65	0.42
721	1.7	0.65	0.42
722	1.7	0.65	0.42
723	1.7	0.65	0.42
724	1.7	0.65	0.42
725	1.7	0.65	0.42
726	1.7	0.65	0.42
727	1.7	0.65	0.42
728	1.7	0.65	0.42
729	1.7	0.65	0.42
730	1.7	0.65	0.42
731	1.7	0.65	0.42
732	1.7	0.66	0.44
733	1.7	0.66	0.44
734	1.7	0.66	0.44
735	1.7	0.66	0.44
736	1.7	0.66	0.44
737	1.7	0.66	0.44
738	1.7	0.66	0.44
739	1.7	0.66	0.44
740	1.7	0.66	0.44
741	1.7	0.66	0.44
742	1.7	0.66	0.44
743	1.7	0.66	0.44
744	1.7	0.66	0.44
745	1.7	0.66	0.44
746	1.7	0.66	0.44
747	1.7	0.66	0.44
748	1.7	0.66	0.44
749	1.7	0.66	0.44
750	1.7	0.66	0.44
	86.6		21.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
751	1.7	0.66	0.44
752	1.7	0.66	0.44
753	1.7	0.66	0.44
754	1.7	0.66	0.44
755	1.7	0.66	0.44
756	1.7	0.66	0.44
757	1.7	0.66	0.44
758	1.7	0.66	0.44
759	1.7	0.66	0.44
760	1.8	0.67	0.45
761	1.8	0.67	0.45
762	1.8	0.67	0.45
763	1.8	0.67	0.45
764	1.8	0.67	0.45
765	1.8	0.67	0.45
766	1.8	0.67	0.45
767	1.8	0.67	0.45
768	1.8	0.67	0.45
769	1.8	0.67	0.45
770	1.8	0.67	0.45
771	1.8	0.67	0.45
772	1.8	0.67	0.45
773	1.8	0.67	0.45
774	1.8	0.67	0.45
775	1.8	0.67	0.45
776	1.8	0.67	0.45
777	1.8	0.67	0.45
778	1.8	0.67	0.45
779	1.8	0.67	0.45
780	1.8	0.67	0.45
781	1.8	0.67	0.45
782	1.8	0.67	0.45
783	1.8	0.67	0.45
784	1.8	0.67	0.45
785	1.8	0.68	0.46
786	1.8	0.68	0.46
787	1.8	0.68	0.46
788	1.8	0.68	0.46
789	1.8	0.68	0.46
790	1.8	0.68	0.46
791	1.8	0.68	0.46
792	1.8	0.68	0.46
793	1.8	0.68	0.46
794	1.8	0.68	0.46
795	1.8	0.68	0.46
796	1.8	0.68	0.46
797	1.8	0.68	0.46
798	1.8	0.68	0.46
799	1.8	0.68	0.46
800	1.8	0.68	0.46
	87.6		22.6
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
801	1.8	0.68	0.46
802	1.8	0.68	0.46
803	1.8	0.68	0.46
804	1.8	0.68	0.46
805	1.8	0.68	0.46
806	1.8	0.68	0.46
807	1.8	0.68	0.46
808	1.8	0.69	0.48
809	1.8	0.69	0.48
810	1.8	0.69	0.48
811	1.8	0.69	0.48
812	1.8	0.69	0.48
813	1.8	0.69	0.48
814	1.8	0.69	0.48
815	1.8	0.69	0.48
816	1.8	0.69	0.48
817	1.8	0.69	0.48
818	1.8	0.69	0.48
819	1.8	0.69	0.48
820	1.8	0.69	0.48
821	1.8	0.69	0.48
822	1.8	0.69	0.48
823	1.8	0.69	0.48
824	1.8	0.69	0.48
825	1.8	0.69	0.48
826	1.8	0.69	0.48
827	1.8	0.69	0.48
828	1.8	0.69	0.48
829	1.8	0.69	0.48
830	1.8	0.69	0.48
831	1.8	0.69	0.48
832	1.8	0.69	0.48
833	1.8	0.69	0.48
834	1.8	0.69	0.48
835	1.8	0.69	0.48
836	1.8	0.69	0.48
837	1.8	0.69	0.48
838	1.8	0.69	0.48
839	1.8	0.69	0.48
840	1.8	0.70	0.49
841	1.8	0.70	0.49
842	1.8	0.70	0.49
843	1.8	0.70	0.49
844	1.8	0.70	0.49
845	1.8	0.70	0.49
846	1.8	0.70	0.49
847	1.8	0.70	0.49
848	1.8	0.70	0.49
849	1.8	0.70	0.49
850	1.8	0.70	0.49
	88.5		23.9
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
851	1.8	0.70	0.49
852	1.8	0.70	0.49
853	1.8	0.70	0.49
854	1.8	0.70	0.49
855	1.8	0.70	0.49
856	1.8	0.70	0.49
857	1.8	0.70	0.49
858	1.8	0.70	0.49
859	1.8	0.70	0.49
860	1.8	0.70	0.49
861	1.8	0.70	0.49
862	1.8	0.70	0.49
863	1.8	0.71	0.50
864	1.8	0.71	0.50
865	1.8	0.71	0.50
866	1.8	0.71	0.50
867	1.8	0.71	0.50
868	1.8	0.71	0.50
869	1.8	0.71	0.50
870	1.8	0.71	0.50
871	1.8	0.71	0.50
872	1.8	0.71	0.50
873	1.8	0.71	0.50
874	1.8	0.71	0.50
875	1.8	0.71	0.50
876	1.8	0.71	0.50
877	1.8	0.71	0.50
878	1.8	0.71	0.50
879	1.8	0.71	0.50
880	1.8	0.71	0.50
881	1.8	0.71	0.50
882	1.8	0.71	0.50
883	1.8	0.71	0.50
884	1.8	0.71	0.50
885	1.8	0.71	0.50
886	1.8	0.72	0.52
887	1.8	0.72	0.52
888	1.8	0.72	0.52
889	1.8	0.72	0.52
890	1.8	0.72	0.52
891	1.8	0.72	0.52
892	1.8	0.72	0.52
893	1.8	0.72	0.52
894	1.8	0.72	0.52
895	1.8	0.72	0.52
896	1.8	0.72	0.52
897	1.8	0.72	0.52
898	1.8	0.72	0.52
899	1.8	0.72	0.52
900	1.8	0.72	0.52
	89.5		25.3
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
901	1.8	0.73	0.53
902	1.8	0.73	0.53
903	1.8	0.73	0.53
904	1.8	0.73	0.53
905	1.8	0.73	0.53
906	1.8	0.73	0.53
907	1.8	0.73	0.53
908	1.8	0.73	0.53
909	1.8	0.74	0.55
910	1.8	0.74	0.55
911	1.8	0.74	0.55
912	1.8	0.74	0.55
913	1.8	0.74	0.55
914	1.8	0.74	0.55
915	1.8	0.74	0.55
916	1.8	0.74	0.55
917	1.8	0.74	0.55
918	1.8	0.74	0.55
919	1.8	0.74	0.55
920	1.8	0.74	0.55
921	1.8	0.74	0.55
922	1.8	0.74	0.55
923	1.8	0.75	0.56
924	1.8	0.75	0.56
925	1.8	0.75	0.56
926	1.8	0.75	0.56
927	1.8	0.75	0.56
928	1.8	0.75	0.56
929	1.8	0.75	0.56
930	1.8	0.75	0.56
931	1.8	0.75	0.56
932	1.8	0.75	0.56
933	1.8	0.75	0.56
934	1.8	0.75	0.56
935	1.8	0.75	0.56
936	1.8	0.75	0.56
937	1.8	0.75	0.56
938	1.8	0.75	0.56
939	1.8	0.75	0.56
940	1.8	0.75	0.56
941	1.8	0.75	0.56
942	1.8	0.75	0.56
943	1.8	0.75	0.56
944	1.8	0.75	0.56
945	1.8	0.76	0.58
946	1.8	0.76	0.58
947	1.8	0.76	0.58
948	1.8	0.76	0.58
949	1.8	0.76	0.58
950	1.8	0.76	0.58
	91.3		27.8
	Sum(n)		$Sum(n-N)^2$

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
951	1.8	0.75	0.56
952	1.8	0.75	0.56
953	1.8	0.76	0.58
954	1.8	0.76	0.58
955	1.8	0.76	0.58
956	1.8	0.76	0.58
957	1.8	0.76	0.58
958	1.8	0.76	0.58
959	1.8	0.76	0.58
960	1.8	0.76	0.58
961	1.8	0.76	0.58
962	1.8	0.76	0.58
963	1.8	0.76	0.58
964	1.8	0.76	0.58
965	1.8	0.76	0.58
966	1.8	0.76	0.58
967	1.8	0.76	0.58
968	1.8	0.76	0.58
969	1.8	0.76	0.58
970	1.9	0.77	0.59
971	1.9	0.77	0.59
972	1.9	0.77	0.59
973	1.9	0.77	0.59
974	1.9	0.77	0.59
975	1.9	0.77	0.59
976	1.9	0.77	0.59
977	1.9	0.77	0.59
978	1.9	0.77	0.59
979	1.9	0.77	0.59
980	1.9	0.77	0.59
981	1.9	0.77	0.59
982	1.9	0.78	0.61
983	1.9	0.78	0.61
984	1.9	0.78	0.61
985	1.9	0.78	0.61
986	1.9	0.78	0.61
987	1.9	0.78	0.61
988	1.9	0.78	0.61
989	1.9	0.78	0.61
990	1.9	0.78	0.61
991	1.9	0.78	0.61
992	1.9	0.78	0.61
993	1.9	0.78	0.61
994	1.9	0.78	0.61
995	1.9	0.78	0.61
996	1.9	0.79	0.62
997	1.9	0.79	0.62
998	1.9	0.79	0.62
999	1.9	0.79	0.62
1000	1.9	0.79	0.62
	92.5		29.7
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1001	1.9	0.79	0.62
1002	1.9	0.79	0.62
1003	1.9	0.79	0.62
1004	1.9	0.79	0.62
1005	1.9	0.79	0.62
1006	1.9	0.79	0.62
1007	1.9	0.79	0.62
1008	1.9	0.79	0.62
1009	1.9	0.79	0.62
1010	1.9	0.79	0.62
1011	1.9	0.79	0.62
1012	1.9	0.80	0.64
1013	1.9	0.80	0.64
1014	1.9	0.80	0.64
1015	1.9	0.80	0.64
1016	1.9	0.80	0.64
1017	1.9	0.80	0.64
1018	1.9	0.80	0.64
1019	1.9	0.80	0.64
1020	1.9	0.80	0.64
1021	1.9	0.80	0.64
1022	1.9	0.80	0.64
1023	1.9	0.80	0.64
1024	1.9	0.80	0.64
1025	1.9	0.80	0.64
1026	1.9	0.80	0.64
1027	1.9	0.80	0.64
1028	1.9	0.80	0.64
1029	1.9	0.81	0.66
1030	1.9	0.81	0.66
1031	1.9	0.81	0.66
1032	1.9	0.81	0.66
1033	1.9	0.81	0.66
1034	1.9	0.81	0.66
1035	1.9	0.81	0.66
1036	1.9	0.81	0.66
1037	1.9	0.81	0.66
1038	1.9	0.81	0.66
1039	1.9	0.81	0.66
1040	1.9	0.81	0.66
1041	1.9	0.81	0.66
1042	1.9	0.81	0.66
1043	1.9	0.81	0.66
1044	1.9	0.82	0.67
1045	1.9	0.82	0.67
1046	1.9	0.82	0.67
1047	1.9	0.82	0.67
1048	1.9	0.82	0.67
1049	1.9	0.82	0.67
1050	1.9	0.82	0.67
	94.2		32.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
1051	1.9	0.82	0.67
1052	1.9	0.82	0.67
1053	1.9	0.82	0.67
1054	1.9	0.82	0.67
1055	1.9	0.82	0.67
1056	1.9	0.83	0.69
1057	1.9	0.83	0.69
1058	1.9	0.83	0.69
1059	1.9	0.83	0.69
1060	1.9	0.83	0.69
1061	1.9	0.83	0.69
1062	1.9	0.83	0.69
1063	1.9	0.84	0.71
1064	1.9	0.84	0.71
1065	1.9	0.84	0.71
1066	1.9	0.84	0.71
1067	1.9	0.84	0.71
1068	1.9	0.84	0.71
1069	1.9	0.84	0.71
1070	1.9	0.84	0.71
1071	1.9	0.84	0.71
1072	1.9	0.85	0.72
1073	1.9	0.85	0.72
1074	1.9	0.85	0.72
1075	1.9	0.85	0.72
1076	1.9	0.85	0.72
1077	1.9	0.85	0.72
1078	1.9	0.85	0.72
1079	1.9	0.85	0.72
1080	1.9	0.85	0.72
1081	1.9	0.85	0.72
1082	1.9	0.86	0.74
1083	1.9	0.86	0.74
1084	1.9	0.86	0.74
1085	1.9	0.86	0.74
1086	1.9	0.86	0.74
1087	1.9	0.86	0.74
1088	1.9	0.86	0.74
1089	1.9	0.86	0.74
1090	1.9	0.86	0.74
1091	2.0	0.87	0.76
1092	2.0	0.87	0.76
1093	2.0	0.87	0.76
1094	2.0	0.87	0.76
1095	2.0	0.87	0.76
1096	2.0	0.87	0.76
1097	2.0	0.87	0.76
1098	2.0	0.88	0.78
1099	2.0	0.88	0.78
1100	2.0	0.88	0.78
	96.4		36.1
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1101	2.0	0.88	0.78
1102	2.0	0.89	0.79
1103	2.0	0.89	0.79
1104	2.0	0.89	0.79
1105	2.0	0.89	0.79
1106	2.0	0.89	0.79
1107	2.0	0.90	0.81
1108	2.0	0.90	0.81
1109	2.0	0.90	0.81
1110	2.0	0.90	0.81
1111	2.0	0.90	0.81
1112	2.0	0.91	0.83
1113	2.0	0.91	0.83
1114	2.0	0.91	0.83
1115	2.0	0.91	0.83
1116	2.0	0.91	0.83
1117	2.0	0.91	0.83
1118	2.0	0.92	0.85
1119	2.0	0.92	0.85
1120	2.0	0.92	0.85
1121	2.0	0.92	0.85
1122	2.0	0.92	0.85
1123	2.0	0.92	0.85
1124	2.0	0.92	0.85
1125	2.0	0.92	0.85
1126	2.0	0.92	0.85
1127	2.0	0.92	0.85
1128	2.0	0.92	0.85
1129	2.0	0.92	0.85
1130	2.0	0.92	0.85
1131	2.0	0.92	0.85
1132	2.0	0.92	0.85
1133	2.0	0.92	0.85
1134	2.0	0.92	0.85
1135	2.0	0.92	0.85
1136	2.0	0.92	0.85
1137	2.0	0.92	0.85
1138	2.0	0.92	0.85
1139	2.0	0.92	0.85
1140	2.0	0.92	0.85
1141	2.0	0.92	0.85
1142	2.0	0.92	0.85
1143	2.0	0.92	0.85
1144	2.0	0.92	0.85
1145	2.0	0.92	0.85
1146	2.0	0.92	0.85
1147	2.0	0.92	0.85
1148	2.0	0.92	0.85
1149	2.0	0.92	0.85
1150	2.0	0.92	0.85
	99.7		41.7
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
1151	2.0	0.92	0.85
1152	2.0	0.92	0.85
1153	2.0	0.92	0.85
1154	2.0	0.92	0.85
1155	2.0	0.92	0.85
1156	2.0	0.92	0.85
1157	2.0	0.92	0.85
1158	2.0	0.92	0.85
1159	2.0	0.92	0.85
1160	2.0	0.92	0.85
1161	2.0	0.92	0.85
1162	2.0	0.92	0.85
1163	2.0	0.92	0.85
1164	2.0	0.92	0.85
1165	2.0	0.92	0.85
1166	2.0	0.92	0.85
1167	2.0	0.92	0.85
1168	2.0	0.92	0.85
1169	2.0	0.92	0.85
1170	2.0	0.92	0.85
1171	2.0	0.92	0.85
1172	2.0	0.92	0.85
1173	2.0	0.92	0.85
1174	2.0	0.92	0.85
1175	2.0	0.92	0.85
1176	2.0	0.92	0.85
1177	2.0	0.92	0.85
1178	2.0	0.92	0.85
1179	2.0	0.92	0.85
1180	2.0	0.92	0.85
1181	2.0	0.92	0.85
1182	2.0	0.92	0.85
1183	2.0	0.92	0.85
1184	2.0	0.92	0.85
1185	2.0	0.92	0.85
1186	2.0	0.92	0.85
1187	2.0	0.92	0.85
1188	2.0	0.92	0.85
1189	2.0	0.92	0.85
1190	2.0	0.92	0.85
1191	2.0	0.92	0.85
1192	2.0	0.92	0.85
1193	2.0	0.92	0.85
1194	2.0	0.92	0.85
1195	2.0	0.92	0.85
1196	2.0	0.92	0.85
1197	2.0	0.92	0.85
1198	2.0	0.92	0.85
1199	2.0	0.92	0.85
1200	2.0	0.92	0.85
	100.0		42.4
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1201	2.0	0.92	0.85
1202	2.0	0.92	0.85
1203	2.0	0.92	0.85
1204	2.0	0.92	0.85
1205	2.0	0.92	0.85
1206	2.0	0.92	0.85
1207	2.0	0.92	0.85
1208	2.0	0.92	0.85
1209	2.0	0.92	0.85
1210	2.0	0.92	0.85
1211	2.0	0.92	0.85
1212	2.0	0.92	0.85
1213	2.0	0.92	0.85
1214	2.0	0.92	0.85
1215	2.0	0.92	0.85
1216	2.0	0.92	0.85
1217	2.0	0.92	0.85
1218	2.0	0.92	0.85
1219	2.0	0.92	0.85
1220	2.0	0.92	0.85
1221	2.0	0.92	0.85
1222	2.0	0.92	0.85
1223	2.0	0.92	0.85
1224	2.0	0.92	0.85
1225	2.0	0.92	0.85
1226	2.0	0.92	0.85
1227	2.0	0.92	0.85
1228	2.0	0.92	0.85
1229	2.0	0.92	0.85
1230	2.0	0.92	0.85
1231	2.0	0.92	0.85
1232	2.0	0.92	0.85
1233	2.0	0.92	0.85
1234	2.0	0.92	0.85
1235	2.0	0.92	0.85
1236	2.0	0.92	0.85
1237	2.0	0.92	0.85
1238	2.0	0.92	0.85
1239	2.0	0.92	0.85
1240	2.0	0.92	0.85
1241	2.0	0.92	0.85
1242	2.0	0.92	0.85
1243	2.0	0.92	0.85
1244	2.0	0.92	0.85
1245	2.0	0.92	0.85
1246	2.0	0.92	0.85
1247	2.0	0.92	0.85
1248	2.0	0.92	0.85
1249	2.0	0.92	0.85
1250	2.0	0.92	0.85
	100.0		42.4
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
1251	2.0	0.92	0.85
1252	2.0	0.92	0.85
1253	2.0	0.92	0.85
1254	2.0	0.92	0.85
1255	2.0	0.92	0.85
1256	2.0	0.92	0.85
1257	2.0	0.92	0.85
1258	2.0	0.92	0.85
1259	2.0	0.92	0.85
1260	2.0	0.92	0.85
1261	2.0	0.92	0.85
1262	2.0	0.92	0.85
1263	2.0	0.92	0.85
1264	2.0	0.92	0.85
1265	2.0	0.92	0.85
1266	2.0	0.92	0.85
1267	2.0	0.92	0.85
1268	2.0	0.92	0.85
1269	2.0	0.92	0.85
1270	2.0	0.92	0.85
1271	2.0	0.92	0.85
1272	2.0	0.92	0.85
1273	2.0	0.92	0.85
1274	2.0	0.92	0.85
1275	2.0	0.92	0.85
1276	2.0	0.92	0.85
1277	2.0	0.92	0.85
1278	2.0	0.92	0.85
1279	2.0	0.92	0.85
1280	2.0	0.92	0.85
1281	2.0	0.92	0.85
1282	2.0	0.92	0.85
1283	2.0	0.92	0.85
1284	2.0	0.92	0.85
1285	2.0	0.92	0.85
1286	2.0	0.92	0.85
1287	2.0	0.92	0.85
1288	2.0	0.92	0.85
1289	2.0	0.92	0.85
1290	2.0	0.92	0.85
1291	2.0	0.92	0.85
1292	2.0	0.92	0.85
1293	2.0	0.92	0.85
1294	2.0	0.92	0.85
1295	2.0	0.92	0.85
1296	2.0	0.92	0.85
1297	2.0	0.92	0.85
1298	2.0	0.92	0.85
1299	2.0	0.92	0.85
1300	2.0	0.92	0.85
	100.0		42.4
	Sum(n)		$Sum(n-N)^2$

Number	n	(n-N)	$(n-N)^2$
1301	2.0	0.92	0.85
1302	2.0	0.92	0.85
1303	2.0	0.92	0.85
1304	2.0	0.92	0.85
1305	2.0	0.92	0.85
1306	2.0	0.92	0.85
1307	2.0	0.92	0.85
1308	2.0	0.92	0.85
1309	2.0	0.92	0.85
1310	2.0	0.92	0.85
1311	2.0	0.92	0.85
1312	2.0	0.92	0.85
1313	2.0	0.92	0.85
1314	2.0	0.92	0.85
1315	2.0	0.92	0.85
1316	2.0	0.92	0.85
1317	2.0	0.92	0.85
1318	2.0	0.92	0.85
1319	2.0	0.92	0.85
1320	2.0	0.92	0.85
1321	2.0	0.92	0.85
1322	2.0	0.92	0.85
1323	2.0	0.92	0.85
1324	2.0	0.92	0.85
1325	2.0	0.92	0.85
1326	2.0	0.92	0.85
1327	2.0	0.92	0.85
1328	2.0	0.92	0.85
1329	2.0	0.92	0.85
1330	2.0	0.92	0.85
1331	2.0	0.92	0.85
1332	2.0	0.92	0.85
1333	2.0	0.92	0.85
1334	2.0	0.92	0.85
1335	2.0	0.92	0.85
1336	2.0	0.92	0.85
1337	2.0	0.92	0.85
1338	2.0	0.92	0.85
1339	2.0	0.92	0.85
1340	2.0	0.92	0.85
1341	2.0	0.92	0.85
1342	2.0	0.92	0.85
1343	2.0	0.92	0.85
1344	2.0	0.92	0.85
1345	2.0	0.92	0.85
1346	2.0	0.92	0.85
1347	2.0	0.92	0.85
1348	2.0	0.92	0.85
1349	2.0	0.92	0.85
1350	2.0	0.92	0.85
	100.0		42.4
	Sum(n)		$Sum(n-N)^2$

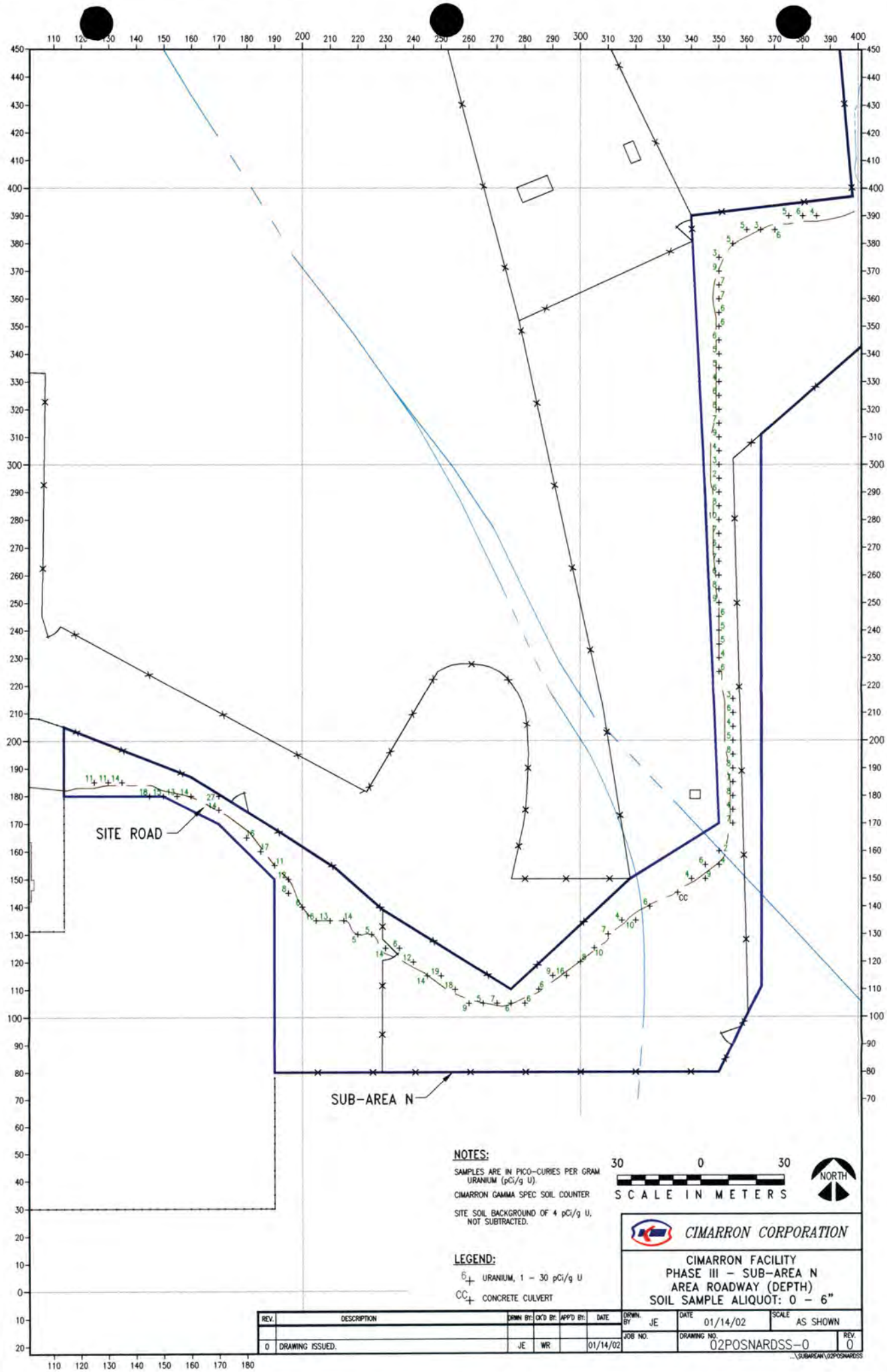
CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - OPTION 2 ON-SITE DISPOSAL CELL AREA

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
1351	2.0	0.92	0.85
1352	2.0	0.92	0.85
1353	2.0	0.92	0.85
1354	2.0	0.92	0.85
1355	2.0	0.92	0.85
1356	2.0	0.92	0.85
1357	2.0	0.92	0.85
1358	2.0	0.92	0.85
1359	2.0	0.92	0.85
1360	2.0	0.92	0.85
1361	2.0	0.92	0.85
1362	2.0	0.92	0.85
1363	2.0	0.92	0.85
1364	2.0	0.92	0.85
1365	2.0	0.92	0.85
1366	2.0	0.92	0.85
1367	2.0	0.92	0.85
1368	2.0	0.92	0.85
1369	2.0	0.92	0.85
1370	2.0	0.92	0.85
1371	2.0	0.92	0.85
1372	2.0	0.92	0.85
1373	2.0	0.92	0.85
1374	2.0	0.92	0.85
1375	2.0	0.92	0.85
1376	2.0	0.92	0.85
1377	2.0	0.92	0.85
1378	2.0	0.92	0.85
1379	2.0	0.92	0.85
1380	2.0	0.92	0.85
1381	2.0	0.92	0.85
1382	2.0	0.92	0.85
1383	2.0	0.92	0.85
1384	2.0	0.92	0.85
1385	2.0	0.92	0.85
1386	2.0	0.92	0.85
1387	2.0	0.92	0.85
1388	2.0	0.92	0.85
1389	2.0	0.92	0.85
1390	2.0	0.92	0.85
1391	2.0	0.92	0.85
1392	2.0	0.92	0.85
1393	2.0	0.92	0.85
1394	2.0	0.92	0.85
1395	2.0	0.93	0.87
1396	2.0	0.93	0.87
1397	2.0	0.93	0.87
1398	2.0	0.94	0.88
1399	2.0	0.94	0.88
1400	2.0	0.94	0.88
	100.1		42.5
	Sum(n)		Sum(n-N)²

Number	n	(n-N)	(n-N)²
1401	2.0	0.94	0.88
1402	2.0	0.95	0.90
1403	2.0	0.95	0.90
1404	2.0	0.95	0.90
1405	2.0	0.95	0.90
1406	2.0	0.96	0.92
1407	2.1	0.98	0.96
1408	2.1	1.00	1.00
1409	2.1	1.00	1.00
1410	2.1	1.02	1.04
1411	2.1	1.06	1.12
1412	2.2	1.09	1.19
1413	2.2	1.10	1.21
1414	2.2	1.11	1.23
1415	2.2	1.12	1.26
1416	2.2	1.13	1.28
1417	2.2	1.15	1.32
1418	2.3	1.17	1.37
1419	2.3	1.25	1.56
1420	3.0	1.92	3.69
1421	3.0	1.92	3.69
1422	0.0	0.00	0.00
1423	0.0	0.00	0.00
1424	0.0	0.00	0.00
1425	0.0	0.00	0.00
1426	0.0	0.00	0.00
1427	0.0	0.00	0.00
1428	0.0	0.00	0.00
1429	0.0	0.00	0.00
1430	0.0	0.00	0.00
1431	0.0	0.00	0.00
1432	0.0	0.00	0.00
1433	0.0	0.00	0.00
1434	0.0	0.00	0.00
1435	0.0	0.00	0.00
1436	0.0	0.00	0.00
1437	0.0	0.00	0.00
1438	0.0	0.00	0.00
1439	0.0	0.00	0.00
1440	0.0	0.00	0.00
1441	0.0	0.00	0.00
1442	0.0	0.00	0.00
1443	0.0	0.00	0.00
1444	0.0	0.00	0.00
1445	0.0	0.00	0.00
1446	0.0	0.00	0.00
1447	0.0	0.00	0.00
1448	0.0	0.00	0.00
1449	0.0	0.00	0.00
1450	0.0	0.00	0.00
	46.4		28.4
	Sum(n)		Sum(n-N)²

APPENDIX 4 – AREA ROADWAY FSS DATA - DRAWINGS, DATA TABLES, GRAPHS, AND STATISTICAL EVALUATIONS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6 + URANIUM, 1 – 30 pCi/g U

CC + CONCRETE CULVERT

30 0 30

SCALE IN METERS

NORTH

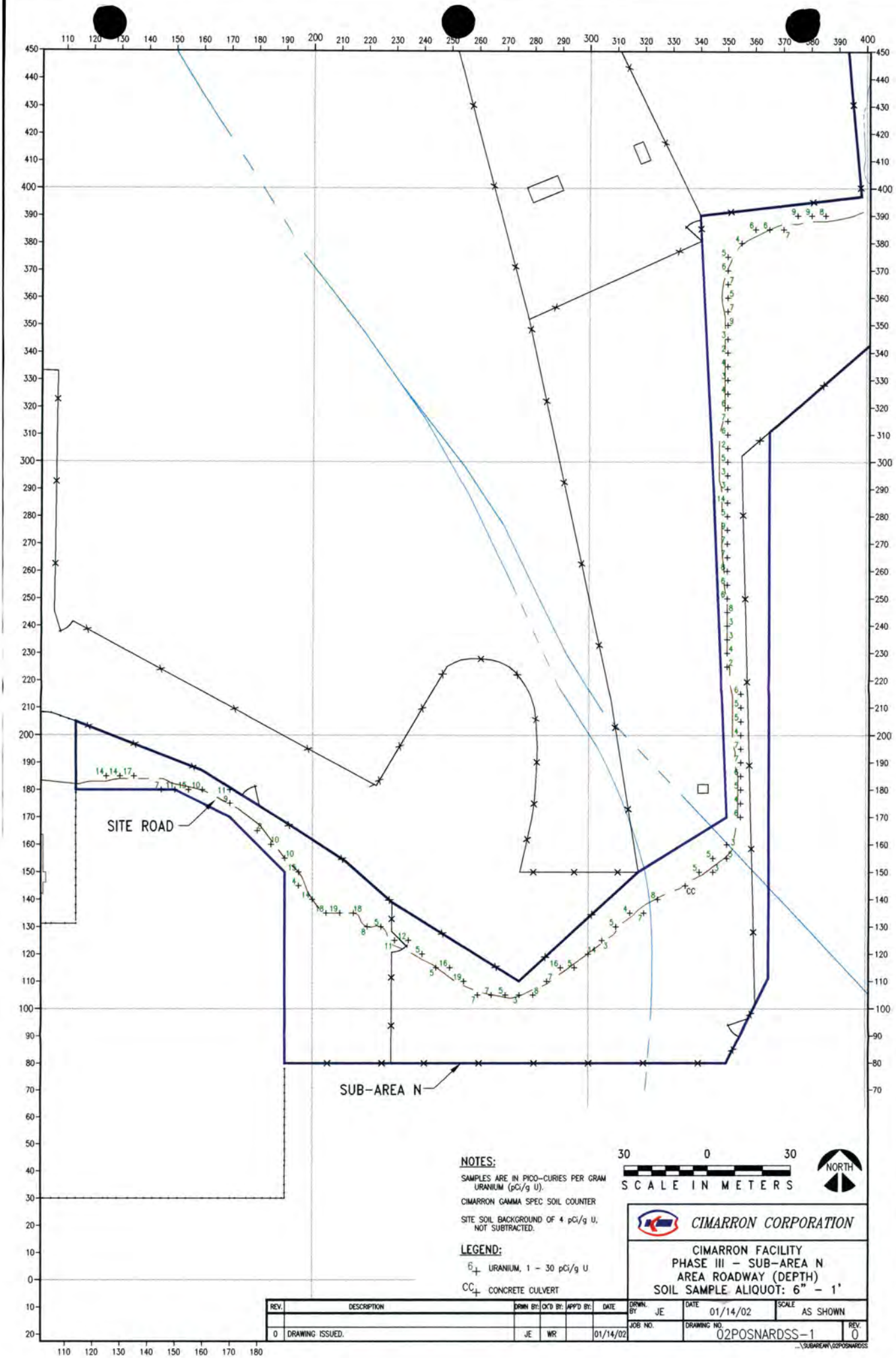
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA N
AREA ROADWAY (DEPTH)
SOIL SAMPLE ALIQUOT: 0 – 6"

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	JE	DATE	01/14/02	SCALE	AS SHOWN
JOB NO.		DRAWING NO.	02POSNARDSS-0	REV.	0

...\SUBAREAN\02POSNARDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

CC+ CONCRETE CULVERT

CIMARRON CORPORATION

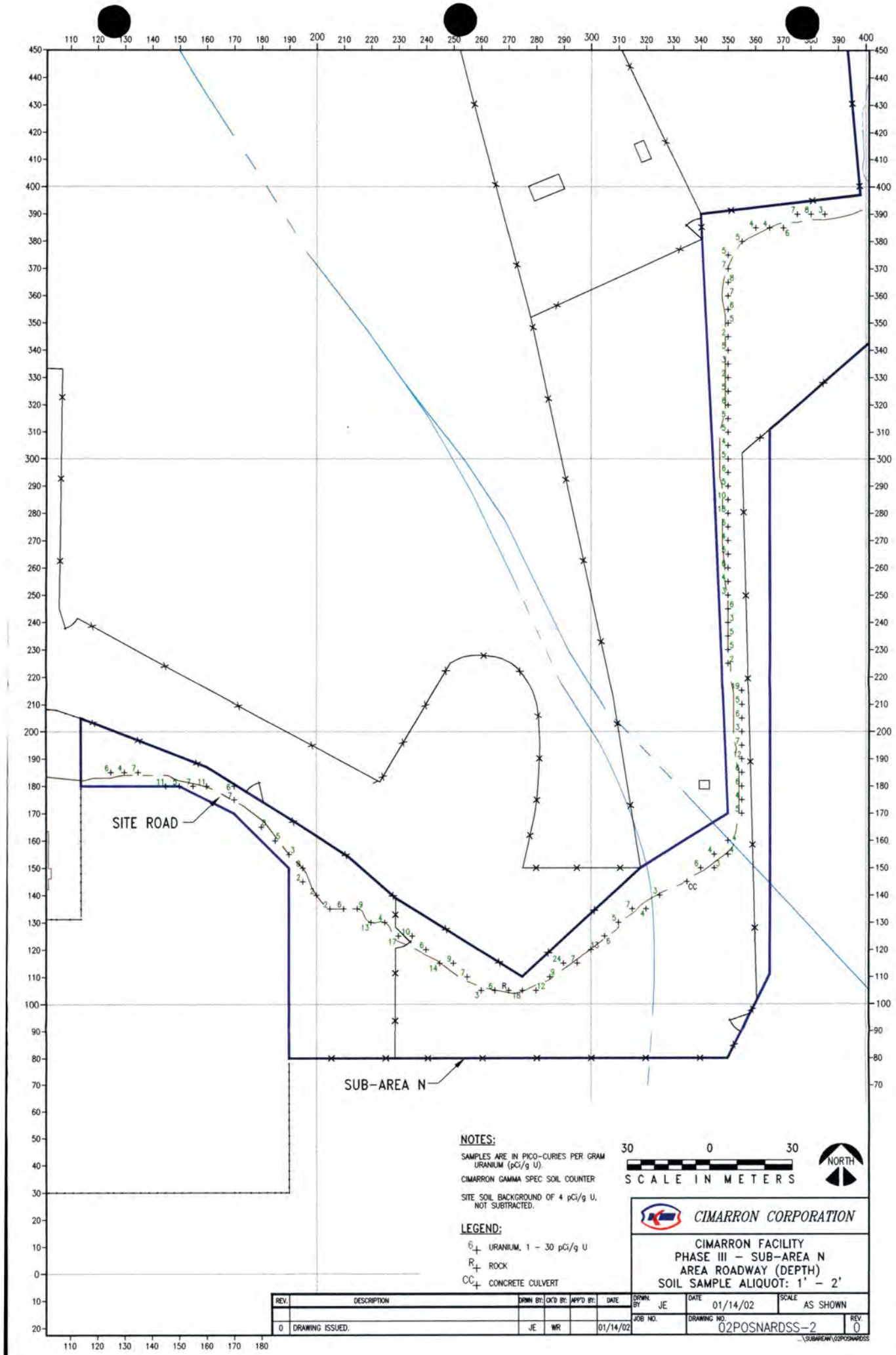
CIMARRON FACILITY
PHASE III - SUB-AREA N
AREA ROADWAY (DEPTH)
SOIL SAMPLE ALIQUOT: 6" - 1'

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	02POSNARDSS-1	0

...\SUBAREAN\02POSNARDSS



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

R+ ROCK

CC+ CONCRETE CULVERT

30 0 30

SCALE IN METERS

NORTH

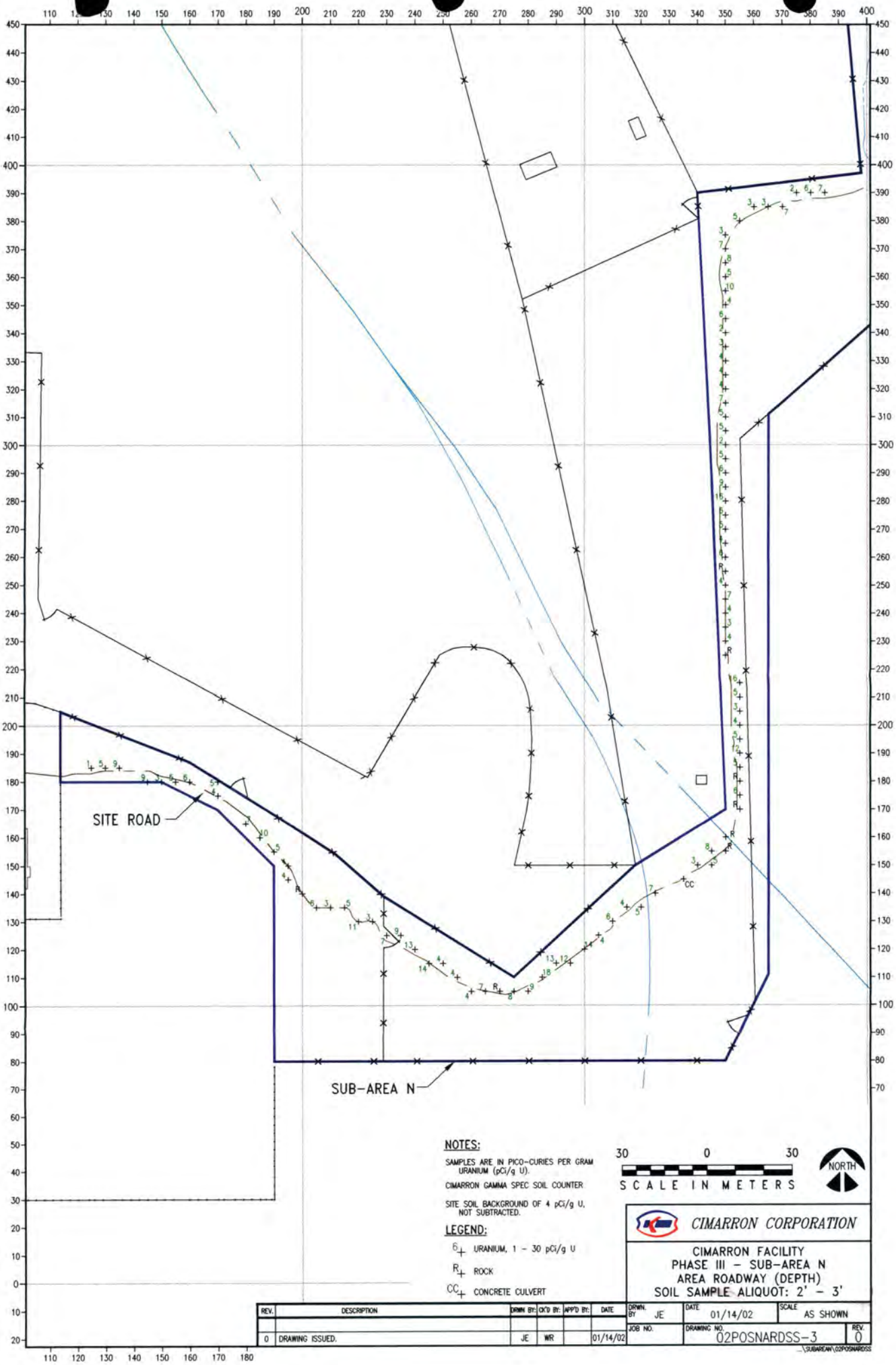
CIMARRON CORPORATION

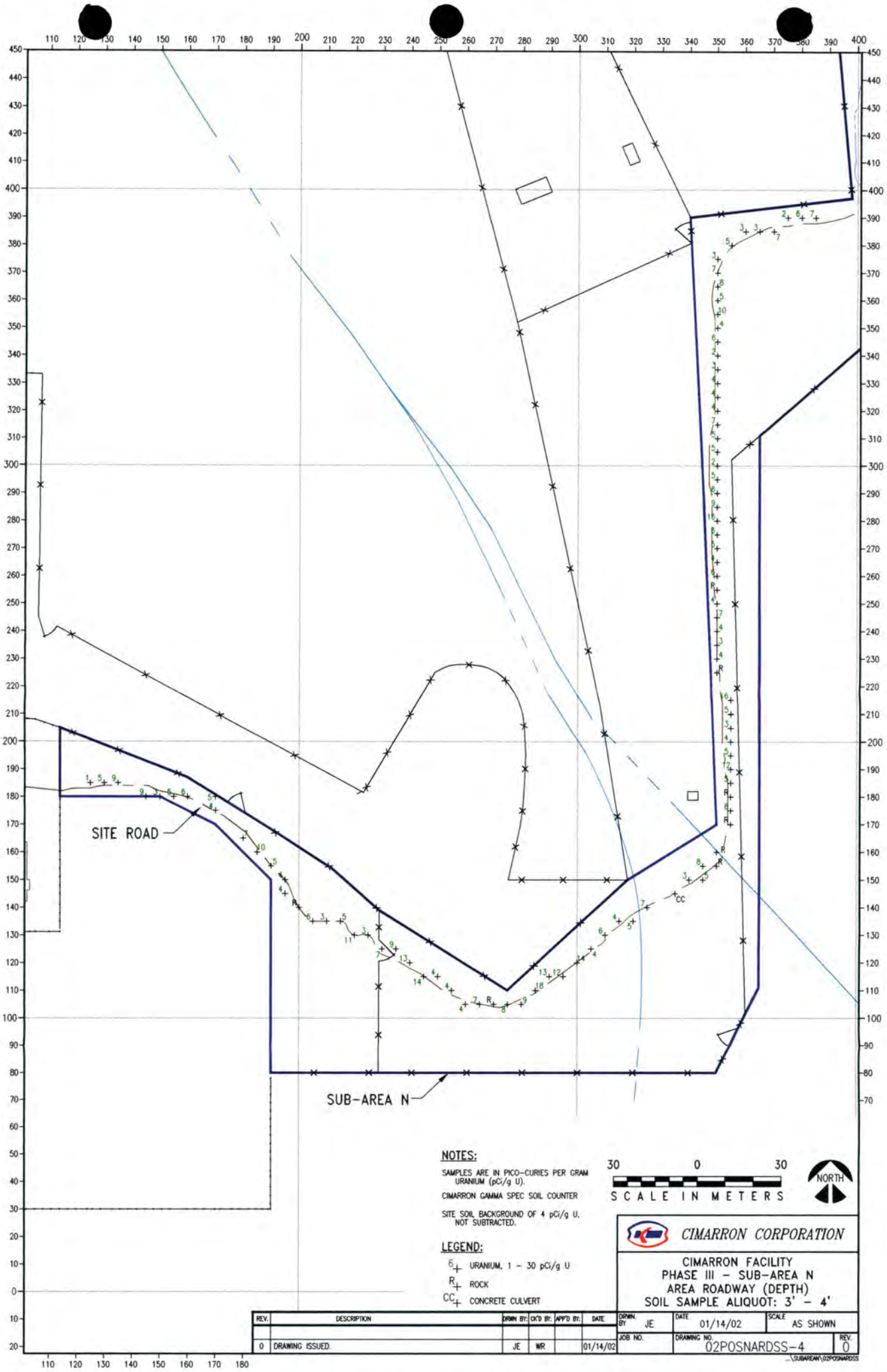
CIMARRON FACILITY
PHASE III - SUB-AREA N
AREA ROADWAY (DEPTH)
SOIL SAMPLE ALIQUOT: 1' - 2'

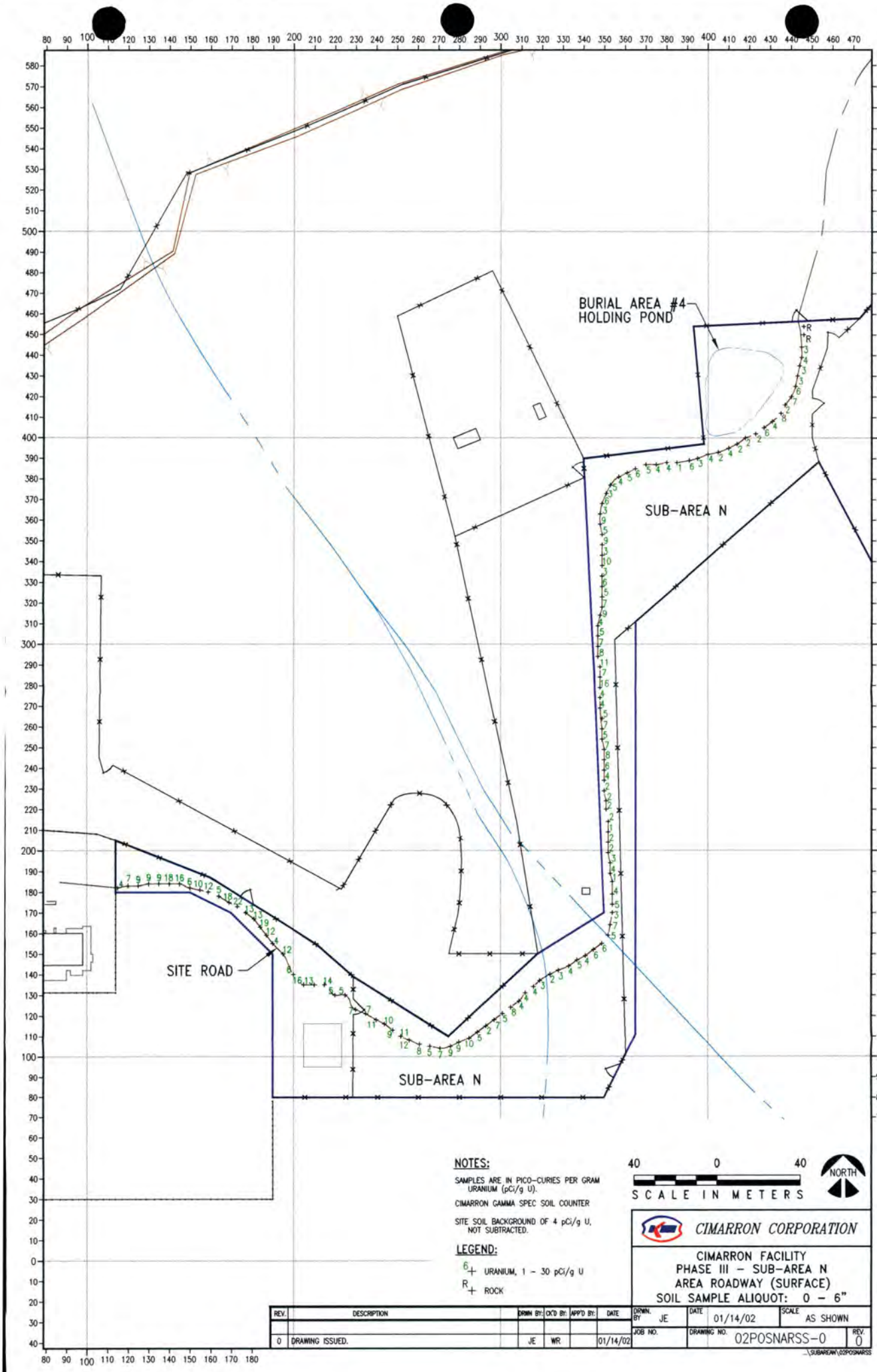
REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO. 02POSNARDSS-2	REV. 0

...\SUBAREAW\02POSNARDSS


SITE ROAD
SUB-AREA N
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.
LEGEND:
URANIUM, 1 - 30 pCi/g U
ROCK
CONCRETE CULVERT
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
AREA ROADWAY (DEPTH)
SOIL SAMPLE ALIQUOT: 2' - 3'
REV. DESCRIPTION DRWN BY: CK'D BY: APP'D BY: DATE
0 DRAWING ISSUED. JE WR 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNARDSS-3
REV. 0


SITE ROAD
SUB-AREA N
NOTES:
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).
CIMARRON GAMMA SPEC SOIL COUNTER
SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.
LEGEND:
URANIUM, 1 - 30 pCi/g U
ROCK
CONCRETE CULVERT
30 0 30
SCALE IN METERS
NORTH
CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III - SUB-AREA N
AREA ROADWAY (DEPTH)
SOIL SAMPLE ALIQUOT: 3' - 4'
REV. DESCRIPTION DRWN BY: CK'D BY: APP'D BY: DATE
0 DRAWING ISSUED. JE WR 01/14/02
DRWN. BY JE
DATE 01/14/02
SCALE AS SHOWN
JOB NO.
DRAWING NO. 02POSNARDSS-4
REV. 0



NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6 + URANIUM, 1 - 30 pCi/g U

R + ROCK

40 0 40

SCALE IN METERS

NORTH

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
AREA ROADWAY (SURFACE)
SOIL SAMPLE ALIQUOT: 0 - 6"

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	JE	DATE	01/14/02	SCALE	AS SHOWN
JOB NO.		DRAWING NO.	02POSNARSS-0	REV.	0

..\SUBAREAN\02POSNARSS

CIMAR. .N CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED
ROADWAY DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	125	E	-	185	N	3650	10	9	11	1	14	1	6	1	1	1	5	1
2	130	E	-	185	N	3840	9	10	11	1	14	1	4	1	5	1	5	1
3	135	E	-	185	N	4220	9	8	14	1	17	1	7	1	9	1	15	1
4	145	E	-	180	N	4830	10	9	18	1	7	1	11	1	9	1	8	1
5	150	E	-	180	N	4130	10	9	15	1	11	1	5	1	3	1	3	1
6	155	E	-	180	N	4460	9	10	13	1	15	1	7	1	5	1	6	1
7	160	E	-	180	N	4860	10	11	14	1	10	1	11	1	6	1	5	1
8	170	E	-	175	N	3210	9	9	14	1	9	1	7	1	4	1	4	1
9	170	E	-	180	N	4380	10	9	27	1	11	1	6	1	5	1	5	1
10	180	E	-	165	N	5020	12	10	16	1	8	1	8	1	7	1	5	1
11	185	E	-	160	N	3900	9	9	17	1	10	1	5	1	10	1	10	1
12	190	E	-	155	N	3900	9	9	11	1	10	1	3	1	5	1	5	1
13	195	E	-	145	N	1970	7	8	8	1	4	1	2	1	4	1	6	1
14	195	E	-	150	N	5200	7	10	12	1	15	1	8	1	4	1	4	1
15	200	E	-	140	N	2300	7	8	6	1	14	1	2	1	ROCK	ROCK	ROCK	ROCK
16	205	E	-	135	N	3840	8	10	16	1	18	1	2	1	6	1	4	1
17	210	E	-	135	N	3750	9	9	13	1	19	1	6	1	3	1	3	1
18	215	E	-	135	N	4260	9	9	14	1	18	1	9	1	5	1	3	1
19	220	E	-	130	N	3710	8	9	5	1	8	1	13	1	11	1	8	1
20	225	E	-	130	N	4850	10	9	5	2	5	1	4	1	3	1	2	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMAR. .N CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED
ROADWAY DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	230	E	-	125	N	3240	5	6	14	1	11	1	17	1	7	1	11	1
2	235	E	-	125	N	4120	7	6	6	2	12	2	10	3	9	1	ROCK	ROCK
3	240	E	-	120	N	3180	7	6	12	1	5	2	6	1	13	2	15	1
4	245	E	-	115	N	3310	7	6	14	2	5	1	14	1	14	1	15	1
5	250	E	-	115	N	3320	9	9	19	1	16	1	9	1	4	1	3	1
6	255	E	-	110	N	3140	6	5	18	1	19	1	7	1	4	1	13	1
7	260	E	-	105	N	3090	7	7	9	1	7	1	3	2	4	1	5	1
8	265	E	-	105	N	3480	7	7	5	2	7	1	6	1	7	1	6	1
9	270	E	-	105	N	3460	7	8	7	1	5	1	ROCK	ROCK	ROCK	ROCK	ROCK	ROCK
10	275	E	-	105	N	2820	7	6	6	1	3	1	18	1	8	1	3	1
11	280	E	-	105	N	2620	6	6	6	1	8	1	12	1	9	1	7	1
12	285	E	-	110	N	2960	6	5	6	1	7	2	9	1	18	1	3	1
13	290	E	-	115	N	3710	8	7	9	1	16	1	24	2	13	2	12	1
14	295	E	-	115	N	3260	7	6	16	2	5	1	7	1	12	1	6	1
15	300	E	-	120	N	3650	8	7	8	1	14	1	13	1	14	1	6	1
16	305	E	-	125	N	3160	6	6	10	3	3	2	6	2	4	1	5	1
17	310	E	-	130	N	2770	6	7	7	2	5	1	5	2	6	2	8	1
18	315	E	-	135	N	3330	6	6	4	2	4	2	7	2	4	1	5	1
19	320	E	-	135	N	2950	6	6	10	1	7	2	4	2	5	2	6	2
20	325	E	-	140	N	3090	7	6	6	2	8	1	3	2	7	2	7	2

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED
ROADWAY DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	335	E	-	145	N	1760	8	8	CONCRETE CULVERT									
2	340	E	-	150	N	2070	8	8	4	1	5	1	6	2	3	1	8	1
3	345	E	-	150	N	2340	8	8	9	1	3	2	3	1	5	2	3	2
4	345	E	-	155	N	2640	8	8	6	1	5	2	4	2	8	2	4	2
5	350	E	-	155	N	2650	8	7	4	1	5	1	4	1	ROCK	ROCK	ROCK	ROCK
6	350	E	-	160	N	2450	9	9	2	1	3	1	4	1	ROCK	ROCK	ROCK	ROCK
7	350	E	-	225	N	2580	8	9	6	1	2	1	2	1	ROCK	ROCK	ROCK	ROCK
8	350	E	-	230	N	1940	8	9	4	1	4	1	5	1	4	1	4	1
9	350	E	-	235	N	2300	8	9	5	1	3	1	5	1	3	1	5	1
10	350	E	-	240	N	2140	8	8	5	1	3	1	3	1	4	1	2	1
11	350	E	-	245	N	2130	7	7	6	1	8	1	6	1	7	1	7	1
12	350	E	-	250	N	2380	8	8	9	1	6	1	3	1	4	1	7	1
13	350	E	-	255	N	2710	8	8	8	1	6	1	4	1	ROCK	ROCK	ROCK	ROCK
14	350	E	-	260	N	2690	9	8	6	1	8	1	6	1	6	1	6	1
15	350	E	-	265	N	2840	10	8	7	1	7	1	5	1	4	1	7	1
16	350	E	-	270	N	2920	10	10	6	1	7	1	4	2	5	1	6	1
17	350	E	-	275	N	2800	10	9	7	1	9	1	6	1	6	1	5	2
18	350	E	-	280	N	3010	11	11	10	1	5	1	18	1	16	1	13	2
19	350	E	-	285	N	2230	9	9	8	1	14	1	10	1	9	1	17	1
20	350	E	-	290	N	2700	9	9	6	1	3	1	5	1	6	1	5	1

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARI , CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED
ROADWAY DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g									
									0 - 6"		6" - 1'		1' - 2'		2' - 3'		3' - 4'	
									Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)
1	350	E	-	295	N	3730	10	9	2	1	3	1	6	1	5	1	4	1
2	350	E	-	300	N	3460	11	10	3	1	5	1	5	1	2	1	2	1
3	350	E	-	305	N	3710	9	10	4	1	2	1	4	1	5	1	2	1
4	350	E	-	310	N	3720	9	9	9	1	6	1	5	1	5	1	2	1
5	350	E	-	315	N	3240	9	10	7	1	7	1	5	1	7	1	6	1
6	350	E	-	320	N	3040	8	9	8	1	6	1	6	1	4	1	5	1
7	350	E	-	325	N	2250	8	7	6	1	4	1	5	1	4	1	2	1
8	350	E	-	330	N	2370	8	9	4	1	3	1	2	1	4	1	4	1
9	350	E	-	335	N	3020	10	9	5	1	4	1	3	1	3	1	2	1
10	350	E	-	340	N	2460	8	9	5	1	2	1	5	1	2	1	3	2
11	350	E	-	345	N	2200	8	7	6	1	3	1	2	1	6	1	4	1
12	350	E	-	350	N	2190	9	8	6	1	9	1	5	1	4	2	7	2
13	350	E	-	355	N	2260	7	8	6	1	7	1	6	1	10	1	8	1
14	350	E	-	360	N	2290	8	9	7	1	5	1	7	1	5	1	8	2
15	350	E	-	365	N	2990	9	10	7	1	7	1	8	1	8	1	6	1
16	350	E	-	370	N	2670	9	9	9	1	6	1	7	1	7	1	5	1
17	350	E	-	375	N	2270	8	9	3	1	5	2	5	1	3	1	2	2
18	355	E	-	170	N	2390	8	8	7	1	6	1	5	1	ROCK	ROCK	ROCK	ROCK
19	355	E	-	175	N	2280	8	8	4	1	4	1	4	1	6	1	6	1
20	355	E	-	180	N	2360	9	9	8	1	5	1	6	1	ROCK	ROCK	ROCK	ROCK

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMAR. . .N CORPORATION
CIMARRON FACILITY
PHASE III, SUB-AREA 'N' AFFECTED
ROADWAY DEPTH SOIL SAMPLES

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g 0 - 6" Total-U	0 - 6" Th (Nat)	6" - 1' Total-U	6" - 1' Th (Nat)	1' - 2' Total-U	1' - 2' Th (Nat)	2' - 3' Total-U	2' - 3' Th (Nat)	3' - 4' Total-U	3' - 4' Th (Nat)
1	355	E	-	185	N	2430	9	9	7	1	6	1	6	1	5	1	4	1
2	355	E	-	190	N	3150	8	7	8	1	7	1	12	1	12	1	ROCK	ROCK
3	355	E	-	195	N	2490	9	9	8	1	7	1	7	1	5	1	ROCK	ROCK
4	355	E	-	200	N	2780	10	10	5	1	4	1	3	1	4	1	ROCK	ROCK
5	355	E	-	205	N	2910	8	8	4	1	5	1	6	1	3	1	ROCK	ROCK
6	355	E	-	210	N	2480	8	8	6	1	5	1	5	1	5	1	ROCK	ROCK
7	355	E	-	215	N	2160	8	8	3	1	6	1	19	1	16	1	ROCK	ROCK
8	355	E	-	380	N	3010	9	9	5	1	4	1	5	1	5	1	3	2
9	360	E	-	385	N	2820	10	10	5	1	6	1	4	1	3	1	2	1
10	365	E	-	385	N	2960	9	9	3	1	6	1	4	1	3	1	4	1
11	370	E	-	385	N	2630	10	10	6	1	7	1	6	1	7	1	5	1
12	375	E	-	390	N	2030	9	9	5	1	9	1	7	1	2	1	5	1
13	380	E	-	390	N	1980	9	9	6	1	9	1	8	1	6	1	4	1
14	385	E	-	390	N	2510	8	8	4	1	8	1	3	2	7	1	2	1
15			-															
16			-															
17			-															
18			-															
19			-															
20			-															

INSTRUMENTS:	RESULTS IN	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - 19 #138420	µr/hr	7-9	2
LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR - #48395	CPM	3000	N/A
CIMARRON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/G	4.0 Total U 1.5 Th (Nat)	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. C. Rogers DATE:

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	115	E	-	182	N	2550	9	8	4	1
2	120	E	-	183	N	2470	8	8	7	1
3	125	E	-	183	N	2850	9	8	9	2
4	130	E	-	184	N	2610	8	8	9	2
5	135	E	-	184	N	2650	8	9	9	2
6	140	E	-	184	N	2790	9	9	18	2
7	145	E	-	184	N	2210	9	7	16	2
8	150	E	-	182	N	2110	9	8	6	1
9	155	E	-	181	N	2360	8	7	10	2
10	159	E	-	180	N	2660	8	7	12	2
11	164	E	-	178	N	3070	8	8	5	2
12	169	E	-	175	N	2420	9	8	18	2
13	173	E	-	173	N	3190	8	8	22	2
14	177	E	-	170	N	2950	9	9	13	3
15	181	E	-	167	N	2590	7	8	13	2
16	184	E	-	163	N	2760	8	9	19	2
17	187	E	-	159	N	2790	10	7	12	2
18	190	E	-	155	N	2510	8	8	4	2
19	195	E	-	150	N	4200	7	10	12	1
20	200	E	-	140	N	2300	7	8	6	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	205	E	-	135	N	3840	8	10	16	1
2	210	E	-	135	N	3750	9	9	13	1
3	215	E	-	135	N	4260	9	9	14	1
4	220	E	-	130	N	3710	8	9	5	1
5	225	E	-	130	N	4850	10	9	5	2
6	230	E	-	123	N	2730	8	8	7	2
7	235	E	-	121	N	3170	7	9	7	2
8	240	E	-	118	N	2550	8	8	11	1
9	244	E	-	116	N	2650	8	8	10	2
10	248	E	-	113	N	2320	8	8	9	2
11	252	E	-	110	N	2340	7	10	11	2
12	256	E	-	108	N	2660	9	9	12	1
13	261	E	-	106	N	2110	7	8	8	2
14	266	E	-	105	N	2430	8	8	5	2
15	271	E	-	104	N	2090	7	8	7	1
16	276	E	-	105	N	1990	8	7	9	2
17	280	E	-	107	N	1850	7	7	9	1
18	285	E	-	109	N	2230	7	8	10	2
19	289	E	-	112	N	2310	8	8	5	2
20	293	E	-	115	N	2280	8	9	2	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	297	E	-	118	N	1980	8	8	7	1
2	301	E	-	121	N	2800	9	9	5	2
3	305	E	-	124	N	2970	7	9	8	3
4	309	E	-	127	N	2650	8	8	4	2
5	312	E	-	131	N	2780	7	8	4	2
6	316	E	-	134	N	2590	7	8	4	1
7	319	E	-	137	N	2100	7	8	3	2
8	324	E	-	140	N	2330	8	9	2	2
9	328	E	-	142	N	2370	7	9	3	2
10	333	E	-	144	N	2110	8	9	4	1
11	337	E	-	147	N	2190	7	8	5	1
12	341	E	-	149	N	1560	7	9	4	1
13	345	E	-	152	N	2130	9	9	6	1
14	349	E	-	155	N	2110	9	8	6	1
15	352	E	-	159	N	2540	9	8	5	1
16	353	E	-	164	N	2440	10	9	7	1
17	354	E	-	170	N	2130	9	9	3	2
18	354	E	-	174	N	2230	8	9	5	1
19	354	E	-	179	N	2270	7	8	4	1
20	354	E	-	185	N	2610	9	8	1	1

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	353	E	-	189	N	2240	8	7	4	1
2	353	E	-	194	N	2400	8	9	3	1
3	352	E	-	199	N	2320	8	9	2	1
4	352	E	-	204	N	2300	8	10	2	1
5	352	E	-	209	N	2260	9	9	1	1
6	352	E	-	214	N	2300	8	8	2	1
7	351	E	-	220	N	2360	7	7	2	2
8	351	E	-	224	N	2480	8	8	2	1
9	350	E	-	229	N	2370	8	9	2	2
10	350	E	-	234	N	2040	7	9	4	2
11	350	E	-	239	N	2290	8	8	6	2
12	350	E	-	244	N	2360	8	8	8	2
13	350	E	-	249	N	2010	8	7	7	1
14	349	E	-	254	N	2090	8	9	5	1
15	349	E	-	259	N	2220	7	8	7	2
16	349	E	-	264	N	2220	8	7	5	2
17	348	E	-	269	N	2320	8	8	4	2
18	348	E	-	274	N	2280	8	9	4	2
19	348	E	-	279	N	2270	8	10	16	2
20	348	E	-	284	N	2620	8	9	7	2

INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	348	E	-	289	N	2880	7	10	11	2
2	347	E	-	294	N	2440	7	9	8	2
3	347	E	-	299	N	2510	7	10	7	2
4	347	E	-	304	N	2450	7	10	5	2
5	347	E	-	309	N	2600	8	9	4	2
6	348	E	-	314	N	2600	7	10	9	2
7	349	E	-	318	N	1840	9	10	7	2
8	349	E	-	323	N	2500	9	9	5	2
9	349	E	-	328	N	2290	8	10	6	2
10	349	E	-	333	N	2200	8	9	3	2
11	349	E	-	338	N	2130	8	8	10	2
12	349	E	-	343	N	2000	7	9	3	2
13	349	E	-	348	N	1920	8	8	9	2
14	349	E	-	353	N	2120	8	8	5	2
15	348	E	-	358	N	2260	9	10	9	2
16	348	E	-	363	N	2720	8	10	3	2
17	349	E	-	368	N	2560	8	8	6	2
18	351	E	-	373	N	2510	8	8	3	2
19	353	E	-	377	N	2780	8	9	5	2
20	357	E	-	381	N	2500	8	10	4	2

INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	361	E	-	383	N	2820	7	9	5	2
2	365	E	-	385	N	2660	7	9	6	2
3	370	E	-	387	N	2210	8	9	5	2
4	375	E	-	387	N	2300	9	8	4	2
5	380	E	-	388	N	2340	8	9	4	2
6	385	E	-	388	N	2210	10	10	1	1
7	391	E	-	389	N	2160	9	9	6	2
8	395	E	-	390	N	2150	8	9	3	2
9	400	E	-	392	N	2170	9	9	4	1
10	405	E	-	393	N	2620	8	8	2	2
11	410	E	-	395	N	2790	9	11	4	2
12	414	E	-	397	N	1770	10	10	2	2
13	418	E	-	400	N	2430	9	10	2	2
14	423	E	-	402	N	2870	9	9	2	2
15	427	E	-	405	N	2810	8	10	6	2
16	431	E	-	408	N	2050	8	9	4	2
17	435	E	-	412	N	2330	9	9	8	2
18	437	E	-	416	N	2790	9	9	2	2
19	440	E	-	420	N	2460	9	8	7	2
20	442	E	-	425	N	2360	8	9	6	2

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Total U - 4 Th(nat) - 1.5	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Centerline Roadway Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	443	E	-	430	N	2680	10	10	3	2
2	444	E	-	435	N	2540	9	9	3	2
3	445	E	-	439	N	2220	8	9	4	1
4	445	E	-	444	N	2530	9	10	3	1
5	446	E	-	450	N	2100	8	9	ROCK	ROCK
6	446	E	-	454	N	2440	8	9	ROCK	ROCK
7		E	-		N					
8		E	-		N					
9		E	-		N					
10		E	-		N					
11		E	-		N					
12		E	-		N					
13		E	-		N					
14		E	-		N					
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

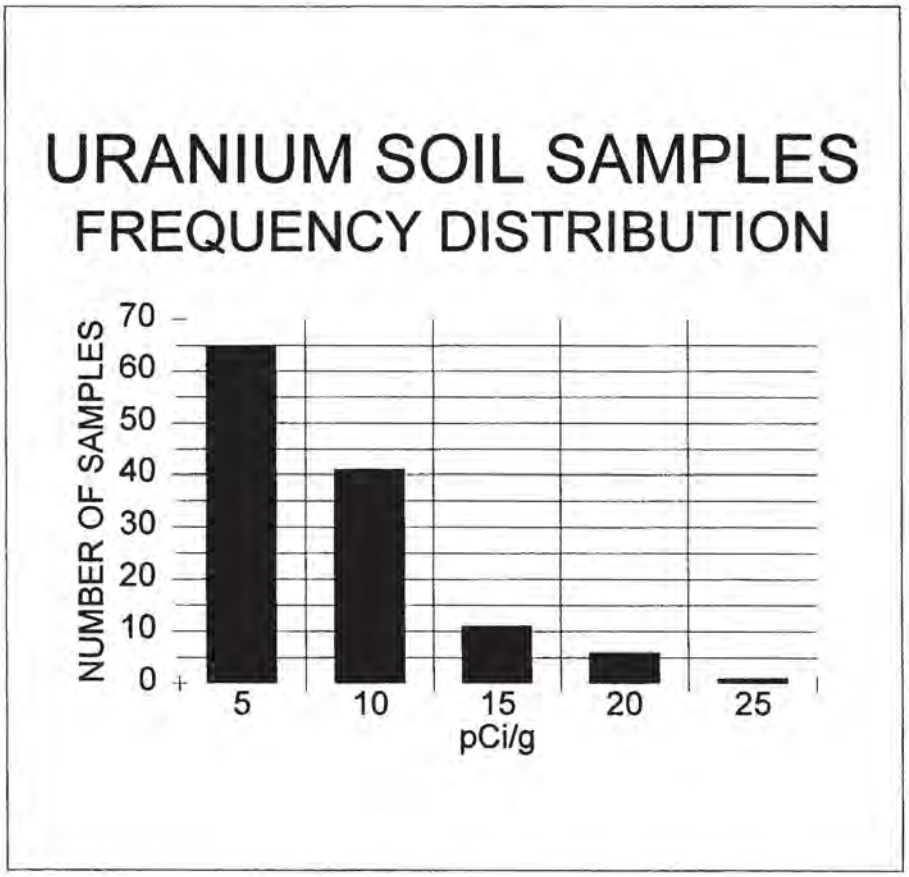
INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 50056	CPM	2200	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.O. Rogers DATE: 1-8-02

PHASE III, SUB-AREA "N" - ROADWAY
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

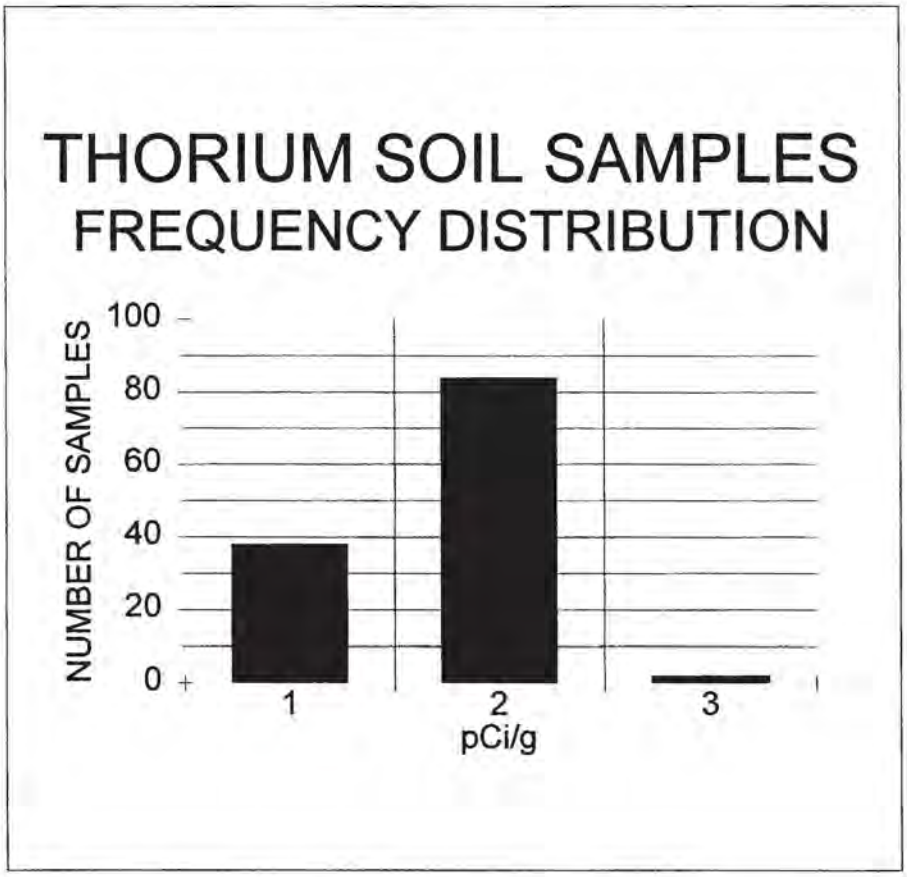
DECEMBER 11, 2001



NUMBER OF READINGS	**124**
AVERAGE READING	**6**
MINIMUM READING	**1**
MAXIMUM READING	**22**
STANDARD DEVIATION	**4**

PHASE III, SUB-AREA "N" - ROADWAY
SURFACE SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

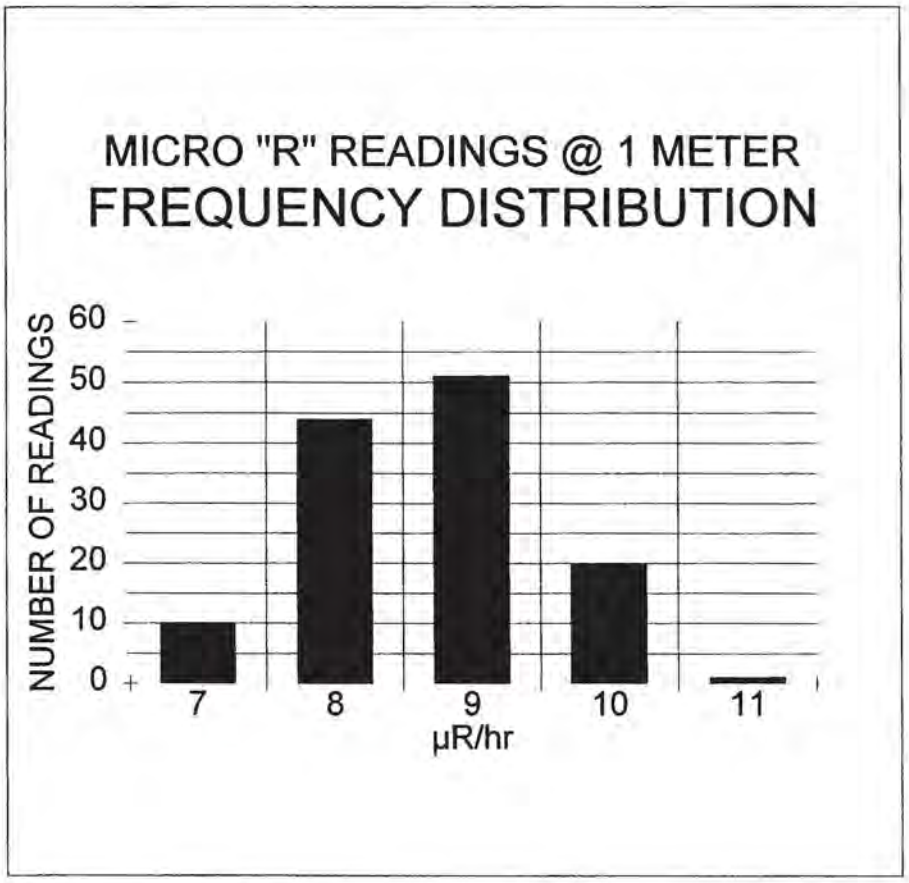
DECEMBER 11, 2001



NUMBER OF READINGS	**124**
AVERAGE READING	**2**
MINIMUM READING	**1**
MAXIMUM READING	**3**
STANDARD DEVIATION	**0.5**

PHASE III, SUB-AREA "N" - ROADWAY
SURFACE SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 1111299
RESULTS IN µR/hr

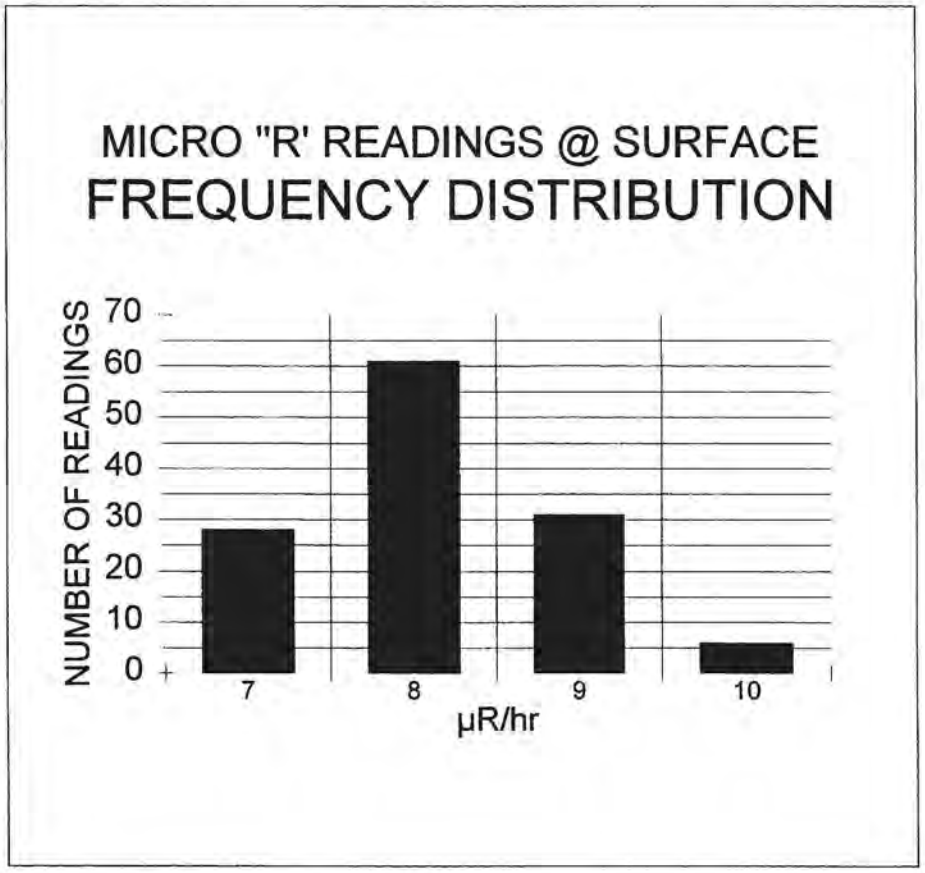
DECEMBER 11, 2001



NUMBER OF READINGS	**126**
AVERAGE READING	**9**
MINIMUM READING	**7**
MAXIMUM READING	**11**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N" - ROADWAY SURFACE SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 111299
RESULTS IN µR/hr

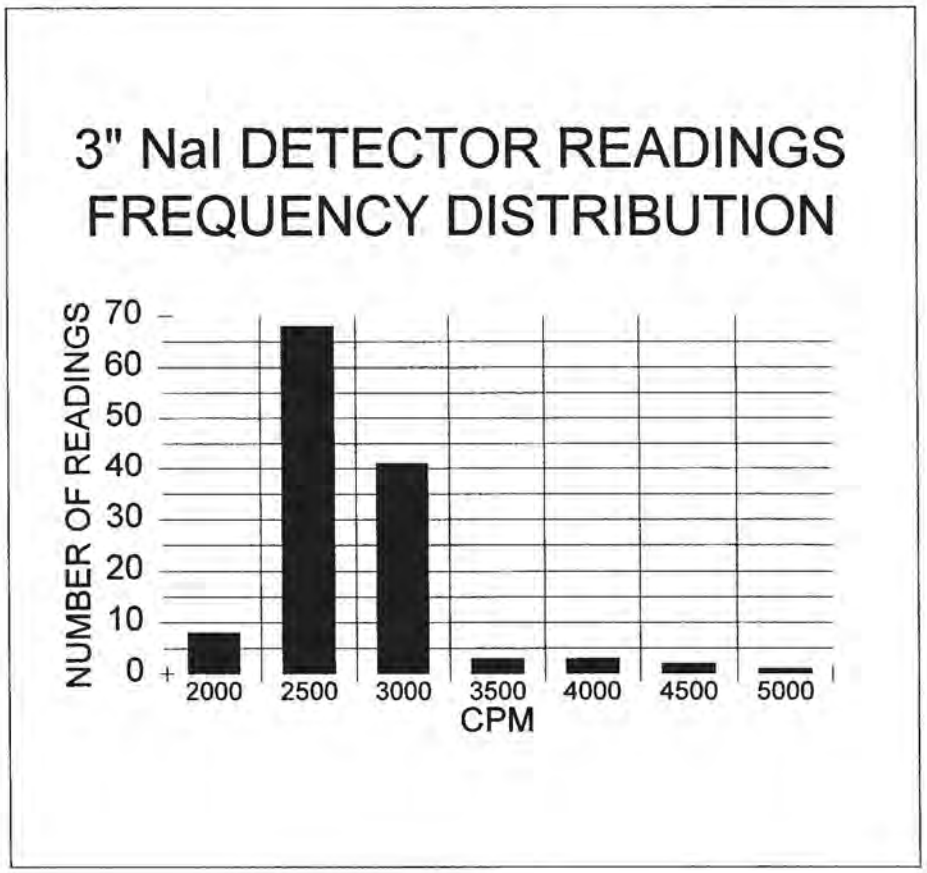
DECEMBER 11, 2001



NUMBER OF READINGS	**126**
AVERAGE READING	**8**
MINIMUM READING	**7**
MAXIMUM READING	**10**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N" - ROADWAY SURFACE SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220 - S/N 50056
BACKGROUND AVERAGES: 2200

DECEMBER 11, 2001



NUMBER OF READINGS	126
AVERAGE READING	2487
MINIMUM READING	1560
MAXIMUM READING	4850
STANDARD DEVIATION	469

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - ROADWAY

n = pCi/g TOTAL U

Number	n	(n-N)	$(n-N)^2$
1	4.0	-2.5	6.0
2	7.0	0.5	0.3
3	9.0	2.5	6.5
4	9.0	2.5	6.5
5	9.0	2.5	6.5
6	18.0	11.5	133.4
7	16.0	9.5	91.2
8	6.0	-0.5	0.2
9	10.0	3.5	12.6
10	12.0	5.5	30.8
11	5.0	-1.5	2.1
12	18.0	11.5	133.4
13	22.0	15.5	241.8
14	13.0	6.5	42.9
15	13.0	6.5	42.9
16	19.0	12.5	157.5
17	12.0	5.5	30.8
18	4.0	-2.5	6.0
19	7.0	0.5	0.3
20	7.0	0.5	0.3
21	11.0	4.5	20.7
22	10.0	3.5	12.6
23	9.0	2.5	6.5
24	11.0	4.5	20.7
25	12.0	5.5	30.8
26	8.0	1.5	2.4
27	5.0	-1.5	2.1
28	7.0	0.5	0.3
29	9.0	2.5	6.5
30	9.0	2.5	6.5
31	10.0	3.5	12.6
32	5.0	-1.5	2.1
33	2.0	-4.5	19.8
34	7.0	0.5	0.3
35	5.0	-1.5	2.1
36	8.0	1.5	2.4
37	4.0	-2.5	6.0
38	4.0	-2.5	6.0
39	4.0	-2.5	6.0
40	3.0	-3.5	11.9
41	2.0	-4.5	19.8
42	3.0	-3.5	11.9
43	4.0	-2.5	6.0
44	5.0	-1.5	2.1
45	4.0	-2.5	6.0
46	6.0	-0.5	0.2
47	6.0	-0.5	0.2
48	5.0	-1.5	2.1
49	7.0	0.5	0.3
50	3.0	-3.5	11.9
	256.0		491.9
	136.0		400.1
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	800		2082.7
	Sum(n)		$Sum(n-N)^2$

No. of Samples (x) : **124**

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **6.45**

Standard Deviation (Sd) = SQRT $[(n-N)^2 \div (x - 1)]$

Standard Deviation: **4.11**

2 Std Deviations: **8.23**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.658**

Area's Average Level (Aμ) = (N) ÷ (df) x [(Sd)/SQRT(x)]

(Aμ) = **7.06** pCi/gU TOTAL U

GUIDELINE VALUE: **30** pCi/gU TOTAL U

Acceptable Level: **34.0** pCi/gU TOTAL U

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	123	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	123	1.658	95%

PERFORMED BY: SKeyser DATE: 1/8/02

REVIEWED BY: W. G. Rogers DATE: 1-8-02

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - ROADWAY

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
51	5.0	-1.45	2.11
52	4.0	-2.45	6.01
53	1.0	-5.45	29.72
54	4.0	-2.45	6.01
55	3.0	-3.45	11.91
56	2.0	-4.45	19.82
57	2.0	-4.45	19.82
58	1.0	-5.45	29.72
59	2.0	-4.45	19.82
60	2.0	-4.45	19.82
61	2.0	-4.45	19.82
62	2.0	-4.45	19.82
63	4.0	-2.45	6.01
64	6.0	-0.45	0.20
65	8.0	1.55	2.40
66	7.0	0.55	0.30
67	5.0	-1.45	2.11
68	7.0	0.55	0.30
69	5.0	-1.45	2.11
70	4.0	-2.45	6.01
71	4.0	-2.45	6.01
72	16.0	9.55	91.17
73	7.0	0.55	0.30
74	11.0	4.55	20.69
75	8.0	1.55	2.40
76	7.0	0.55	0.30
77	5.0	-1.45	2.11
78	4.0	-2.45	6.01
79	9.0	2.55	6.49
80	7.0	0.55	0.30
81	5.0	-1.45	2.11
82	6.0	-0.45	0.20
83	3.0	-3.45	11.91
84	10.0	3.55	12.59
85	3.0	-3.45	11.91
86	9.0	2.55	6.49
87	5.0	-1.45	2.11
88	9.0	2.55	6.49
89	3.0	-3.45	11.91
90	6.0	-0.45	0.20
91	3.0	-3.45	11.91
92	5.0	-1.45	2.11
93	4.0	-2.45	6.01
94	5.0	-1.45	2.11
95	6.0	-0.45	0.20
96	5.0	-1.45	2.11
97	4.0	-2.45	6.01
98	4.0	-2.45	6.01
99	1.0	-5.45	29.72
100	6.0	-0.45	0.20
	256.0		491.9
	Sum(n)		Sum(n-N)²

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N)²
101	3.0	-3.45	11.91
102	4.0	-2.45	6.01
103	2.0	-4.45	19.82
104	4.0	-2.45	6.01
105	2.0	-4.45	19.82
106	2.0	-4.45	19.82
107	2.0	-4.45	19.82
108	6.0	-0.45	0.20
109	4.0	-2.45	6.01
110	8.0	1.55	2.40
111	2.0	-4.45	19.82
112	7.0	0.55	0.30
113	6.0	-0.45	0.20
114	3.0	-3.45	11.91
115	3.0	-3.45	11.91
116	4.0	-2.45	6.01
117	3.0	-3.45	11.91
118	12	5.55	30.78
119	6	-0.45	0.20
120	16	9.55	91.17
121	13	6.55	42.88
122	14	7.55	56.98
123	5	-1.45	2.11
124	5	-1.45	2.11
125	0.0	0.00	0.00
126	0.0	0.00	0.00
127	0.0	0.00	0.00
128	0.0	0.00	0.00
129	0.0	0.00	0.00
130	0.0	0.00	0.00
131	0.0	0.00	0.00
132	0.0	0.00	0.00
133	0.0	0.00	0.00
134	0.0	0.00	0.00
135	0.0	0.00	0.00
136	0.0	0.00	0.00
137	0.0	0.00	0.00
138	0.0	0.00	0.00
139	0.0	0.00	0.00
140	0.0	0.00	0.00
141	0.0	0.00	0.00
142	0.0	0.00	0.00
143	0.0	0.00	0.00
144	0.0	0.00	0.00
145	0.0	0.00	0.00
146	0.0	0.00	0.00
147	0.0	0.00	0.00
148	0.0	0.00	0.00
149	0.0	0.00	0.00
150	0.0	0.00	0.00
	136.0		400.1
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - ROADWAY

n = pCi/g Th (NAT)

Number	n	(n-N)	$(n-N)^2$
1	1.0	-0.7	0.5
2	1.0	-0.7	0.5
3	2.0	0.3	0.1
4	2.0	0.3	0.1
5	2.0	0.3	0.1
6	2.0	0.3	0.1
7	2.0	0.3	0.1
8	1.0	-0.7	0.5
9	2.0	0.3	0.1
10	2.0	0.3	0.1
11	2.0	0.3	0.1
12	2.0	0.3	0.1
13	2.0	0.3	0.1
14	3.0	1.3	1.7
15	2.0	0.3	0.1
16	2.0	0.3	0.1
17	2.0	0.3	0.1
18	2.0	0.3	0.1
19	2.0	0.3	0.1
20	2.0	0.3	0.1
21	1.0	-0.7	0.5
22	2.0	0.3	0.1
23	2.0	0.3	0.1
24	2.0	0.3	0.1
25	1.0	-0.7	0.5
26	2.0	0.3	0.1
27	2.0	0.3	0.1
28	1.0	-0.7	0.5
29	2.0	0.3	0.1
30	1.0	-0.7	0.5
31	2.0	0.3	0.1
32	2.0	0.3	0.1
33	2.0	0.3	0.1
34	1.0	-0.7	0.5
35	2.0	0.3	0.1
36	3.0	1.3	1.7
37	2.0	0.3	0.1
38	2.0	0.3	0.1
39	1.0	-0.7	0.5
40	2.0	0.3	0.1
41	2.0	0.3	0.1
42	2.0	0.3	0.1
43	1.0	-0.7	0.5
44	1.0	-0.7	0.5
45	1.0	-0.7	0.5
46	1.0	-0.7	0.5
47	1.0	-0.7	0.5
48	1.0	-0.7	0.5
49	1.0	-0.7	0.5
50	2.0	0.3	0.1
	87.0		9.7
	39.0		5.8
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	212		29.5
	Sum(n)		$Sum(n-N)^2$

No. of Samples (x) : **124**

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **1.71**

Standard Deviation (Sd) = SQRT [$(n-N)^2$ ÷ (x - 1)]

Standard Deviation: **0.49**

2 Std Deviations: **0.98**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.658**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **1.78** pCi/gTh (NAT)

GUIDELINE VALUE: **10** pCi/gTh (NAT)

Acceptable Level: **4.0** pCi/gTh (NAT)

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	123	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	123	1.658	95%

PERFORMED BY: [signature] DATE: 1/8/02

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION - CIMARRON FACILITY
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - ROADWAY

n = pCi/g Th (NAT)

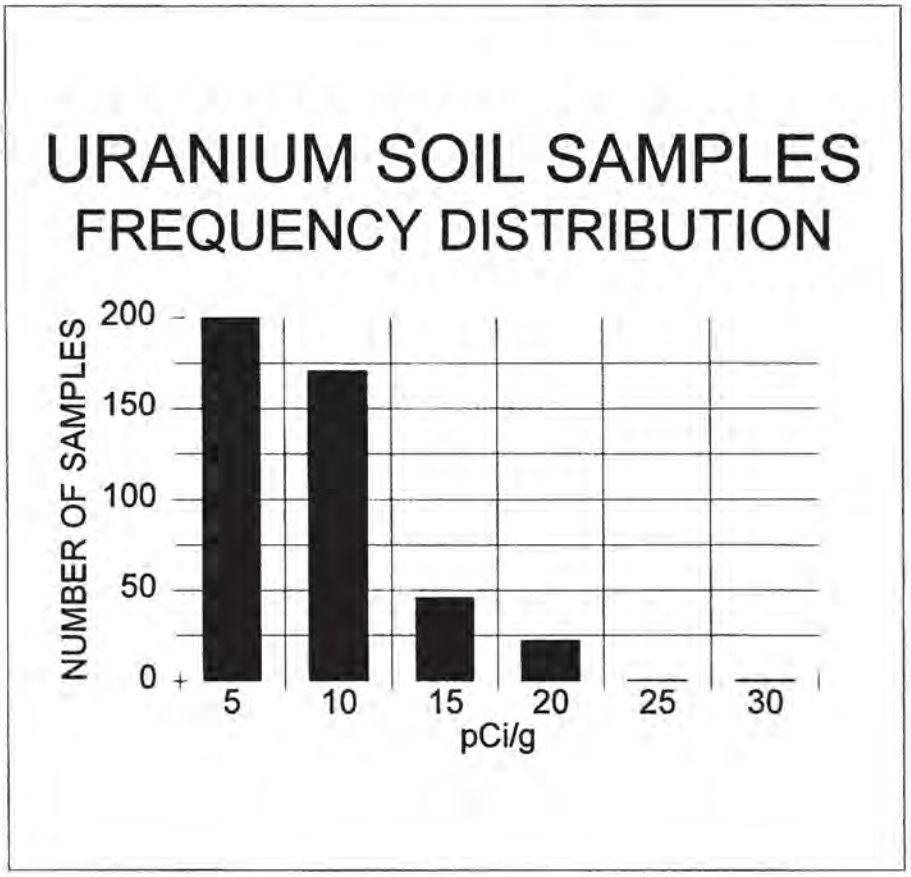
Number	n	(n-N)	(n-N)²
51	1.0	-0.71	0.50
52	1.0	-0.71	0.50
53	1.0	-0.71	0.50
54	1.0	-0.71	0.50
55	1.0	-0.71	0.50
56	1.0	-0.71	0.50
57	1.0	-0.71	0.50
58	1.0	-0.71	0.50
59	1.0	-0.71	0.50
60	2.0	0.29	0.08
61	1.0	-0.71	0.50
62	2.0	0.29	0.08
63	2.0	0.29	0.08
64	2.0	0.29	0.08
65	2.0	0.29	0.08
66	1.0	-0.71	0.50
67	1.0	-0.71	0.50
68	2.0	0.29	0.08
69	2.0	0.29	0.08
70	2.0	0.29	0.08
71	2.0	0.29	0.08
72	2.0	0.29	0.08
73	2.0	0.29	0.08
74	2.0	0.29	0.08
75	2.0	0.29	0.08
76	2.0	0.29	0.08
77	2.0	0.29	0.08
78	2.0	0.29	0.08
79	2.0	0.29	0.08
80	2.0	0.29	0.08
81	2.0	0.29	0.08
82	2.0	0.29	0.08
83	2.0	0.29	0.08
84	2.0	0.29	0.08
85	2.0	0.29	0.08
86	2.0	0.29	0.08
87	2.0	0.29	0.08
88	2.0	0.29	0.08
89	2.0	0.29	0.08
90	2.0	0.29	0.08
91	2.0	0.29	0.08
92	2.0	0.29	0.08
93	2.0	0.29	0.08
94	2.0	0.29	0.08
95	2.0	0.29	0.08
96	2.0	0.29	0.08
97	2.0	0.29	0.08
98	2.0	0.29	0.08
99	1.0	-0.71	0.50
100	2.0	0.29	0.08
	87.0		9.7
	Sum(n)		Sum(n-N)²

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N)²
101	2.0	0.29	0.08
102	1.0	-0.71	0.50
103	2.0	0.29	0.08
104	2.0	0.29	0.08
105	2.0	0.29	0.08
106	2.0	0.29	0.08
107	2.0	0.29	0.08
108	2.0	0.29	0.08
109	2.0	0.29	0.08
110	2.0	0.29	0.08
111	2.0	0.29	0.08
112	2.0	0.29	0.08
113	2.0	0.29	0.08
114	2.0	0.29	0.08
115	2.0	0.29	0.08
116	1.0	-0.71	0.50
117	1.0	-0.71	0.50
118	1	-0.71	0.50
119	1	-0.71	0.50
120	1	-0.71	0.50
121	1	-0.71	0.50
122	1	-0.71	0.50
123	1	-0.71	0.50
124	2	0.29	0.08
125	0.0	0.00	0.00
126	0.0	0.00	0.00
127	0.0	0.00	0.00
128	0.0	0.00	0.00
129	0.0	0.00	0.00
130	0.0	0.00	0.00
131	0.0	0.00	0.00
132	0.0	0.00	0.00
133	0.0	0.00	0.00
134	0.0	0.00	0.00
135	0.0	0.00	0.00
136	0.0	0.00	0.00
137	0.0	0.00	0.00
138	0.0	0.00	0.00
139	0.0	0.00	0.00
140	0.0	0.00	0.00
141	0.0	0.00	0.00
142	0.0	0.00	0.00
143	0.0	0.00	0.00
144	0.0	0.00	0.00
145	0.0	0.00	0.00
146	0.0	0.00	0.00
147	0.0	0.00	0.00
148	0.0	0.00	0.00
149	0.0	0.00	0.00
150	0.0	0.00	0.00
	39.0		5.8
	Sum(n)		Sum(n-N)²

PHASE III, SUB-AREA "N" - ROADWAY
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL URANIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED

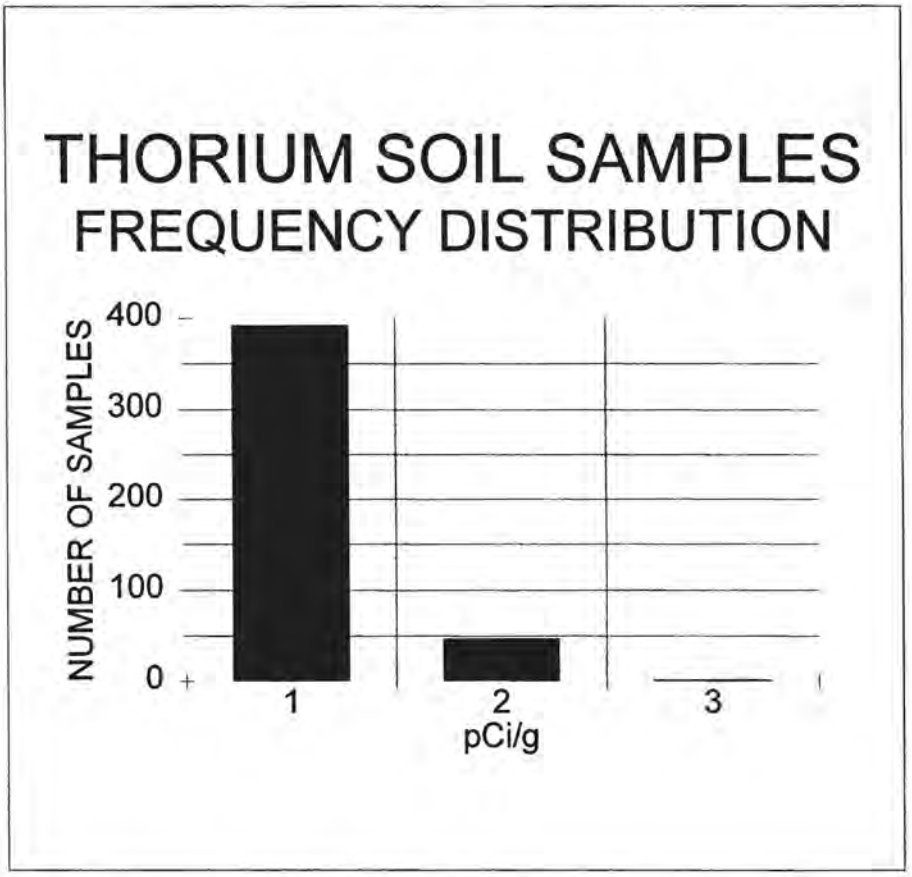
DECEMBER 13, 2001



NUMBER OF READINGS	**441**
AVERAGE READING	**7**
MINIMUM READING	**1**
MAXIMUM READING	**27**
STANDARD DEVIATION	**4**

PHASE III, SUB-AREA "N" - ROADWAY
DEPTH SOIL SURVEY
CIMARRON SOIL COUNTER
TOTAL THORIUM SOIL SAMPLE RESULTS
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED

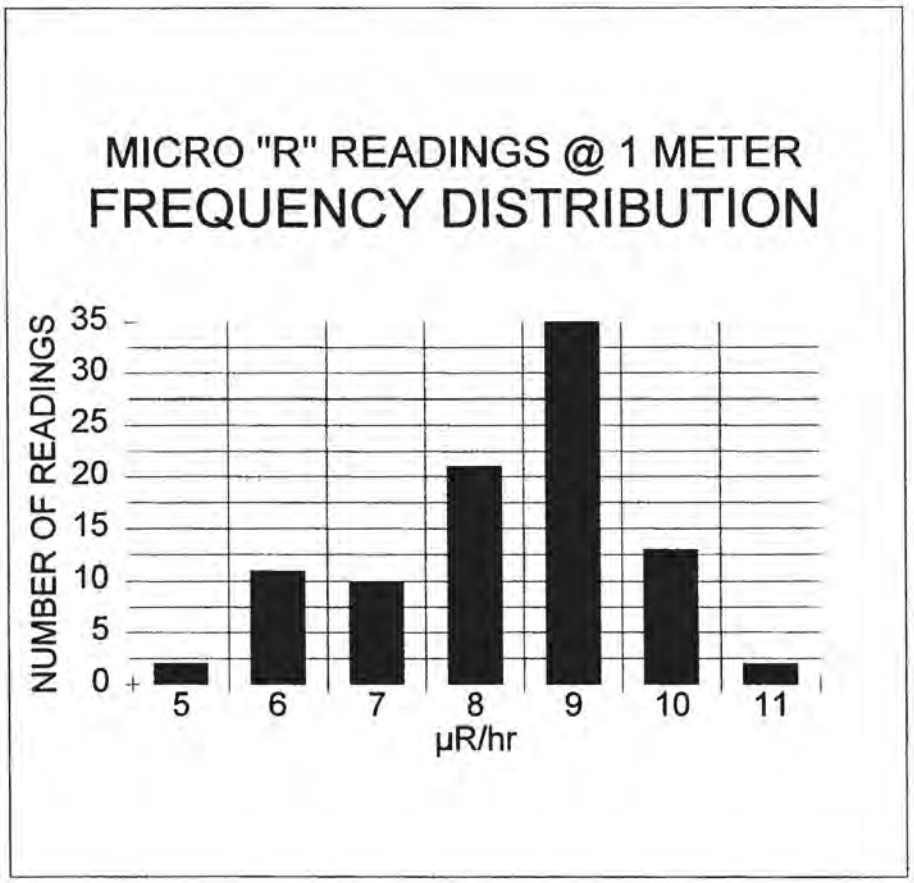
DECEMBER 13, 2001



NUMBER OF READINGS	**441**
AVERAGE READING	**1**
MINIMUM READING	**1**
MAXIMUM READING	**3**
STANDARD DEVIATION	**0.3**

PHASE III, SUB-AREA "N" - ROADWAY
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

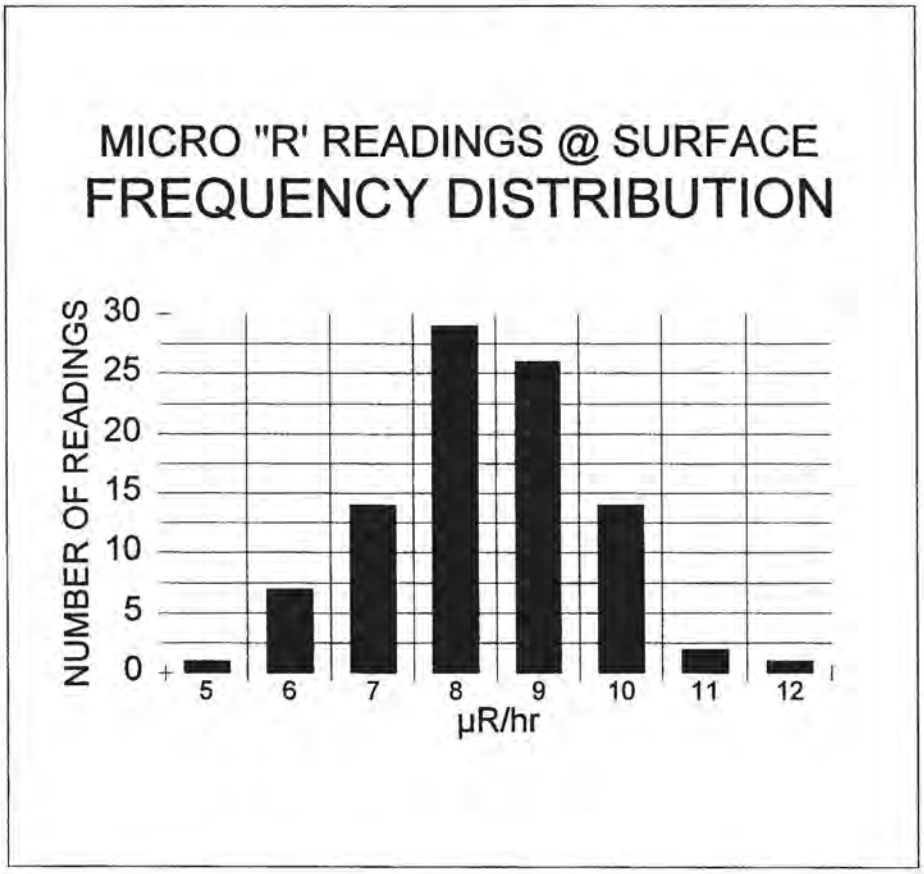
DECEMBER 13, 2001



NUMBER OF READINGS	**94**
AVERAGE READING	**8**
MINIMUM READING	**5**
MAXIMUM READING	**11**
STANDARD DEVIATION	**1**

PHASE III, SUB-AREA "N" - ROADWAY
DEPTH SOIL SURVEY
MICRO-R METER READINGS AT SURFACE
LUDLUM MODEL 19, S/N 138420
RESULTS IN µR/hr

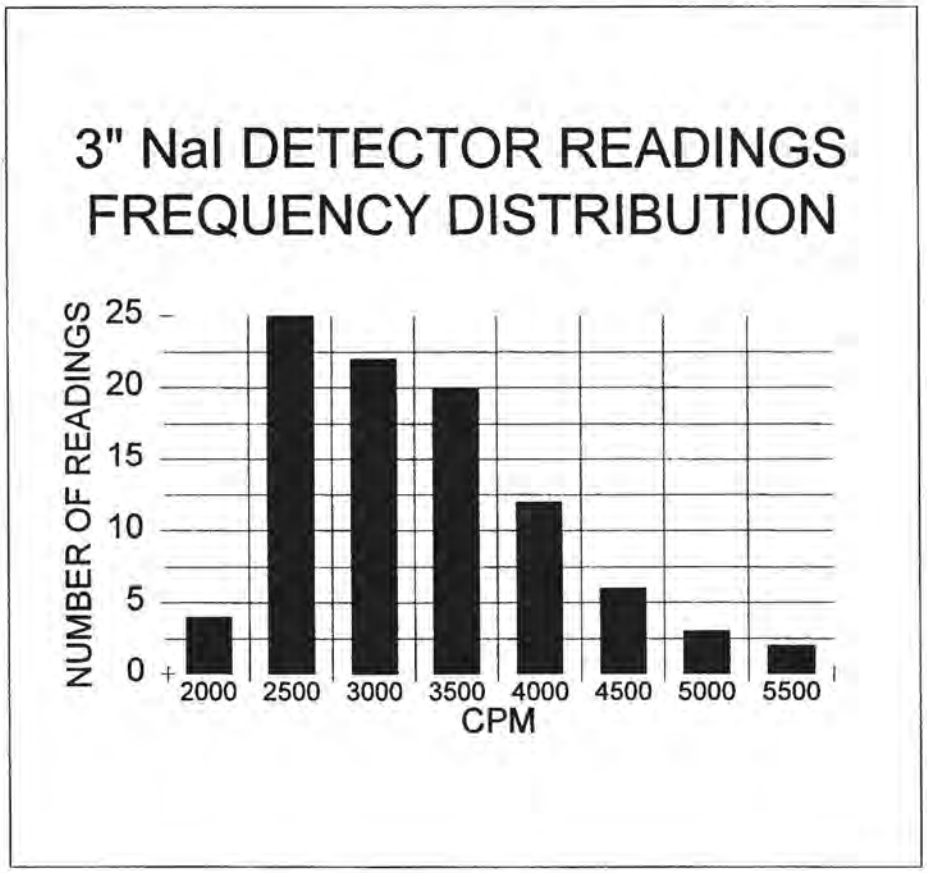
DECEMBER 13, 2001



NUMBER OF READINGS	**94**
AVERAGE READING	**8**
MINIMUM READING	**5**
MAXIMUM READING	**12**
STANDARD DEVIATION	**1**

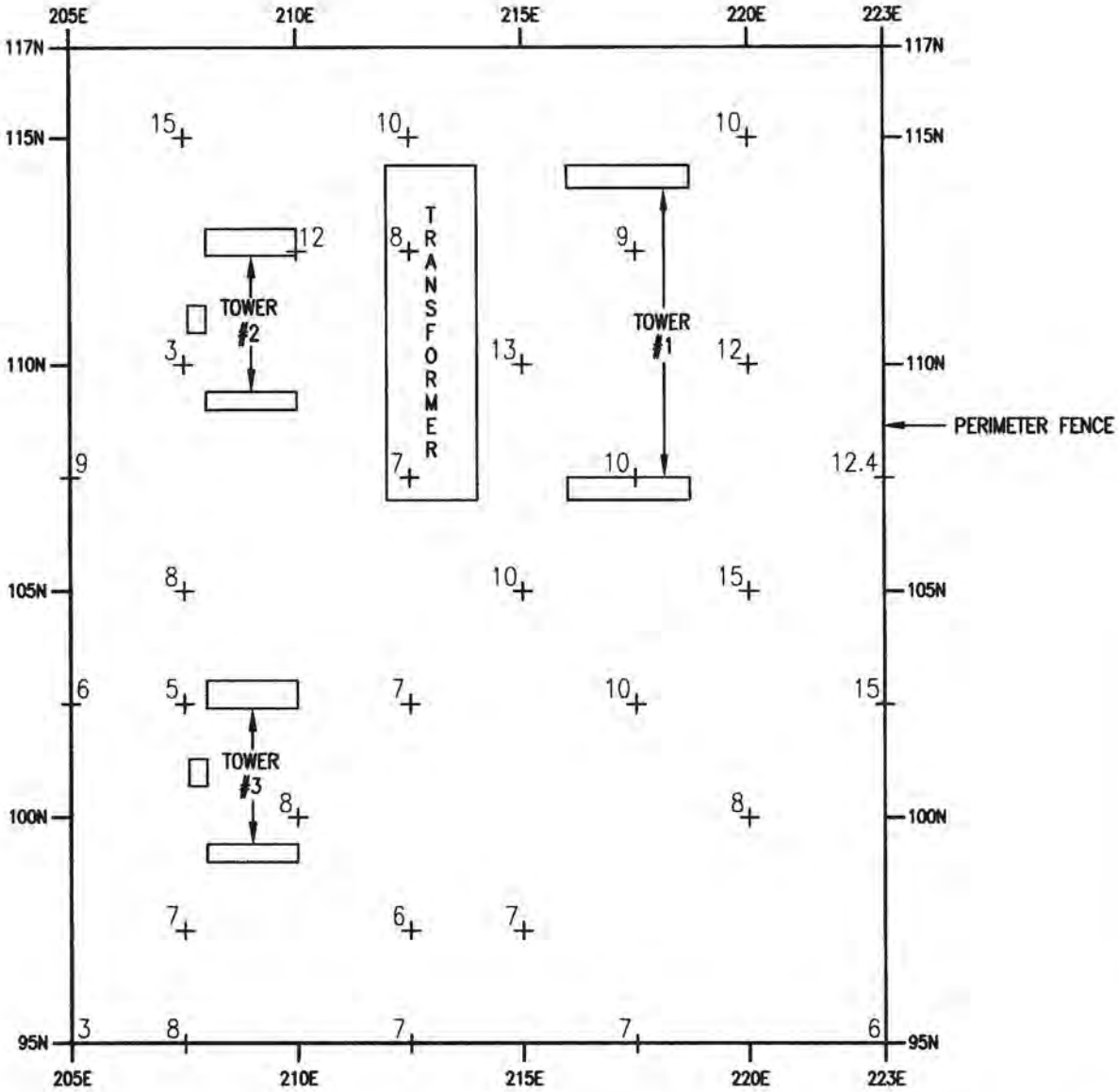
PHASE III, SUB-AREA "N" - ROADWAY
DEPTH SOIL SURVEY
GROSS GAMMA READINGS IN CPM
LUDLUM MODEL 2220, S/N 48395
BACKGROUND AVERAGES: 3000

DECEMBER 13, 2001



NUMBER OF READINGS	**94**
AVERAGE READING	**3037**
MINIMUM READING	**1760**
MAXIMUM READING	**5200**
STANDARD DEVIATION	**774**

APPENDIX 5 – ELECTRICAL SUBSTATION FSS DATA - DRAWING, DATA TABLES, GRAPHS, AND STATISTICAL EVALUATIONS



4 0 4

SCALE IN METERS

NORTH

NOTES:

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

LEGEND:

6+ URANIUM, 1 - 30 pCi/g U

CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
ELECTRICAL SUBSTATION
SOIL SAMPLE ALIQUOT: 0 - 6"

DRWN. BY	DATE	SCALE:
JE	01/14/02	AS SHOWN

JOB NO.	DRAWING NO.	REV.
	02POSNESSS-0	0

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

...SUBAREAN\02POSNESSS

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION FOUNDATION (NORTH SIDE)
ALPHA / BETA - GAMMA SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
0 METERS					7 METERS					14 METERS				
TOP	60	0	1130	6	TOP	170	2	1030	0	TOP	230	2	1280	10
1 METER					8 METERS					15 METERS				
TOP	180	0	1220	6	TOP	170	0	1270	0	TOP	140	2	1400	0
2 METERS					9 METERS					16 METERS				
TOP	110	0	1070	0	TOP	260	2	1430	3	TOP	260	0	1380	6
3 METERS					10 METERS					17 METERS				
TOP	30	0	1150	6	TOP	170	2	1020	0	TOP	210	0	1220	0
4 METERS					11 METERS					18 METERS				
TOP	160	0	1440	0	TOP	160	4	1340	3	TOP	140	2	1070	0
5 METERS					12 METERS									
TOP	120	0	1240	0	TOP	270	0	1370	0					
6 METERS					13 METERS									
TOP	120	0	1660	0	TOP	220	4	1090	5					

ALPHA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 73 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 601 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION FOUNDATION (SOUTH SIDE)
ALPHA / BETA - GAMMA SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
0 METERS					7 METERS					14 METERS				
TOP	60	0	900	3	TOP	260	2	870	0	TOP	190	2	1100	3
1 METER					8 METERS					15 METERS				
TOP	220	0	840	0	TOP	200	0	1110	5	TOP	50	0	540	0
2 METERS					9 METERS					16 METERS				
TOP	170	0	820	5	TOP	230	0	670	0	TOP	150	0	950	1
3 METERS					10 METERS					17 METERS				
TOP	190	0	1210	5	TOP	210	2	1090	0	TOP	100	0	900	1
4 METERS					11 METERS					18 METERS				
TOP	220	0	1050	0	TOP	210	0	1040	5	TOP	120	2	900	3
5 METERS					12 METERS									
TOP	260	2	1130	0	TOP	180	0	990	0					
6 METERS					13 METERS									
TOP	260	0	1620	1	TOP	260	2	910	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 73 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 601 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION FOUNDATION (EAST SIDE)
ALPHA / BETA - GAMMA SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
0 METERS					10 METERS					20 METERS				
TOP	20	0	870	0	TOP	140	0	1530	0	TOP	60	2	950	0
1 METER					11 METERS					21 METERS				
TOP	80	0	880	1	TOP	170	0	1290	1	TOP	60	2	810	3
2 METERS					12 METERS					22.1 METERS				
TOP	80	0	570	3	TOP	160	2	1170	0	TOP	80	2	840	3
3 METERS					13 METERS									
TOP	130	0	950	3	TOP	70	0	1200	5					
4 METERS					14 METERS									
TOP	170	0	760	5	TOP	180	2	1340	3					
METERS					15 METERS									
TOP	140	5	970	0	TOP	130	0	1170	3					
6 METERS					16 METERS									
TOP	110	0	1480	1	TOP	150	0	1190	0					
7 METERS					17 METERS									
TOP	140	0	880	0	TOP	130	5	860	0					
8 METERS					18 METERS									
TOP	220	0	920	0	TOP	90	0	1110	5					
9 METERS					19 METERS									
TOP	150	0	1190	1	TOP	140	2	850	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 73 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 601 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION FOUNDATION (WEST SIDE)
ALPHA / BETA - GAMMA SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
0 METERS					8 METERS					16 METERS				
TOP	130	2	1220	5	TOP	220	2	1000	0	TOP	110	0	1160	1
SIDE	220	0	1160	5	SIDE	50	0	640	5	SIDE	140	2	630	0
1 METER					9 METERS					17 METERS				
TOP	330	2	1100	3	TOP	170	0	900	3	TOP	180	0	1020	0
SIDE	160	2	1390	5	SIDE	50	0	920	0	SIDE	130	2	840	10
2 METERS					10 METERS					18 METERS				
TOP	170	0	1220	0	TOP	180	0	1540	0	TOP	210	0	930	5
SIDE	120	0	1260	3	SIDE	40	2	910	0	SIDE	50	0	830	1
3 METERS					11 METERS					19 METERS				
TOP	200	0	1270	5	TOP	280	0	1010	0	TOP	200	2	1260	5
SIDE	140	0	950	3	SIDE	70	0	760	0	SIDE	80	0	1040	3
4 METERS					12 METERS					20 METERS				
TOP	170	2	890	3	TOP	260	2	1320	0	TOP	180	0	980	3
SIDE	120	0	460	0	SIDE	40	0	870	3	SIDE	120	2	1240	3
5 METERS					13 METERS					21 METERS				
TOP	180	5	800	3	TOP	90	7	1180	0	TOP	130	0	1340	0
SIDE	50	2	480	0	SIDE	30	2	980	0	SIDE	190	0	1130	1
6 METERS					14 METERS					22.1 METERS				
TOP	100	0	590	3	TOP	140	0	680	0	TOP	170	0	1060	5
SIDE	70	0	690	0	SIDE	70	0	780	3	SIDE	100	0	1040	0
7 METERS					15 METERS									
TOP	240	5	1370	10	TOP	190	0	910	1					
SIDE	60	2	680	0	SIDE	120	0	1210	3					

ALPHA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 73 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2224 S / N 114606
CI NO. 52 MDA : 601 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 1)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE - CONCRETE					SOUTH SIDE - CONCRETE									
NORTH SIDE					NORTH SIDE									
0 METERS	153	0	0	3	0 METERS	288	0	1180	3					
1 METER	144	0	0	3	1 METER	99	0	720	0					
2 METERS	171	2	0	5	2 METERS	207	2	1370	3					
SOUTH SIDE					SOUTH SIDE									
0 METERS	108	2	880	0	0 METERS	243	2	1460	0					
1 METER	63	0	560	0	1 METER	36	0	630	3					
2 METERS	162	2	1090	0	2 METERS	270	0	1240	0					
TOP					TOP									
0 METERS	207	0	450	5	0 METERS	216	0	1990	0					
1 METER	99	0	0	5	1 METER	144	0	1100	0					
2 METERS	207	2	480	0	2 METERS	198	2	1940	3					
EAST SIDE					EAST SIDE									
0 METERS	108	2	0	0	0 METERS	153	0	1030	3					
WEST SIDE					WEST SIDE									
0 METERS	36	4	0	2	0 METERS	90	5	810	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 2)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE - CONCRETE					SOUTH SIDE - CONCRETE									
NORTH SIDE					NORTH SIDE									
0 METERS	162	0	400	0	0 METERS	99	0	990	0					
1 METER	180	2	550	3	1 METER	126	0	670	3					
2 METERS	171	4	760	2	2 METERS	90	4	770	0					
SOUTH SIDE					SOUTH SIDE									
0 METERS	126	0	870	5	0 METERS	135	0	620	0					
1 METER	117	0	600	0	1 METER	144	0	830	5					
2 METERS	108	0	1110	0	2 METERS	189	0	800	0					
TOP					TOP									
0 METERS	450	0	1300	5	0 METERS	288	0	1900	3					
1 METER	441	2	1310	0	1 METER	117	0	1650	0					
2 METERS	684	0	1420	3	2 METERS	297	0	1590	3					
EAST SIDE					EAST SIDE									
0 METERS	81	2	940	0	0 METERS	180	0	560	0					
WEST SIDE					WEST SIDE									
0 METERS	117	0	680	0	0 METERS	243	0	600	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 3)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE - CONCRETE					SOUTH SIDE - CONCRETE									
NORTH SIDE					NORTH SIDE									
0 METERS	140	4	550	5	0 METERS	110	0	540	3					
1 METER	80	0	340	0	1 METER	140	0	640	0					
2 METERS	180	2	850	0	2 METERS	100	0	420	0					
SOUTH SIDE					SOUTH SIDE									
0 METERS	100	5	820	0	0 METERS	90	0	570	0					
1 METER	130	0	270	3	1 METER	80	0	690	0					
2 METERS	30	0	0	0	2 METERS	180	2	1230	3					
TOP					TOP									
0 METERS	210	2	1100	3	0 METERS	220	0	1110	0					
1 METER	110	0	950	0	1 METER	120	0	720	0					
2 METERS	210	0	890	0	2 METERS	430	2	1380	0					
EAST SIDE					EAST SIDE									
0 METERS	70	0	480	3	0 METERS	150	0	520	0					
WEST SIDE					WEST SIDE									
0 METERS	130	0	410	0	0 METERS	40	0	220	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TRANSFORMERS)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
CONCRETE					CONCRETE									
NORTH SIDE					WEST SIDE									
0 METERS	144	2	590	5	0 METERS	45	2	400	12					
1 METER	189	0	500	0	1 METER	207	5	860	2					
2 METERS	153	2	430	2	2 METERS	153	2	460	0					
					3 METERS	153	2	580	7					
SOUTH SIDE					4 METERS	153	0	530	0					
0 METERS	90	0	620	0	5 METERS	99	0	710	0					
1 METER	144	0	690	0	6 METERS	108	0	710	3					
2 METERS	45	2	420	0	7 METERS	99	2	530	0					
EAST SIDE					TOP									
0 METERS	117	0	490	0	0 METERS	243	2	1010	0					
1 METER	126	0	380	0	1 METER	234	2	750	0					
2 METERS	144	0	890	0	2 METERS	378	0	1280	3					
3 METERS	198	0	810	5	3 METERS	153	0	890	3					
4 METERS	99	0	330	3	4 METERS	180	2	1220	0					
5 METERS	108	0	570	5	5 METERS	351	5	1510	0					
6 METERS	144	0	900	3	6 METERS	180	2	960	0					
7 METERS	135	2	670	5										

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

12/27/2001

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 1)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE					SOUTH SIDE					RANDOM SAMPLES				
LEG # 1	(1 METER)				LEG # 3	(1 METER)				R - 1	400	2	0	0
NORTH	360	2	220	3	NORTH	306	0	30	3	R - 2	350	2	0	3
SOUTH	324	0	340	5	SOUTH	324	2	150	0	R - 3	270	2	390	0
EAST	243	2	220	0	EAST	207	0	0	0	R - 4	270	0	0	0
WEST	234	0	60	10	WEST	234	0	0	3	R - 5	240	4	120	2
LEG # 1	(2 METERS)				LEG # 3	(2 METERS)								
NORTH	378	0	200	0	NORTH	288	2	210	0					
SOUTH	360	2	60	0	SOUTH	378	0	0	0					
EAST	306	0	110	0	EAST	279	2	210	5					
WEST	252	2	40	0	WEST	162	0	0	0					
LEG # 2	(1 METER)				LEG # 4	(1 METER)								
NORTH	324	0	120	0	NORTH	414	2	170	0					
SOUTH	576	0	180	8	SOUTH	450	0	0	8					
EAST	261	4	0	0	EAST	99	2	0	3					
WEST	243	0	160	0	WEST	108	0	20	5					
LEG # 2	(2 METERS)				LEG # 4	(2 METERS)								
NORTH	504	0	20	8	NORTH	450	2	200	3					
SOUTH	171	2	170	5	SOUTH	324	0	220	0					
EAST	126	0	50	0	EAST	153	2	0	7					
WEST	297	2	260	7	WEST	162	2	140	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 2)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE					SOUTH SIDE					RANDOM SAMPLES				
LEG # 1	(1 METER)				LEG # 3	(1 METER)				R - 1	680	0	830	3
NORTH	540	2	0	3	NORTH	360	2	20	3	R - 2	470	2	0	3
SOUTH	630	0	0	0	SOUTH	414	0	0	0	R - 3	750	2	630	0
EAST	108	0	0	0	EAST	189	2	0	0	R - 4	410	7	190	0
WEST	207	2	0	3	WEST	315	0	0	0	R - 5	610	0	1060	0
LEG # 1	(2 METERS)				LEG # 3	(2 METERS)								
NORTH	540	2	0	0	NORTH	252	0	0	0					
SOUTH	594	0	0	0	SOUTH	432	0	90	0					
EAST	270	0	0	0	EAST	198	0	0	5					
WEST	216	2	0	5	WEST	54	0	0	8					
LEG # 2	(1 METER)				LEG # 4	(1 METER)								
NORTH	270	0	0	5	NORTH	414	2	0	8					
SOUTH	378	2	0	0	SOUTH	342	0	0	0					
EAST	144	0	0	0	EAST	108	0	0	0					
WEST	198	2	0	0	WEST	180	0	0	0					
LEG # 2	(2 METERS)				LEG # 4	(2 METERS)								
NORTH	432	2	0	5	NORTH	792	2	0	0					
SOUTH	270	0	0	0	SOUTH	576	2	0	3					
EAST	180	4	0	0	EAST	198	0	0	0					
WEST	504	5	0	0	WEST	612	0	260	5					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TOWER # 3)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
NORTH SIDE					SOUTH SIDE					RANDOM SAMPLES				
LEG # 1	(1 METER)				LEG # 3	(1 METER)				R - 1	600	2	940	0
NORTH	210	0	0	5	NORTH	130	2	0	3	R - 2	530	0	760	0
SOUTH	40	0	0	5	SOUTH	30	2	0	3	R - 3	420	2	0	5
EAST	150	2	0	12	EAST	90	5	0	0	R - 4	300	0	0	0
WEST	60	0	0	0	WEST	60	0	0	5	R - 5	220	0	400	5
LEG # 1	(2 METERS)				LEG # 3	(2 METERS)								
NORTH	140	0	0	3	NORTH	40	0	0	0					
SOUTH	60	0	0	0	SOUTH	20	0	0	0					
EAST	50	2	0	0	EAST	150	0	0	0					
WEST	260	2	0	0	WEST	360	0	850	0					
LEG # 2	(1 METER)				LEG # 4	(1 METER)								
NORTH	190	2	0	3	NORTH	170	2	180	3					
SOUTH	50	2	0	0	SOUTH	170	2	0	0					
EAST	60	0	0	0	EAST	30	0	0	3					
WEST	70	0	0	5	WEST	240	4	0	5					
LEG # 2	(2 METERS)				LEG # 4	(2 METERS)								
NORTH	110	0	0	0	NORTH	80	4	0	0					
SOUTH	60	0	0	8	SOUTH	0	0	0	3					
EAST	190	4	0	12	EAST	310	0	490	0					
WEST	350	2	0	0	WEST	340	0	0	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (TRANSFORMERS)
ALPHA / BETA - GAMMA FINAL SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
TRANSFORMERS @ 2 METERS					RANDOM SAMPLES @ 2 METERS				
T - 1					T - 1				
NORTH	108	0	0	0	#1	10	0	0	7
SOUTH	126	0	0	3	#2	60	0	0	0
EAST	54	2	0	7	#3	50	7	0	4
WEST	189	0	0	0	#4	0	0	0	0
					#5	10	0	0	3
T - 2									
NORTH	72	2	0	2	T - 2				
SOUTH	144	10	0	9	#1	30	0	0	7
EAST	81	2	0	0	#2	30	2	0	0
WEST	99	0	0	5	#3	0	0	0	5
					#4	0	5	0	0
T - 3					#5	70	2	110	2
NORTH	126	0	0	5					
SOUTH	99	5	0	0	T - 3				
EAST	54	0	0	0	#1	50	2	0	5
WEST	108	2	0	5	#2	40	2	0	2
					#3	90	2	0	2
					#4	60	0	0	3
					#5	60	2	0	0

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 58308
CI NO. 46 MDA : 102 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 2 - 2 - 98
CALIB. DUE DATE : 5 - 98

LUDLUM MODEL 2220 S / N 58309
CI NO. 47 MDA : 566 dpm / 100 cm ²
43 - 68 PROBE CALIB. DATE : 3 - 2 - 98
CALIB. DUE DATE : 6 - 98

BETA INSTRUMENTS :

LUDLUM MODEL 2224 S / N 114616
CI NO. 51 MDA : 600 dpm / 100 cm ²
43 - 89 PROBE CALIB. DATE : 2 - 27 - 98
CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (NORTH FENCE)
ALPHA / BETA - GAMMA SYSTEMATIC SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
BAR # 1					BAR # 2					POST # 1					POST # 6				
0 METERS	396	7	1474	0	0 METERS	330	5	759	0	0 METERS	242	0	0	3	0 METERS	253	2	0	5
1 METER	748	12	1449	0	1 METER	495	0	575	0	1 METER	209	2	0	0	1 METER	165	0	0	0
2 METERS	781	0	1380	3	2 METERS	363	2	483	0	2 METERS	231	0	483	3	2 METERS	209	0	0	0
3 METERS	352	0	1219	10	3 METERS	627	4	1012	5	POST # 2					POST # 7				
4 METERS	506	0	1702	3	4 METERS	418	0	1380	0	0 METERS	407	0	184	0	0 METERS	143	0	46	5
5 METERS	275	0	1472	5	5 METERS	693	2	1081	5	1 METER	660	0	0	0	1 METER	121	4	23	2
6 METERS	682	2	1104	0	6 METERS	462	2	1173	5	2 METERS	440	0	0	0	2 METERS	143	7	0	0
7 METERS	198	4	207	5	7 METERS	330	0	529	5	POST # 3					POST # 8				
8 METERS	682	0	1426	8	8 METERS	473	2	345	7	0 METERS	913	2	0	0	0 METERS	99	0	0	3
9 METERS	506	0	1357	0	9 METERS	352	0	621	3	1 METER	220	5	0	0	1 METER	154	4	0	0
10 METERS	506	4	0	2	10 METERS	396	2	828	0	2 METERS	165	0	345	0	2 METERS	231	4	0	2
11 METERS	506	0	391	3	11 METERS	473	2	713	3	POST # 4					POST # 9				
12 METERS	660	2	184	3	12 METERS	440	0	345	3	0 METERS	297	0	644	3	0 METERS	242	0	0	0
13 METERS	484	0	1587	8	13 METERS	429	4	368	12	1 METER	220	2	0	5	1 METER	374	0	368	0
14 METERS	517	2	1058	3	14 METERS	330	2	1081	3	2 METERS	253	0	253	0	2 METERS	396	2	184	0
15 METERS	352	2	1403	3	15 METERS	363	0	1150	0	POST # 5									
16 METERS	352	4	1150	5	16 METERS	374	2	805	5	0 METERS	264	0	115	3					
17 METERS	308	4	1081	5	17 METERS	572	0	69	8	1 METER	583	4	0	0					
18 METERS	440	15	483	2	18 METERS	440	2	989	5	2 METERS	473	0	0	0					

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 37807 CI NO. 162
MDA : 123 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 4 - 6 - 98 CALIB. DUE DATE : 7 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2220 S / N 50064 CI NO. 158
MDA : 625 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 2 - 27 - 98 CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (SOUTH FENCE)
ALPHA / BETA - GAMMA SYSTEMATIC SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
BAR # 1					BAR # 2					POST # 1					POST # 4				
0 METERS	484	0	552	3	0 METERS	385	2	736	5	0 METERS	154	5	0	0	0 METERS	330	0	1081	0
1 METER	264	0	1081	3	1 METER	330	5	1656	5	1 METER	165	0	0	3	1 METER	231	0	805	5
2 METERS	220	0	1219	0	2 METERS	473	2	1541	0	2 METERS	242	2	0	0	2 METERS	275	0	368	0
3 METERS	319	0	1173	0															
4 METERS	363	2	1840	0															
5 METERS	330	5	1288	5	BAR # 3					POST # 2					POST # 5				
6 METERS	275	0	759	7	0 METERS	286	0	1403	0	0 METERS	209	2	322	0	0 METERS	264	0	690	0
7 METERS	242	0	1564	0	1 METER	308	2	713	0	1 METER	517	0	414	0	1 METER	264	2	391	2
8 METERS	550	0	598	5	2 METERS	264	0	1196	0	2 METERS	264	2	805	0	2 METERS	418	0	414	0
9 METERS	462	0	989	0															
10 METERS	429	0	966	3															
11 METERS	506	2	1265	7						POST # 3					POST # 6				
12 METERS	506	2	1012	0						0 METERS	209	2	299	5	0 METERS	209	0	598	3
13 METERS	407	2	759	0						1 METER	330	2	759	5	1 METER	242	2	0	2
14 METERS	297	7	1380	4						2 METERS	363	2	1058	2	2 METERS	396	0	805	0
15 METERS	352	2	1173	0															
16 METERS	242	0	667	7															
17 METERS	418	0	851	0															
18 METERS	297	0	1564	10															

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 37807 CI NO. 162
MDA : 123 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 4 - 6 - 98 CALIB. DUE DATE : 7 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2220 S / N 50064 CI NO. 158
MDA : 625 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 2 - 27 - 98 CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (EAST FENCE)
ALPHA / BETA - GAMMA SYSTEMATIC SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
BAR # 1					BAR # 2					POST # 1					POST # 5				
0 METERS	539	7	1081	0	0 METERS	495	2	1196	2	0 METERS	121	2	299	5	0 METERS	264	4	1196	2
1 METER	649	4	1035	2	1 METER	429	0	805	3	1 METER	429	2	805	0	1 METER	605	2	506	0
2 METERS	759	4	1771	2	2 METERS	550	0	1587	0	2 METERS	330	2	230	2	2 METERS	605	0	874	3
3 METERS	572	2	920	0															
4 METERS	528	2	1334	5															
5 METERS	649	4	1610	5	BAR # 3					POST # 2					POST # 6				
6 METERS	594	4	851	7	0 METERS	880	2	1610	2	0 METERS	297	0	1587	3	0 METERS	308	0	1472	7
7 METERS	869	4	1127	0	1 METER	704	4	713	0	1 METER	704	2	3381	5	1 METER	308	2	529	2
8 METERS	803	4	1058	2	2 METERS	473	0	1012	0	2 METERS	506	0	920	0	2 METERS	539	2	138	2
9 METERS	550	0	1541	0															
10 METERS	1089	0	2484	0															
11 METERS	1089	2	1518	5						POST # 3					POST # 7				
12 METERS	1199	0	1196	10						0 METERS	374	2	414	0	0 METERS	231	0	1334	0
13 METERS	330	4	1495	0						1 METER	616	0	92	0	1 METER	242	2	184	0
14 METERS	242	0	1656	5						2 METERS	517	4	828	0	2 METERS	286	2	230	2
15 METERS	726	0	1564	0															
16 METERS	495	0	1564	0															
17 METERS	495	2	1656	5						POST # 4					POST # 8				
18 METERS	561	4	1081	2						0 METERS	385	0	345	0	0 METERS	352	0	644	0
19 METERS	792	2	1495	2						1 METER	770	2	874	0	1 METER	539	2	874	0
20 METERS	825	0	1403	7						2 METERS	979	2	1104	0	2 METERS	594	2	759	0

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 37807 CI NO. 162
MDA : 123 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 4 - 6 - 98 CALIB. DUE DATE : 7 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2220 S / N 50064 CI NO. 158
MDA : 625 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 2 - 27 - 98 CALIB. DUE DATE : 6 - 98 -

CIMARRON CORPORATION
FINAL RELEASE SURVEY
SUB - STATION (WEST FENCE)
ALPHA / BETA - GAMMA SYSTEMATIC SURVEY

GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)		GRID LOCATION	ALPHA (dpm / 100 cm ²)		BETA (dpm / 100 cm ²)	
	DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR		DIRECT	SMEAR	DIRECT	SMEAR
BAR # 1					BAR # 2					POST # 1					POST # 5				
0 METERS	539	0	966	0	0 METERS	396	0	828	0	0 METERS	165	2	598	0	0 METERS	77	4	0	0
1 METER	286	7	1334	0	1 METER	352	0	1173	0	1 METER	209	2	0	0	1 METER	297	4	0	0
2 METERS	231	0	1564	5	2 METERS	363	0	667	14	2 METERS	187	0	299	0	2 METERS	242	0	0	0
3 METERS	242	0	1081	10															
4 METERS	352	2	1219	5															
5 METERS	297	4	1311	12	BAR # 3					POST # 2					POST # 6				
6 METERS	330	0	759	5	0 METERS	220	2	0	10	0 METERS	143	0	0	5	0 METERS	187	0	0	0
7 METERS	253	0	621	7	1 METER	231	0	897	0	1 METER	220	2	0	0	1 METER	143	0	69	5
8 METERS	231	0	1081	7	2 METERS	462	0	828	0	2 METERS	220	2	0	2	2 METERS	319	2	69	2
9 METERS	297	4	552	0															
10 METERS	242	0	943	5															
11 METERS	308	2	1035	0						POST # 3					POST # 7				
12 METERS	231	12	805	5						0 METERS	187	2	437	0	0 METERS	198	2	0	0
13 METERS	176	2	782	7						1 METER	165	0	69	5	1 METER	198	0	0	3
14 METERS	231	0	690	0						2 METERS	242	0	0	3	2 METERS	198	0	0	0
15 METERS	154	4	782	7															
16 METERS	209	2	713	0															
17 METERS	264	2	943	0						POST # 4					POST # 8				
18 METERS	132	2	805	7						0 METERS	132	0	0	5	0 METERS	165	2	322	0
19 METERS	264	0	1150	0						1 METER	88	0	575	0	1 METER	275	0	0	0
20 METERS	165	2	805	3						2 METERS	165	0	46	0	2 METERS	286	0	0	0

ALPHA INSTRUMENT :

LUDLUM MODEL 2220 S / N 37807 CI NO. 162
MDA : 123 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 4 - 6 - 98 CALIB. DUE DATE : 7 - 98

BETA INSTRUMENT :

LUDLUM MODEL 2220 S / N 50064 CI NO. 158
MDA : 625 dpm / 100 cm ² 43 - 68 PROBE
CALIB. DATE : 2 - 27 - 98 CALIB. DUE DATE : 6 - 98

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Sub-Station Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	205	E	-	95	N	2930	7	7	3	1
2	205	E	-	97.5	N	2380	6	7	N/A	N/A
3	205	E	-	100	N	2420	7	7	N/A	N/A
4	205	E	-	102.5	N	2650	7	7	6	1
5	205	E	-	105	N	2650	6	7	N/A	N/A
6	205	E	-	107.5	N	3650	6	8	9	1
7	205	E	-	110	N	2470	7	7	N/A	N/A
8	205	E	-	112.5	N	3640	9	8	N/A	N/A
9	205	E	-	115	N	3550	8	7	N/A	N/A
10	207.5	E	-	95	N	3740	7	8	8	1
11	207.5	E	-	97.5	N	3760	8	7	7	1
12	207.5	E	-	100	N	2880	8	7	N/A	N/A
13	207.5	E	-	102.5	N	3780	8	6	5	1
14	207.5	E	-	105	N	4100	7	6	8	1
15	207.5	E	-	107.5	N	2730	7	8	N/A	N/A
16	207.5	E	-	110	N	4360	7	7	3	1
17	207.5	E	-	112.5	N	3120	7	7	N/A	N/A
18	207.5	E	-	115	N	4600	7	8	15	1
19	210	E	-	95	N	3370	6	7	N/A	N/A
20	210	E	-	97.5	N	2500	7	7	N/A	N/A

INSTRUMENTS:	RESULTS IN:	BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Boyce DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Sub-Station Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	210	E	-	100	N	4090	7	7	8	1
2	210	E	-	102.5	N	2560	7	8	N/A	N/A
3	210	E	-	105	N	2440	7	6	N/A	N/A
4	210	E	-	107.5	N	3800	8	8	N/A	N/A
5	210	E	-	110	N	2760	6	6	N/A	N/A
6	210	E	-	112.5	N	4180	7	7	12	1
7	210	E	-	115	N	4120	7	7	N/A	N/A
8	212.5	E	-	95	N	4010	7	7	7	1
9	212.5	E	-	97.5	N	3520	7	7	6	1
10	212.5	E	-	100	N	2640	6	8	N/A	N/A
11	212.5	E	-	102.5	N	4720	6	7	7	1
12	212.5	E	-	105	N	2670	6	6	N/A	N/A
13	212.5	E	-	107.5	N	3660	8	7	7	1
14	212.5	E	-	110	N	2200	7	6	N/A	N/A
15	212.5	E	-	112.5	N	4480	7	7	8	1
16	212.5	E	-	115	N	4300	6	7	10	1
17	215	E	-	95	N	3890	8	8	N/A	N/A
18	215	E	-	97.5	N	3570	6	8	7	1
19	215	E	-	100	N	2340	7	7	N/A	N/A
20	215	E	-	102.5	N	2380	5	7	N/A	N/A

INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	2500	N/A
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Total U - 4 Th(nat) - 1.5	10 1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Sub-Station Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	215	E	-	105	N	3450	8	7	10	1
2	215	E	-	107.5	N	2220	6	5	N/A	N/A
3	215	E	-	110	N	4090	8	8	13	1
4	215	E	-	112.5	N	2110	6	6	N/A	N/A
5	215	E	-	115	N	5120	7	7	N/A	N/A
6	217.5	E	-	95	N	4150	7	8	7	1
7	217.5	E	-	97.5	N	2290	7	7	N/A	N/A
8	217.5	E	-	100	N	2480	8	8	N/A	N/A
9	217.5	E	-	102.5	N	4030	10	7	10	1
10	217.5	E	-	105	N	2510	7	7	N/A	N/A
11	217.5	E	-	107.5	N	3400	6	7	10	1
12	217.5	E	-	110	N	2680	7	8	N/A	N/A
13	217.5	E	-	112.5	N	3690	7	8	9	1
14	217.5	E	-	115	N	2660	6	6	N/A	N/A
15		E	-		N					
16		E	-		N					
17		E	-		N					
18		E	-		N					
19		E	-		N					
20		E	-		N					

INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. a. Rogers DATE: 1-8-02

CIMARRON CORPORATION
CIMARRON FACILITY
Sub-Area "N" Affected
Sub-Station Surface Soil Samples

LN #	GRID NUMBER					3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	0-6" Sample Total-U	0-6" Sample Th (Nat)
1	220	E	-	95	N	3700	7	7	N/A	N/A
2	220	E	-	97.5	N	2480	6	7	N/A	N/A
3	220	E	-	100	N	3830	8	7	8	1
4	220	E	-	102.5	N	2490	8	7	N/A	N/A
5	220	E	-	105	N	5290	8	8	15	2
6	220	E	-	107.5	N	3970	8	7	N/A	N/A
7	220	E	-	110	N	4280	8	7	12	1
8	220	E	-	112.5	N	2700	7	7	N/A	N/A
9	220	E	-	115	N	4190	9	8	10	1
10	223	E	-	95	N	2670	7	7	6	1
11	223	E	-	97.5	N	2360	7	6	N/A	N/A
12	223	E	-	100	N	4380	7	8	N/A	N/A
13	223	E	-	102.5	N	2400	7	7	15	2
14	223	E	-	105	N	4550	7	8	N/A	N/A
15	223	E	-	107.5	N	2330	8	7	12	1
16	223	E	-	110	N	2590	7	10	N/A	N/A
17	223	E	-	112.5	N	4110	9	7	N/A	N/A
18	223	E	-	115	N	2540	7	7	N/A	N/A
19		E	-		N					
20		E	-		N					

INSTRUMENTS:		RESULTS IN: BACKGROUND	MDA
LUDLUM MICRO 'R' METER - MODEL 19 S/N 111299	µR/hr	9	7
LUDLUM 2220, SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395	CPM	2500	N/A
		Total U - 4	10
CIMMARON SOIL COUNTER 4" X 4" X 16" NaI DETECTOR	pCi/g	Th(nat) - 1.5	1

BACKGROUND NOT SUBTRACTED

REVIEWED BY: W. A. Rogers DATE: 1-8-02

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION CONCRETE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	60.0	-96.1	9241.7
2	180.0	23.9	569.6
3	110.0	-46.1	2128.3
4	30.0	-126.1	15909.7
5	160.0	3.9	14.9
6	120.0	-36.1	1305.6
7	120.0	-36.1	1305.6
8	60.0	-96.1	9241.7
9	220.0	63.9	4078.9
10	170.0	13.9	192.3
11	190.0	33.9	1146.9
12	220.0	63.9	4078.9
13	260.0	103.9	10788.2
14	260.0	103.9	10788.2
15	20.0	-136.1	18532.4
16	80.0	-76.1	5796.3
17	80.0	-76.1	5796.3
18	130.0	-26.1	683.0
19	170.0	13.9	192.3
20	140.0	-16.1	260.3
21	110.0	-46.1	2128.3
22	140.0	-16.1	260.3
23	220.0	63.9	4078.9
24	150.0	-6.1	37.6
25	130.0	-26.1	683.0
26	220.0	63.9	4078.9
27	330.0	173.9	30229.5
28	160.0	3.9	14.9
29	170.0	13.9	192.3
30	120.0	-36.1	1305.6
31	200.0	43.9	1924.3
32	140.0	-16.1	260.3
33	170.0	13.9	192.3
34	120.0	-36.1	1305.6
35	180.0	23.9	569.6
36	50.0	-106.1	11264.4
37	100.0	-56.1	3151.0
38	70.0	-86.1	7419.0
39	240.0	83.9	7033.6
40	60.0	-96.1	9241.7
41	153.0	-3.1	9.8
42	144.0	-12.1	147.2
43	171.0	14.9	221.0
44	108.0	-48.1	2316.8
45	63.0	-93.1	8673.9
46	162.0	5.9	34.4
47	207.0	50.9	2587.4
48	99.0	-57.1	3264.3
49	207.0	50.9	2587.4
50	108.0	-48.1	2316.8
	8609.0		597331.6
	7582.0		270869.2
	7796.0		323916.0
	270.0		3343.3
	0.0		0.0
	0.0		0.0
	0.0		0.0
	31539		1405041.4
	Sum(n)		Sum(n-N)²

No. of Samples (x) : 202

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : 156.13

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: 83.61

2 Std Deviations: 167.22

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = 1.655

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = 165.87 DPM/100cm²

GUIDELINE VALUE: 5000 DPM/100cm²

Acceptable Level: 5000 DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	201	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	201	1.655	95%

PERFORMED BY: [signature] DATE: 1-2-02

REVIEWED BY: W. E. Argen DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION CONCRETE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	36.0	-120.13	14432.10
52	162.0	5.87	34.41
53	180.0	23.87	569.60
54	171.0	14.87	221.01
55	126.0	-30.13	908.04
56	117.0	-39.13	1531.44
57	108.0	-48.13	2316.85
58	450.0	293.87	86357.42
59	441.0	284.87	81148.83
60	684.0	527.87	278642.87
61	81.0	-75.13	5645.07
62	117.0	-39.13	1531.44
63	140.0	-16.13	260.30
64	80.0	-76.13	5796.33
65	180.0	23.87	569.60
66	100.0	-56.13	3150.99
67	130.0	-26.13	682.97
68	30.0	-126.13	15909.70
69	210.0	53.87	2901.58
70	110.0	-46.13	2128.31
71	210.0	53.87	2901.58
72	70.0	-86.13	7419.01
73	130.0	-26.13	682.97
74	144.0	-12.13	147.23
75	189.0	32.87	1080.20
76	153.0	-3.13	9.82
77	90.0	-66.13	4373.66
78	144.0	-12.13	147.23
79	45.0	-111.13	12350.69
80	117.0	-39.13	1531.44
81	126.0	-30.13	908.04
82	144.0	-12.13	147.23
83	198.0	41.87	1752.79
84	99.0	-57.13	3264.26
85	108.0	-48.13	2316.85
86	144.0	-12.13	147.23
87	135.0	-21.13	446.63
88	170.0	13.87	192.28
89	170.0	13.87	192.28
90	260.0	103.87	10788.22
91	170.0	13.87	192.28
92	160.0	3.87	14.95
93	270.0	113.87	12965.54
94	220.0	63.87	4078.91
95	260.0	103.87	10788.22
96	200.0	43.87	1924.26
97	230.0	73.87	5456.24
98	210.0	53.87	2901.58
99	210.0	53.87	2901.58
100	180.0	23.87	569.60
	8609.0		597331.6
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	260.0	103.87	10788.22
102	140.0	-16.13	260.30
103	170.0	13.87	192.28
104	160.0	3.87	14.95
105	70.0	-86.13	7419.01
106	180.0	23.87	569.60
107	130.0	-26.13	682.97
108	150.0	-6.13	37.62
109	130.0	-26.13	682.97
110	90.0	-66.13	4373.66
111	140.0	-16.13	260.30
112	220.0	63.87	4078.91
113	50.0	-106.13	11264.35
114	170.0	13.87	192.28
115	50.0	-106.13	11264.35
116	180.0	23.87	569.60
117	40.0	-116.13	13487.03
118	280.0	123.87	15342.87
119	70.0	-86.13	7419.01
120	260.0	103.87	10788.22
121	40.0	-116.13	13487.03
122	90.0	-66.13	4373.66
123	30.0	-126.13	15909.70
124	140.0	-16.13	260.30
125	70.0	-86.13	7419.01
126	190.0	33.87	1146.93
127	120.0	-36.13	1305.64
128	288.0	131.87	17388.73
129	99.0	-57.13	3264.26
130	207.0	50.87	2587.38
131	243.0	86.87	7545.76
132	36.0	-120.13	14432.10
133	270.0	113.87	12965.54
134	216.0	59.87	3583.98
135	144.0	-12.13	147.23
136	198.0	41.87	1752.79
137	153.0	-3.13	9.82
138	90.0	-66.13	4373.66
139	99.0	-57.13	3264.26
140	126.0	-30.13	908.04
141	90.0	-66.13	4373.66
142	135.0	-21.13	446.63
143	144.0	-12.13	147.23
144	189.0	32.87	1080.20
145	288.0	131.87	17388.73
146	117.0	-39.13	1531.44
147	297.0	140.87	19843.32
148	180.0	23.87	569.60
149	243.0	86.87	7545.76
150	110.0	-46.13	2128.31
	7582.0		270869.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY- ALPHA DIRECT TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE PHASE III, SUB-AREA 'N' - SUB-STATION CONCRETE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	140.0	-16.13	260.30
152	100.0	-56.13	3150.99
153	90.0	-66.13	4373.66
154	80.0	-76.13	5796.33
155	180.0	23.87	569.60
156	220.0	63.87	4078.91
157	120.0	-36.13	1305.64
158	430.0	273.87	75002.77
159	150.0	-6.13	37.62
160	40.0	-116.13	13487.03
161	45.0	-111.13	12350.69
162	207.0	50.87	2587.38
163	153.0	-3.13	9.82
164	153.0	-3.13	9.82
165	153.0	-3.13	9.82
166	99.0	-57.13	3264.26
167	108.0	-48.13	2316.85
168	99.0	-57.13	3264.26
169	243.0	86.87	7545.76
170	234.0	77.87	6063.17
171	378.0	221.87	49224.67
172	153.0	-3.13	9.82
173	180.0	23.87	569.60
174	351.0	194.87	37972.89
175	180.0	23.87	569.60
176	230.0	73.87	5456.24
177	140.0	-16.13	260.30
178	260.0	103.87	10788.22
179	210.0	53.87	2901.58
180	140.0	-16.13	260.30
181	190.0	33.87	1146.93
182	50.0	-106.13	11264.35
183	150.0	-6.13	37.62
184	100.0	-56.13	3150.99
185	120.0	-36.13	1305.64
186	60.0	-96.13	9241.68
187	60.0	-96.13	9241.68
188	80.0	-76.13	5796.33
189	110.0	-46.13	2128.31
190	140.0	-16.13	260.30
191	180.0	23.87	569.60
192	130.0	-26.13	682.97
193	210.0	53.87	2901.58
194	50.0	-106.13	11264.35
195	200.0	43.87	1924.26
196	80.0	-76.13	5796.33
197	180.0	23.87	569.60
198	120.0	-36.13	1305.64
199	130.0	-26.13	682.97
200	190.0	33.87	1146.93
	7796.0		323916.0
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	170.0	13.87	192.28
202	100.0	-56.13	3150.99
203	0.0	0.00	0.00
204	0.0	0.00	0.00
205	0.0	0.00	0.00
206	0.0	0.00	0.00
207	0.0	0.00	0.00
208	0.0	0.00	0.00
209	0.0	0.00	0.00
210	0.0	0.00	0.00
211	0.0	0.00	0.00
212	0.0	0.00	0.00
213	0.0	0.00	0.00
214	0.0	0.00	0.00
215	0.0	0.00	0.00
216	0.0	0.00	0.00
217	0.0	0.00	0.00
218	0.0	0.00	0.00
219	0.0	0.00	0.00
220	0.0	0.00	0.00
221	0.0	0.00	0.00
222	0.0	0.00	0.00
223	0.0	0.00	0.00
224	0.0	0.00	0.00
225	0.0	0.00	0.00
226	0.0	0.00	0.00
227	0.0	0.00	0.00
228	0.0	0.00	0.00
229	0.0	0.00	0.00
230	0.0	0.00	0.00
231	0.0	0.00	0.00
232	0.0	0.00	0.00
233	0.0	0.00	0.00
234	0.0	0.00	0.00
235	0.0	0.00	0.00
236	0.0	0.00	0.00
237	0.0	0.00	0.00
238	0.0	0.00	0.00
239	0.0	0.00	0.00
240	0.0	0.00	0.00
241	0.0	0.00	0.00
242	0.0	0.00	0.00
243	0.0	0.00	0.00
244	0.0	0.00	0.00
245	0.0	0.00	0.00
246	0.0	0.00	0.00
247	0.0	0.00	0.00
248	0.0	0.00	0.00
249	0.0	0.00	0.00
250	0.0	0.00	0.00
	270.0		3343.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	1130.0	213.6	45630.9
2	1220.0	303.6	92181.4
3	1070.0	153.6	23597.2
4	1150.0	233.6	54575.4
5	1440.0	523.6	274171.5
6	1240.0	323.6	104725.9
7	1660.0	743.6	552961.6
8	900.0	-16.4	268.5
9	840.0	-76.4	5834.8
10	820.0	-96.4	9290.3
11	1210.0	293.6	86209.1
12	1050.0	133.6	17852.7
13	1130.0	213.6	45630.9
14	1620.0	703.6	495072.5
15	870.0	-46.4	2151.7
16	880.0	-36.4	1324.0
17	570.0	-346.4	119983.4
18	950.0	33.6	1129.9
19	760.0	-156.4	24456.6
20	970.0	53.6	2874.4
21	1480.0	563.6	317660.6
22	880.0	-36.4	1324.0
23	920.0	3.6	13.1
24	1190.0	273.6	74864.5
25	1220.0	303.6	92181.4
26	1160.0	243.6	59347.7
27	1100.0	183.6	33714.1
28	1390.0	473.6	224310.1
29	1220.0	303.6	92181.4
30	1260.0	343.6	118070.5
31	1270.0	353.6	125042.8
32	950.0	33.6	1129.9
33	890.0	-26.4	696.2
34	460.0	-456.4	208288.3
35	800.0	-116.4	13545.7
36	480.0	-436.4	190432.9
37	590.0	-326.4	106527.9
38	690.0	-226.4	51250.7
39	1370.0	453.6	205765.5
40	680.0	-236.4	55878.4
41	0.0	0.0	0.0
42	0.0	0.0	0.0
43	0.0	0.0	0.0
44	880.0	-36.4	1324.0
45	560.0	-356.4	127011.1
46	1090.0	173.6	30141.8
47	450.0	-466.4	217516.0
48	0.0	0.0	0.0
49	480.0	-436.4	190432.9
50	0.0	0.0	0.0
	39210.0		5444949.7
	53220.0		7508837.2
	45640.0		4641251.0
	2100.0		35905.3
	0.0		0.0
	0.0		0.0
	0.0		0.0
	185110		22129517.0
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **202**

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)
Sample Mean (N) : **916.39**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **331.81**
2 Std Deviations: **663.62**
Degree of Freedom(df).= (x) - 1 Data listed on Table B-1
(df) = **1.655**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **955.03** DPM/100cm²
GUIDELINE VALUE: **5000** DPM/100cm²
Acceptable Level: **5000** DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	201	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	201	1.655	95%

PERFORMED BY: SKepin DATE: 1-2-02

REVIEWED BY: W. A. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY- BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	0.0	0.00	0.00
52	400.0	-516.39	266654.64
53	550.0	-366.39	134238.80
54	760.0	-156.39	24456.62
55	870.0	-46.39	2151.67
56	600.0	-316.39	100100.19
57	1110.0	193.61	37486.33
58	1300.0	383.61	147159.59
59	1310.0	393.61	154931.87
60	1420.0	503.61	253626.92
61	940.0	23.61	557.61
62	680.0	-236.39	55878.41
63	550.0	-366.39	134238.80
64	340.0	-576.39	332220.98
65	850.0	-66.39	4407.12
66	820.0	-96.39	9290.29
67	270.0	-646.39	417815.04
68	0.0	0.00	0.00
69	1100.0	183.61	33714.05
70	950.0	33.61	1129.89
71	890.0	-26.39	696.23
72	480.0	-436.39	190432.86
73	410.0	-506.39	256426.92
74	590.0	-326.39	106527.91
75	500.0	-416.39	173377.42
76	430.0	-486.39	236571.48
77	620.0	-296.39	87844.74
78	690.0	-226.39	51250.68
79	420.0	-496.39	246399.20
80	490.0	-426.39	181805.14
81	380.0	-536.39	287710.09
82	890.0	-26.39	696.23
83	810.0	-106.39	11318.01
84	330.0	-586.39	343848.70
85	570.0	-346.39	119983.36
86	900.0	-16.39	268.51
87	670.0	-246.39	60706.13
88	1030.0	113.61	12908.11
89	1270.0	353.61	125042.76
90	1430.0	513.61	263799.20
91	1020.0	103.61	10735.83
92	1340.0	423.61	179448.70
93	1370.0	453.61	205765.54
94	1090.0	173.61	30141.77
95	870.0	-46.39	2151.67
96	1110.0	193.61	37486.33
97	670.0	-246.39	60706.13
98	1090.0	173.61	30141.77
99	1040.0	123.61	15280.39
100	990.0	73.61	5419.00
	39210.0		5444949.7
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	910.0	-6.39	40.78
102	1530.0	613.61	376521.97
103	1290.0	373.61	139587.32
104	1170.0	253.61	64319.99
105	1200.0	283.61	80436.82
106	1340.0	423.61	179448.70
107	1170.0	253.61	64319.99
108	1190.0	273.61	74864.55
109	860.0	-56.39	3179.40
110	1110.0	193.61	37486.33
111	850.0	-66.39	4407.12
112	1000.0	83.61	6991.28
113	640.0	-276.39	76389.30
114	900.0	-16.39	268.51
115	920.0	3.61	13.06
116	1540.0	623.61	388894.25
117	910.0	-6.39	40.78
118	1010.0	93.61	8763.56
119	760.0	-156.39	24456.62
120	1320.0	403.61	162904.15
121	870.0	-46.39	2151.67
122	1180.0	263.61	69492.27
123	980.0	63.61	4046.72
124	680.0	-236.39	55878.41
125	780.0	-136.39	18601.18
126	910.0	-6.39	40.78
127	1210.0	293.61	86209.10
128	1180.0	263.61	69492.27
129	720.0	-196.39	38567.52
130	1370.0	453.61	205765.54
131	1460.0	543.61	295516.03
132	630.0	-286.39	82017.02
133	1240.0	323.61	104725.93
134	1990.0	1073.61	1152646.72
135	1100.0	183.61	33714.05
136	1940.0	1023.61	1047785.34
137	1030.0	113.61	12908.11
138	810.0	-106.39	11318.01
139	990.0	73.61	5419.00
140	670.0	-246.39	60706.13
141	770.0	-146.39	21428.90
142	620.0	-296.39	87844.74
143	830.0	-86.39	7462.56
144	800.0	-116.39	13545.73
145	1900.0	983.61	967496.23
146	1650.0	733.61	538189.30
147	1590.0	673.61	453755.63
148	560.0	-356.39	127011.08
149	600.0	-316.39	100100.19
150	540.0	-376.39	141666.53
	53220.0		7508837.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	640.0	-276.39	76389.30
152	420.0	-496.39	246399.20
153	570.0	-346.39	119983.36
154	690.0	-226.39	51250.68
155	1230.0	313.61	98353.65
156	1110.0	193.61	37486.33
157	720.0	-196.39	38567.52
158	1380.0	463.61	214937.81
159	520.0	-396.39	157121.97
160	220.0	-696.39	484953.65
161	400.0	-516.39	266654.64
162	860.0	-56.39	3179.40
163	460.0	-456.39	208288.31
164	580.0	-336.39	113155.63
165	530.0	-386.39	149294.25
166	710.0	-206.39	42595.24
167	710.0	-206.39	42595.24
168	530.0	-386.39	149294.25
169	1010.0	93.61	8763.56
170	750.0	-166.39	27684.35
171	1280.0	363.61	132215.04
172	890.0	-26.39	696.23
173	1220.0	303.61	92181.38
174	1510.0	593.61	352377.42
175	960.0	43.61	1902.17
176	1280.0	363.61	132215.04
177	1400.0	483.61	233882.37
178	1380.0	463.61	214937.81
179	1220.0	303.61	92181.38
180	1070.0	153.61	23597.22
181	1100.0	183.61	33714.05
182	540.0	-376.39	141666.53
183	950.0	33.61	1129.89
184	900.0	-16.39	268.51
185	900.0	-16.39	268.51
186	950.0	33.61	1129.89
187	810.0	-106.39	11318.01
188	840.0	-76.39	5834.84
189	1160.0	243.61	59347.71
190	630.0	-286.39	82017.02
191	1020.0	103.61	10735.83
192	840.0	-76.39	5834.84
193	930.0	13.61	185.34
194	830.0	-86.39	7462.56
195	1260.0	343.61	118070.49
196	1040.0	123.61	15280.39
197	980.0	63.61	4046.72
198	1240.0	323.61	104725.93
199	1340.0	423.61	179448.70
200	1130.0	213.61	45630.88
	45640.0		4641251.0
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	1060.0	143.61	20624.94
202	1040.0	123.61	15280.39
203	0.0	0.00	0.00
204	0.0	0.00	0.00
205	0.0	0.00	0.00
206	0.0	0.00	0.00
207	0.0	0.00	0.00
208	0.0	0.00	0.00
209	0.0	0.00	0.00
210	0.0	0.00	0.00
211	0.0	0.00	0.00
212	0.0	0.00	0.00
213	0.0	0.00	0.00
214	0.0	0.00	0.00
215	0.0	0.00	0.00
216	0.0	0.00	0.00
217	0.0	0.00	0.00
218	0.0	0.00	0.00
219	0.0	0.00	0.00
220	0.0	0.00	0.00
221	0.0	0.00	0.00
222	0.0	0.00	0.00
223	0.0	0.00	0.00
224	0.0	0.00	0.00
225	0.0	0.00	0.00
226	0.0	0.00	0.00
227	0.0	0.00	0.00
228	0.0	0.00	0.00
229	0.0	0.00	0.00
230	0.0	0.00	0.00
231	0.0	0.00	0.00
232	0.0	0.00	0.00
233	0.0	0.00	0.00
234	0.0	0.00	0.00
235	0.0	0.00	0.00
236	0.0	0.00	0.00
237	0.0	0.00	0.00
238	0.0	0.00	0.00
239	0.0	0.00	0.00
240	0.0	0.00	0.00
241	0.0	0.00	0.00
242	0.0	0.00	0.00
243	0.0	0.00	0.00
244	0.0	0.00	0.00
245	0.0	0.00	0.00
246	0.0	0.00	0.00
247	0.0	0.00	0.00
248	0.0	0.00	0.00
249	0.0	0.00	0.00
250	0.0	0.00	0.00
	2100.0		35905.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	360.0	122.1	14919.4
2	324.0	86.1	7420.9
3	243.0	5.1	26.5
4	234.0	-3.9	14.9
5	378.0	140.1	19640.6
6	360.0	122.1	14919.4
7	306.0	68.1	4643.7
8	252.0	14.1	200.1
9	324.0	86.1	7420.9
10	576.0	338.1	114342.0
11	261.0	23.1	535.7
12	243.0	5.1	26.5
13	504.0	266.1	70833.1
14	171.0	-66.9	4469.6
15	126.0	-111.9	12511.6
16	297.0	59.1	3498.1
17	306.0	68.1	4643.7
18	324.0	86.1	7420.9
19	207.0	-30.9	952.0
20	234.0	-3.9	14.9
21	288.0	50.1	2514.5
22	378.0	140.1	19640.6
23	279.0	41.1	1692.9
24	162.0	-75.9	5754.0
25	414.0	176.1	31027.0
26	450.0	212.1	45005.5
27	99.0	-138.9	19280.7
28	108.0	-129.9	16862.3
29	450.0	212.1	45005.5
30	324.0	86.1	7420.9
31	153.0	-84.9	7200.4
32	162.0	-75.9	5754.0
33	400.0	162.1	26291.0
34	350.0	112.1	12576.5
35	270.0	32.1	1033.3
36	270.0	32.1	1033.3
37	240.0	2.1	4.6
38	540.0	302.1	91291.6
39	630.0	392.1	153777.6
40	108.0	-129.9	16862.3
41	207.0	-30.9	952.0
42	540.0	302.1	91291.6
43	594.0	356.1	126839.2
44	270.0	32.1	1033.3
45	216.0	-21.9	477.6
46	270.0	32.1	1033.3
47	378.0	140.1	19640.6
48	144.0	-93.9	8808.8
49	198.0	-39.9	1588.4
50	432.0	194.1	37692.3
	12580.0		2050936.2
	4890.0		1010744.6
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	32824		4149521.0
	Sum(n)		Sum(n-N)²

No. of Samples (x) : 138

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : 237.86

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: 174.04

2 Std Deviations: 348.07

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = 1.657

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = 262.41 DPM/100cm²

GUIDELINE VALUE: 5000 DPM/100cm²

Acceptable Level: 5000 DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	137	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	137	1.657	95%

PERFORMED BY: S Kejin DATE: 1-2-02

REVIEWED BY: W. C. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	270.0	32.14	1033.30
52	180.0	-57.86	3347.21
53	504.0	266.14	70833.12
54	360.0	122.14	14919.38
55	414.0	176.14	31027.04
56	189.0	-48.86	2386.82
57	315.0	77.14	5951.34
58	252.0	14.14	200.08
59	432.0	194.14	37692.25
60	198.0	-39.86	1588.43
61	54.0	-183.86	33802.69
62	414.0	176.14	31027.04
63	342.0	104.14	10846.17
64	108.0	-129.86	16862.34
65	180.0	-57.86	3347.21
66	792.0	554.14	307076.60
67	576.0	338.14	114341.99
68	198.0	-39.86	1588.43
69	612.0	374.14	139984.43
70	680.0	442.14	195492.14
71	470.0	232.14	53891.27
72	750.0	512.14	262292.43
73	410.0	172.14	29633.88
74	610.0	372.14	138491.85
75	210.0	-27.86	775.91
76	40.0	-197.86	39146.63
77	150.0	-87.86	7718.51
78	60.0	-177.86	31632.43
79	140.0	-97.86	9575.62
80	60.0	-177.86	31632.43
81	50.0	-187.86	35289.53
82	260.0	22.14	490.40
83	190.0	-47.86	2290.11
84	50.0	-187.86	35289.53
85	60.0	-177.86	31632.43
86	70.0	-167.86	28175.33
87	110.0	-127.86	16346.92
88	60.0	-177.86	31632.43
89	190.0	-47.86	2290.11
90	350.0	112.14	12576.48
91	130.0	-107.86	11632.72
92	30.0	-207.86	43203.73
93	90.0	-147.86	21861.12
94	60.0	-177.86	31632.43
95	40.0	-197.86	39146.63
96	20.0	-217.86	47460.83
97	150.0	-87.86	7718.51
98	360.0	122.14	14919.38
99	170.0	-67.86	4604.31
100	170.0	-67.86	4604.31
	12580.0		2050936.2
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	30.0	-207.86	43203.73
102	240.0	2.14	4.60
103	80.0	-157.86	24918.22
104	0.0	0.00	0.00
105	310.0	72.14	5204.89
106	340.0	102.14	10433.59
107	600.0	362.14	131148.95
108	530.0	292.14	85348.66
109	420.0	182.14	33176.77
110	300.0	62.14	3861.99
111	220.0	-17.86	318.80
112	108.0	-129.86	16862.34
113	126.0	-111.86	12511.56
114	54.0	-183.86	33802.69
115	189.0	-48.86	2386.82
116	72.0	-165.86	27507.91
117	144.0	-93.86	8808.77
118	81.0	-156.86	24603.51
119	99.0	-138.86	19280.73
120	126.0	-111.86	12511.56
121	99.0	-138.86	19280.73
122	54.0	-183.86	33802.69
123	108.0	-129.86	16862.34
124	10.0	-227.86	51917.93
125	60.0	-177.86	31632.43
126	50.0	-187.86	35289.53
127	0.0	0.00	0.00
128	10.0	-227.86	51917.93
129	30.0	-207.86	43203.73
130	30.0	-207.86	43203.73
131	0.0	0.00	0.00
132	0.0	0.00	0.00
133	70.0	-167.86	28175.33
134	50.0	-187.86	35289.53
135	40.0	-197.86	39146.63
136	90.0	-147.86	21861.12
137	60.0	-177.86	31632.43
138	60.0	-177.86	31632.43
139	0.0	0.00	0.00
140	0.0	0.00	0.00
141	0.0	0.00	0.00
142	0.0	0.00	0.00
143	0.0	0.00	0.00
144	0.0	0.00	0.00
145	0.0	0.00	0.00
146	0.0	0.00	0.00
147	0.0	0.00	0.00
148	0.0	0.00	0.00
149	0.0	0.00	0.00
150	0.0	0.00	0.00
	4890.0		1010744.6
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	220.0	141.2	19926.0
2	340.0	261.2	68204.2
3	220.0	141.2	19926.0
4	60.0	-18.8	355.0
5	200.0	121.2	14679.6
6	60.0	-18.8	355.0
7	110.0	31.2	970.9
8	40.0	-38.8	1508.6
9	120.0	41.2	1694.1
10	180.0	101.2	10233.2
11	0.0	0.0	0.0
12	160.0	81.2	6586.9
13	20.0	-58.8	3462.2
14	170.0	91.2	8310.0
15	50.0	-28.8	831.8
16	260.0	181.2	32818.7
17	30.0	-48.8	2385.4
18	150.0	71.2	5063.7
19	0.0	0.0	0.0
20	0.0	0.0	0.0
21	210.0	131.2	17202.8
22	0.0	0.0	0.0
23	210.0	131.2	17202.8
24	0.0	0.0	0.0
25	170.0	91.2	8310.0
26	0.0	0.0	0.0
27	0.0	0.0	0.0
28	20.0	-58.8	3462.2
29	200.0	121.2	14679.6
30	220.0	141.2	19926.0
31	0.0	0.0	0.0
32	140.0	61.2	3740.5
33	0.0	0.0	0.0
34	0.0	0.0	0.0
35	390.0	311.2	96820.2
36	0.0	0.0	0.0
37	120.0	41.2	1694.1
38	0.0	0.0	0.0
39	0.0	0.0	0.0
40	0.0	0.0	0.0
41	0.0	0.0	0.0
42	0.0	0.0	0.0
43	0.0	0.0	0.0
44	0.0	0.0	0.0
45	0.0	0.0	0.0
46	0.0	0.0	0.0
47	0.0	0.0	0.0
48	0.0	0.0	0.0
49	0.0	0.0	0.0
50	0.0	0.0	0.0
	4110.0		2484373.0
	2700.0		1478740.1
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	10880		4343462.5
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **138**

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **78.84**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **178.06**

2 Std Deviations: **356.11**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.657**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **103.96** DPM/100cm²

GUIDELINE VALUE: **5000** DPM/100cm²

Acceptable Level: **5000** DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	137	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	137	1.657	95%

PERFORMED BY: S Kegin DATE: 1-2-02

REVIEWED BY: W. A. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY- BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION EQUIPMENT

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	0.0	0.00	0.00
52	0.0	0.00	0.00
53	0.0	0.00	0.00
54	20.0	-58.84	3462.21
55	0.0	0.00	0.00
56	0.0	0.00	0.00
57	0.0	0.00	0.00
58	0.0	0.00	0.00
59	90.0	11.16	124.53
60	0.0	0.00	0.00
61	0.0	0.00	0.00
62	0.0	0.00	0.00
63	0.0	0.00	0.00
64	0.0	0.00	0.00
65	0.0	0.00	0.00
66	0.0	0.00	0.00
67	0.0	0.00	0.00
68	0.0	0.00	0.00
69	260.0	181.16	32818.74
70	830.0	751.16	564240.47
71	0.0	0.00	0.00
72	630.0	551.16	303776.71
73	190.0	111.16	12356.42
74	1060.0	981.16	962673.81
75	0.0	0.00	0.00
76	0.0	0.00	0.00
77	0.0	0.00	0.00
78	0.0	0.00	0.00
79	0.0	0.00	0.00
80	0.0	0.00	0.00
81	0.0	0.00	0.00
82	0.0	0.00	0.00
83	0.0	0.00	0.00
84	0.0	0.00	0.00
85	0.0	0.00	0.00
86	0.0	0.00	0.00
87	0.0	0.00	0.00
88	0.0	0.00	0.00
89	0.0	0.00	0.00
90	0.0	0.00	0.00
91	0.0	0.00	0.00
92	0.0	0.00	0.00
93	0.0	0.00	0.00
94	0.0	0.00	0.00
95	0.0	0.00	0.00
96	0.0	0.00	0.00
97	0.0	0.00	0.00
98	850.0	771.16	594686.85
99	180.0	101.16	10233.23
100	0.0	0.00	0.00
	4110.0		2484373.0
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	0.0	0.00	0.00
102	0.0	0.00	0.00
103	0.0	0.00	0.00
104	0.0	0.00	0.00
105	490.0	411.16	169052.07
106	0.0	0.00	0.00
107	940.0	861.16	741595.55
108	760.0	681.16	463978.16
109	0.0	0.00	0.00
110	0.0	0.00	0.00
111	400.0	321.16	103143.37
112	0.0	0.00	0.00
113	0.0	0.00	0.00
114	0.0	0.00	0.00
115	0.0	0.00	0.00
116	0.0	0.00	0.00
117	0.0	0.00	0.00
118	0.0	0.00	0.00
119	0.0	0.00	0.00
120	0.0	0.00	0.00
121	0.0	0.00	0.00
122	0.0	0.00	0.00
123	0.0	0.00	0.00
124	0.0	0.00	0.00
125	0.0	0.00	0.00
126	0.0	0.00	0.00
127	0.0	0.00	0.00
128	0.0	0.00	0.00
129	0.0	0.00	0.00
130	0.0	0.00	0.00
131	0.0	0.00	0.00
132	0.0	0.00	0.00
133	110.0	31.16	970.91
134	0.0	0.00	0.00
135	0.0	0.00	0.00
136	0.0	0.00	0.00
137	0.0	0.00	0.00
138	0.0	0.00	0.00
139	0.0	0.00	0.00
140	0.0	0.00	0.00
141	0.0	0.00	0.00
142	0.0	0.00	0.00
143	0.0	0.00	0.00
144	0.0	0.00	0.00
145	0.0	0.00	0.00
146	0.0	0.00	0.00
147	0.0	0.00	0.00
148	0.0	0.00	0.00
149	0.0	0.00	0.00
150	0.0	0.00	0.00
	2700.0		1478740.1
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	396.0	11.4	130.4
2	748.0	363.4	132073.4
3	781.0	396.4	157148.1
4	352.0	-32.6	1061.5
5	506.0	121.4	14742.6
6	275.0	-109.6	12008.0
7	682.0	297.4	88458.1
8	198.0	-186.6	34812.5
9	682.0	297.4	88458.1
10	506.0	121.4	14742.6
11	506.0	121.4	14742.6
12	506.0	121.4	14742.6
13	660.0	275.4	75855.7
14	484.0	99.4	9884.1
15	517.0	132.4	17534.8
16	352.0	-32.6	1061.5
17	352.0	-32.6	1061.5
18	308.0	-76.6	5864.6
19	440.0	55.4	3071.3
20	484.0	99.4	9884.1
21	264.0	-120.6	14539.8
22	220.0	-164.6	27086.9
23	319.0	-65.6	4300.9
24	363.0	-21.6	465.7
25	330.0	-54.6	2979.1
26	275.0	-109.6	12008.0
27	242.0	-142.6	20329.3
28	550.0	165.4	27363.5
29	462.0	77.4	5993.7
30	429.0	44.4	1973.1
31	506.0	121.4	14742.6
32	506.0	121.4	14742.6
33	407.0	22.4	502.6
34	297.0	-87.6	7670.4
35	352.0	-32.6	1061.5
36	242.0	-142.6	20329.3
37	418.0	33.4	1116.8
38	297.0	-87.6	7670.4
39	539.0	154.4	23845.2
40	649.0	264.4	69917.4
41	759.0	374.4	140189.6
42	572.0	187.4	35125.9
43	528.0	143.4	20569.0
44	649.0	264.4	69917.4
45	594.0	209.4	43856.3
46	869.0	484.4	234661.8
47	803.0	418.4	175074.5
48	550.0	165.4	27363.5
49	1089.0	704.4	496206.2
50	1089.0	704.4	496206.2
	19844.0		1941588.6
	19140.0		1607522.6
	14663.0		1993511.4
	2211.0		296409.1
	0.0		0.0
	0.0		0.0
	0.0		0.0
	80762		8554179.1
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **210**

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **384.58**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **202.31**

2 Std Deviations: **404.62**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.655**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **407.69** DPM/100cm²

GUIDELINE VALUE: **5000** DPM/100cm²

Acceptable Level: **5000** DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	209	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	209	1.655	95%

PERFORMED BY: [signature] DATE: 1-2-02

REVIEWED BY: W. R. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	1199.0	814.42	663278.39
52	330.0	-54.58	2979.08
53	242.0	-142.58	20329.33
54	726.0	341.42	116566.97
55	495.0	110.42	12192.37
56	495.0	110.42	12192.37
57	561.0	176.42	31123.68
58	792.0	407.42	165990.28
59	825.0	440.42	193968.94
60	539.0	154.42	23845.24
61	286.0	-98.58	9718.20
62	231.0	-153.58	23587.11
63	242.0	-142.58	20329.33
64	352.0	-32.58	1061.52
65	297.0	-87.58	7670.42
66	330.0	-54.58	2979.08
67	253.0	-131.58	17313.55
68	231.0	-153.58	23587.11
69	297.0	-87.58	7670.42
70	242.0	-142.58	20329.33
71	308.0	-76.58	5864.64
72	231.0	-153.58	23587.11
73	176.0	-208.58	43506.01
74	231.0	-153.58	23587.11
75	154.0	-230.58	53167.58
76	209.0	-175.58	30828.67
77	264.0	-120.58	14539.77
78	132.0	-252.58	63797.14
79	264.0	-120.58	14539.77
80	165.0	-219.58	48215.79
81	330.0	-54.58	2979.08
82	495.0	110.42	12192.37
83	363.0	-21.58	465.74
84	627.0	242.42	58766.99
85	418.0	33.42	1116.83
86	693.0	308.42	95122.31
87	462.0	77.42	5993.71
88	330.0	-54.58	2979.08
89	473.0	88.42	7817.93
90	352.0	-32.58	1061.52
91	396.0	11.42	130.39
92	473.0	88.42	7817.93
93	440.0	55.42	3071.27
94	429.0	44.42	1973.05
95	330.0	-54.58	2979.08
96	363.0	-21.58	465.74
97	374.0	-10.58	111.96
98	572.0	187.42	35125.90
99	440.0	55.42	3071.27
100	385.0	0.42	0.18
	19844.0		1941588.6
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	330.0	-54.58	2979.08
102	473.0	88.42	7817.93
103	286.0	-98.58	9718.20
104	308.0	-76.58	5864.64
105	264.0	-120.58	14539.77
106	495.0	110.42	12192.37
107	429.0	44.42	1973.05
108	550.0	165.42	27363.46
109	880.0	495.42	245440.03
110	704.0	319.42	102028.53
111	473.0	88.42	7817.93
112	396.0	11.42	130.39
113	352.0	-32.58	1061.52
114	363.0	-21.58	465.74
115	220.0	-164.58	27086.89
116	231.0	-153.58	23587.11
117	462.0	77.42	5993.71
118	242.0	-142.58	20329.33
119	209.0	-175.58	30828.67
120	231.0	-153.58	23587.11
121	407.0	22.42	502.61
122	660.0	275.42	75855.65
123	440.0	55.42	3071.27
124	913.0	528.42	279226.69
125	220.0	-164.58	27086.89
126	165.0	-219.58	48215.79
127	297.0	-87.58	7670.42
128	220.0	-164.58	27086.89
129	253.0	-131.58	17313.55
130	264.0	-120.58	14539.77
131	583.0	198.42	39370.12
132	473.0	88.42	7817.93
133	154.0	-230.58	53167.58
134	165.0	-219.58	48215.79
135	242.0	-142.58	20329.33
136	209.0	-175.58	30828.67
137	517.0	132.42	17534.80
138	264.0	-120.58	14539.77
139	209.0	-175.58	30828.67
140	330.0	-54.58	2979.08
141	363.0	-21.58	465.74
142	121.0	-263.58	69474.92
143	429.0	44.42	1973.05
144	330.0	-54.58	2979.08
145	297.0	-87.58	7670.42
146	704.0	319.42	102028.53
147	506.0	121.42	14742.59
148	374.0	-10.58	111.96
149	616.0	231.42	53554.78
150	517.0	132.42	17534.80
	19140.0		1607522.6
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	385.0	0.42	0.18
152	770.0	385.42	148547.84
153	979.0	594.42	353334.00
154	165.0	-219.58	48215.79
155	209.0	-175.58	30828.67
156	187.0	-197.58	39038.23
157	143.0	-241.58	58361.36
158	220.0	-164.58	27086.89
159	220.0	-164.58	27086.89
160	187.0	-197.58	39038.23
161	165.0	-219.58	48215.79
162	242.0	-142.58	20329.33
163	132.0	-252.58	63797.14
164	88.0	-296.58	87960.26
165	165.0	-219.58	48215.79
166	253.0	-131.58	17313.55
167	165.0	-219.58	48215.79
168	209.0	-175.58	30828.67
169	143.0	-241.58	58361.36
170	121.0	-263.58	69474.92
171	143.0	-241.58	58361.36
172	99.0	-285.58	81556.48
173	154.0	-230.58	53167.58
174	231.0	-153.58	23587.11
175	242.0	-142.58	20329.33
176	374.0	-10.58	111.96
177	396.0	11.42	130.39
178	330.0	-54.58	2979.08
179	231.0	-153.58	23587.11
180	275.0	-109.58	12007.99
181	264.0	-120.58	14539.77
182	264.0	-120.58	14539.77
183	418.0	33.42	1116.83
184	209.0	-175.58	30828.67
185	242.0	-142.58	20329.33
186	396.0	11.42	130.39
187	264.0	-120.58	14539.77
188	605.0	220.42	48584.56
189	605.0	220.42	48584.56
190	308.0	-76.58	5864.64
191	308.0	-76.58	5864.64
192	539.0	154.42	23845.24
193	231.0	-153.58	23587.11
194	242.0	-142.58	20329.33
195	286.0	-98.58	9718.20
196	352.0	-32.58	1061.52
197	539.0	154.42	23845.24
198	594.0	209.42	43856.34
199	77.0	-307.58	94606.04
200	297.0	-87.58	7670.42
	14663.0		1993511.4
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	242.0	-142.58	20329.33
202	187.0	-197.58	39038.23
203	143.0	-241.58	58361.36
204	319.0	-65.58	4300.86
205	198.0	-186.58	34812.45
206	198.0	-186.58	34812.45
207	198.0	-186.58	34812.45
208	165.0	-219.58	48215.79
209	275.0	-109.58	12007.99
210	286.0	-98.58	9718.20
211	0.0	0.00	0.00
212	0.0	0.00	0.00
213	0.0	0.00	0.00
214	0.0	0.00	0.00
215	0.0	0.00	0.00
216	0.0	0.00	0.00
217	0.0	0.00	0.00
218	0.0	0.00	0.00
219	0.0	0.00	0.00
220	0.0	0.00	0.00
221	0.0	0.00	0.00
222	0.0	0.00	0.00
223	0.0	0.00	0.00
224	0.0	0.00	0.00
225	0.0	0.00	0.00
226	0.0	0.00	0.00
227	0.0	0.00	0.00
228	0.0	0.00	0.00
229	0.0	0.00	0.00
230	0.0	0.00	0.00
231	0.0	0.00	0.00
232	0.0	0.00	0.00
233	0.0	0.00	0.00
234	0.0	0.00	0.00
235	0.0	0.00	0.00
236	0.0	0.00	0.00
237	0.0	0.00	0.00
238	0.0	0.00	0.00
239	0.0	0.00	0.00
240	0.0	0.00	0.00
241	0.0	0.00	0.00
242	0.0	0.00	0.00
243	0.0	0.00	0.00
244	0.0	0.00	0.00
245	0.0	0.00	0.00
246	0.0	0.00	0.00
247	0.0	0.00	0.00
248	0.0	0.00	0.00
249	0.0	0.00	0.00
250	0.0	0.00	0.00
	2211.0		296409.1
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY **BETA/GAMMA DIRECT**

TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE

PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	1474.0	728.1	530178.2
2	1449.0	703.1	494396.5
3	1380.0	634.1	402125.1
4	1219.0	473.1	223855.2
5	1702.0	956.1	914191.0
6	1472.0	726.1	527269.6
7	1104.0	358.1	128259.5
8	207.0	-538.9	290377.3
9	1426.0	680.1	462581.4
10	1357.0	611.1	373484.0
11	0.0	0.0	0.0
12	391.0	-354.9	125930.4
13	184.0	-561.9	315694.2
14	1587.0	841.1	707505.3
15	1058.0	312.1	97427.2
16	1403.0	657.1	431824.2
17	1150.0	404.1	163323.8
18	1081.0	335.1	112314.4
19	483.0	-262.9	69098.9
20	552.0	-193.9	37584.3
21	1081.0	335.1	112314.4
22	1219.0	473.1	223855.2
23	1173.0	427.1	182442.9
24	1840.0	1094.1	1197127.8
25	1288.0	542.1	293908.6
26	759.0	13.1	172.5
27	1564.0	818.1	669342.2
28	598.0	-147.9	21864.6
29	989.0	243.1	59113.8
30	966.0	220.1	48458.7
31	1265.0	519.1	269499.4
32	1012.0	266.1	70827.0
33	759.0	13.1	172.5
34	1380.0	634.1	402125.1
35	1173.0	427.1	182442.9
36	667.0	-78.9	6220.0
37	851.0	105.1	11053.0
38	1564.0	818.1	669342.2
39	1081.0	335.1	112314.4
40	1035.0	289.1	83598.1
41	1771.0	1025.1	1050898.4
42	920.0	174.1	30322.4
43	1334.0	588.1	345900.8
44	1610.0	864.1	746726.4
45	851.0	105.1	11053.0
46	1127.0	381.1	145262.6
47	1058.0	312.1	97427.2
48	1541.0	795.1	632237.0
49	2484.0	1738.1	3021107.5
50	1518.0	772.1	596189.9
	48093.0		9288678.0
	32062.0		14536198.0
	18860.0		5768509.1
	460.0		1095959.9
	0.0		0.0
	0.0		0.0
	0.0		0.0
	156632		48390085.1
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **210**

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **745.87**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **481.18**

2 Std Deviations: **962.35**

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = **1.655**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **800.82** DPM/100cm²

GUIDELINE VALUE: **5000** DPM/100cm²

Acceptable Level: **5000** DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	400	is (B)	1.649	95%
(df) low value(Y)	120	is (A)	1.658	95%
Desired value(df) (X)	209	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	209	1.655	95%

PERFORMED BY: [signature] DATE: 1-2-02

REVIEWED BY: W. G. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	1196.0	450.13	202620.02
52	1495.0	749.13	561200.75
53	1656.0	910.13	828342.68
54	1564.0	818.13	669342.15
55	1564.0	818.13	669342.15
56	1656.0	910.13	828342.68
57	1081.0	335.13	112314.35
58	1495.0	749.13	561200.75
59	1403.0	657.13	431824.22
60	966.0	220.13	48458.68
61	1334.0	588.13	345900.82
62	1564.0	818.13	669342.15
63	1081.0	335.13	112314.35
64	1219.0	473.13	223855.15
65	1311.0	565.13	319375.68
66	759.0	13.13	172.48
67	621.0	-124.87	15591.68
68	1081.0	335.13	112314.35
69	552.0	-193.87	37584.28
70	943.0	197.13	38861.55
71	1035.0	289.13	83598.08
72	805.0	59.13	3496.75
73	782.0	36.13	1305.62
74	690.0	-55.87	3121.08
75	782.0	36.13	1305.62
76	713.0	-32.87	1080.22
77	943.0	197.13	38861.55
78	805.0	59.13	3496.75
79	1150.0	404.13	163323.75
80	805.0	59.13	3496.75
81	759.0	13.13	172.48
82	575.0	-170.87	29195.42
83	483.0	-262.87	69098.88
84	1012.0	266.13	70826.95
85	1380.0	634.13	402125.08
86	1081.0	335.13	112314.35
87	1173.0	427.13	182442.88
88	529.0	-216.87	47031.15
89	345.0	-400.87	160694.08
90	621.0	-124.87	15591.68
91	828.0	82.13	6745.88
92	713.0	-32.87	1080.22
93	345.0	-400.87	160694.08
94	368.0	-377.87	142783.22
95	1081.0	335.13	112314.35
96	1150.0	404.13	163323.75
97	805.0	59.13	3496.75
98	69.0	-676.87	458148.48
99	989.0	243.13	59113.82
100	736.0	-9.87	97.35
	48093.0		9288678.0
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	1656.0	910.13	828342.68
102	1541.0	795.13	632237.02
103	1403.0	657.13	431824.22
104	713.0	-32.87	1080.22
105	1196.0	450.13	202620.02
106	1196.0	450.13	202620.02
107	805.0	59.13	3496.75
108	1587.0	841.13	707505.28
109	1610.0	864.13	746726.42
110	713.0	-32.87	1080.22
111	1012.0	266.13	70826.95
112	828.0	82.13	6745.88
113	1173.0	427.13	182442.88
114	667.0	-78.87	6219.95
115	0.0	0.00	0.00
116	897.0	151.13	22841.28
117	828.0	82.13	6745.88
118	0.0	0.00	0.00
119	0.0	0.00	0.00
120	483.0	-262.87	69098.88
121	184.0	-561.87	315694.15
122	0.0	0.00	0.00
123	0.0	0.00	0.00
124	0.0	0.00	0.00
125	0.0	0.00	0.00
126	345.0	-400.87	160694.08
127	644.0	-101.87	10376.82
128	0.0	0.00	0.00
129	253.0	-492.87	242917.55
130	115.0	-630.87	397992.75
131	0.0	0.00	0.00
132	0.0	0.00	0.00
133	0.0	0.00	0.00
134	0.0	0.00	0.00
135	0.0	0.00	0.00
136	322.0	-423.87	179662.95
137	414.0	-331.87	110135.48
138	805.0	59.13	3496.75
139	299.0	-446.87	199689.82
140	759.0	13.13	172.48
141	1058.0	312.13	97427.22
142	299.0	-446.87	199689.82
143	805.0	59.13	3496.75
144	230.0	-515.87	266118.42
145	1587.0	841.13	707505.28
146	3381.0	2635.13	6943927.68
147	920.0	174.13	30322.42
148	414.0	-331.87	110135.48
149	92.0	-653.87	427541.62
150	828.0	82.13	6745.88
	32062.0		14536198.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA 'N' - SUB-STATION FENCE

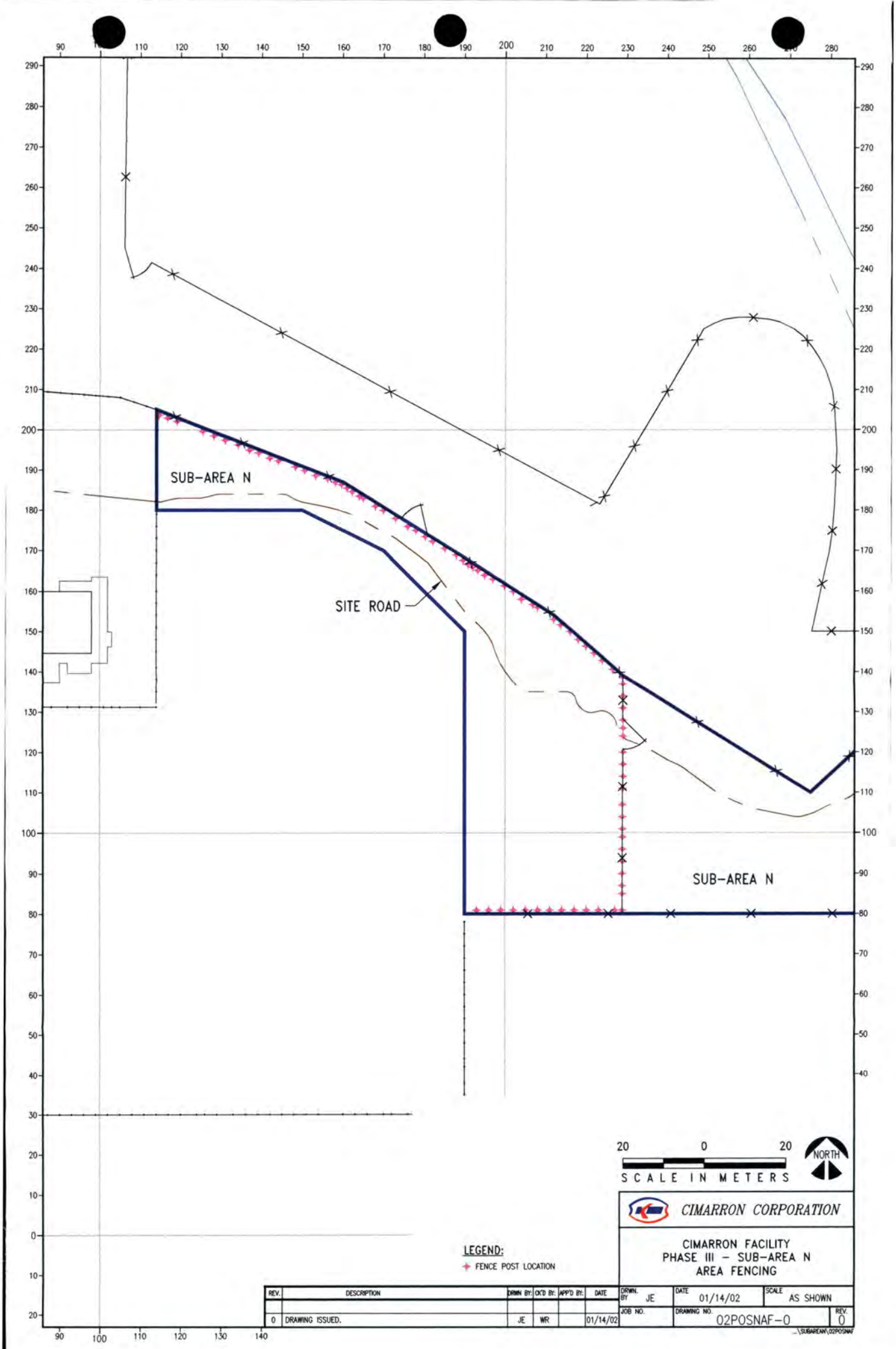
n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	345.0	-400.87	160694.08
152	874.0	128.13	16418.15
153	1104.0	358.13	128259.48
154	598.0	-147.87	21864.55
155	0.0	0.00	0.00
156	299.0	-446.87	199689.82
157	0.0	0.00	0.00
158	0.0	0.00	0.00
159	0.0	0.00	0.00
160	437.0	-308.87	95398.62
161	69.0	-676.87	458148.48
162	0.0	0.00	0.00
163	0.0	0.00	0.00
164	575.0	-170.87	29195.42
165	46.0	-699.87	489813.35
166	0.0	0.00	0.00
167	0.0	0.00	0.00
168	0.0	0.00	0.00
169	46.0	-699.87	489813.35
170	23.0	-722.87	522536.22
171	0.0	0.00	0.00
172	0.0	0.00	0.00
173	0.0	0.00	0.00
174	0.0	0.00	0.00
175	0.0	0.00	0.00
176	368.0	-377.87	142783.22
177	184.0	-561.87	315694.15
178	1081.0	335.13	112314.35
179	805.0	59.13	3496.75
180	368.0	-377.87	142783.22
181	690.0	-55.87	3121.08
182	391.0	-354.87	125930.35
183	414.0	-331.87	110135.48
184	598.0	-147.87	21864.55
185	0.0	0.00	0.00
186	805.0	59.13	3496.75
187	1196.0	450.13	202620.02
188	506.0	-239.87	57536.02
189	874.0	128.13	16418.15
190	1472.0	726.13	527269.62
191	529.0	-216.87	47031.15
192	138.0	-607.87	369501.88
193	1334.0	588.13	345900.82
194	184.0	-561.87	315694.15
195	230.0	-515.87	266118.42
196	644.0	-101.87	10376.82
197	874.0	128.13	16418.15
198	759.0	13.13	172.48
199	0.0	0.00	0.00
200	0.0	0.00	0.00
	18860.0		5768509.1
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	0.0	0.00	0.00
202	0.0	0.00	0.00
203	69.0	-676.87	458148.48
204	69.0	-676.87	458148.48
205	0.0	0.00	0.00
206	0.0	0.00	0.00
207	0.0	0.00	0.00
208	322.0	-423.87	179662.95
209	0.0	0.00	0.00
210	0.0	0.00	0.00
211	0.0	0.00	0.00
212	0.0	0.00	0.00
213	0.0	0.00	0.00
214	0.0	0.00	0.00
215	0.0	0.00	0.00
216	0.0	0.00	0.00
217	0.0	0.00	0.00
218	0.0	0.00	0.00
219	0.0	0.00	0.00
220	0.0	0.00	0.00
221	0.0	0.00	0.00
222	0.0	0.00	0.00
223	0.0	0.00	0.00
224	0.0	0.00	0.00
225	0.0	0.00	0.00
226	0.0	0.00	0.00
227	0.0	0.00	0.00
228	0.0	0.00	0.00
229	0.0	0.00	0.00
230	0.0	0.00	0.00
231	0.0	0.00	0.00
232	0.0	0.00	0.00
233	0.0	0.00	0.00
234	0.0	0.00	0.00
235	0.0	0.00	0.00
236	0.0	0.00	0.00
237	0.0	0.00	0.00
238	0.0	0.00	0.00
239	0.0	0.00	0.00
240	0.0	0.00	0.00
241	0.0	0.00	0.00
242	0.0	0.00	0.00
243	0.0	0.00	0.00
244	0.0	0.00	0.00
245	0.0	0.00	0.00
246	0.0	0.00	0.00
247	0.0	0.00	0.00
248	0.0	0.00	0.00
249	0.0	0.00	0.00
250	0.0	0.00	0.00
	460.0		1095959.9
	Sum(n)		Sum(n-N)²

APPENDIX 6 – FENCING FSS DATA - DRAWING, DATA TABLES, GRAPHS, AND STATISTICAL EVALUATIONS



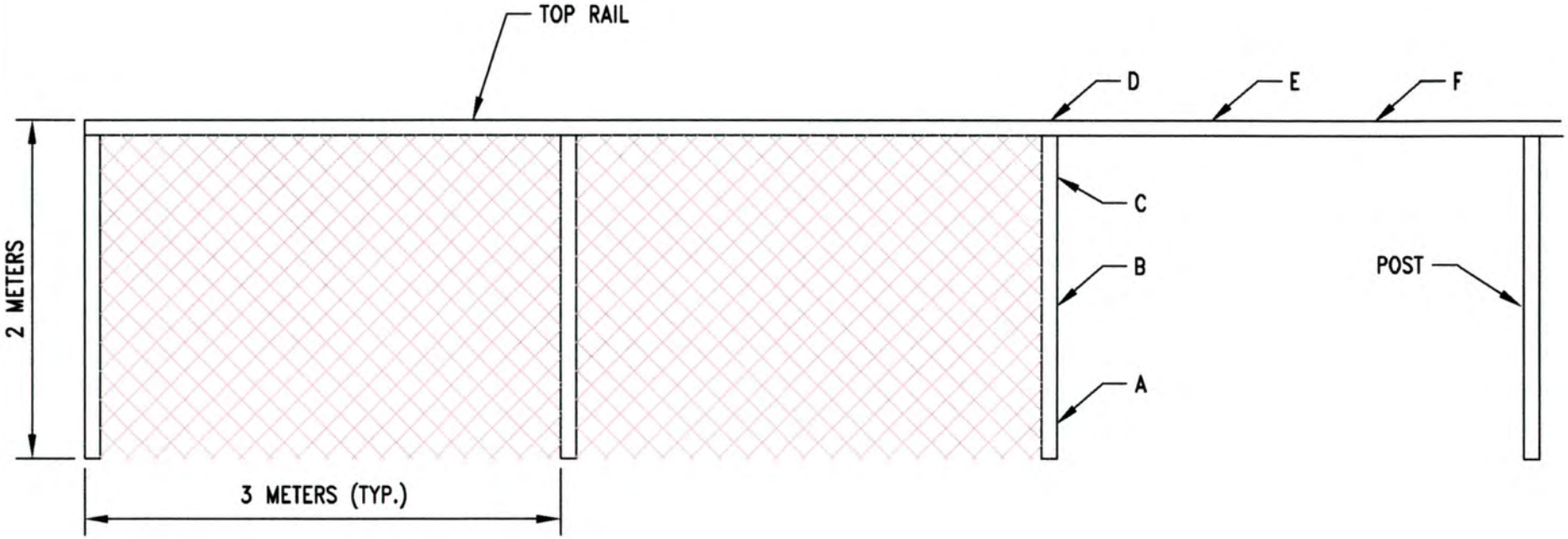
CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III – SUB-AREA N
AREA FENCING

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY	DATE	SCALE
JE	01/14/02	AS SHOWN
JOB NO.	DRAWING NO.	REV.
	02POSNAF-0	0

..\SUBAREAN\02POSNAF



CIMARRON CORPORATION

CIMARRON FACILITY
PHASE III - SUB-AREA N
TYPICAL SURVEY PATTERN OF FENCING

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE
0	DRAWING ISSUED.	JE	WR		01/14/02

DRWN. BY JE	DATE 01/14/02	SCALE: NONE
JOB NO.	DRAWING NO. FNC-SURVEY	REV. 0

...SUBAREAN\FNC-SURVEY

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	193E - 82N	1A	192	0	2	0	
2		1B	144	253	0	3	
3		1C	120	0	0	0	
4		1D	252	1150	0	3	
5		1E	252	1058	2	0	
6		1F	228	460	0	0	
7	196E - 82N	1A	192	713	0	8	
8		1B	72	920	0	0	
9		1C	84	529	4	0	
10		1D	216	483	2	0	
11		1E	180	322	0	0	
12		1F	192	621	0	0	
13	199E - 82N	1A	108	230	0	0	
14		1B	156	483	4	0	
15		1C	276	690	2	5	
16		1D	312	1196	0	0	
17		1E	216	759	0	0	
18		1F	216	736	0	0	
19	202E - 82N	1A	240	322	7	7	
20		1B	108	529	0	8	
21		1C	108	598	4	2	
22		1D	168	1242	0	0	
23		1E	228	1012	2	0	
24		1F	204	828	2	0	
25	205E - 82N	1A	144	0	0	0	
26		1B	156	23	0	8	
27		1C	144	690	0	10	
28		1D	228	1035	0	0	
29		1E	240	1748	0	0	
30		1F	264	1702	4	2	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	208E - 82N	1A	264	828	0	5	
2		1B	108	1150	0	0	
3		1C	168	598	0	0	
4		1D	216	1357	0	3	
5		1E	144	1242	0	0	
6		1F	240	1495	0	0	
7	211E - 82N	1A	240	138	0	0	
8		1B	120	138	2	0	
9		1C	144	0	0	0	
10		1D	252	1403	4	0	
11		1E	276	1104	0	8	
12		1F	300	1265	0	0	
13	214E - 82N	1A	192	299	0	12	
14		1B	228	0	0	0	
15		1C	312	322	0	0	
16		1D	312	1242	0	0	
17		1E	180	1610	0	8	
18		1F	288	943	2	0	
19	217E - 82N	1A	192	345	0	0	
20		1B	180	460	2	0	
21		1C	192	0	0	0	
22		1D	156	874	0	12	
23		1E	288	1058	0	0	
24		1F	240	989	0	0	
25	220E - 82N	1A	108	621	0	3	
26		1B	276	644	2	12	
27		1C	228	644	7	5	
28		1D	228	1357	2	0	
29		1E	324	1150	0	3	
30		1F	300	1518	2	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	223E - 82N	1A	108	736	2	0	
2		1B	252	414	0	0	
3		1C	120	414	0	5	
4		1D	216	782	0	5	
5		1E	240	1518	0	5	
6		1F	288	828	2	0	
7	227E - 82N	1A	144	414	0	0	
8		1B	168	0	0	0	
9		1C	216	897	2	5	
10		1D	228	1150	0	5	
11		1E	396	1587	4	2	
12		1F	204	943	0	15	
13	230E - 82N	1A	120	391	0	0	
14		1B	156	0	2	2	
15		1C	132	782	0	0	
16		1D	180	851	5	2	
17		1E	240	782	2	9	
18		1F	228	598	0	0	
19	230E - 85N	1A	132	138	0	0	
20		1B	132	0	0	7	
21		1C	228	253	0	3	
22		1D	132	1334	2	5	
23		1E	168	690	0	0	
24		1F	192	253	0	3	
25	230E - 87N	1A	120	667	2	0	
26		1B	192	0	2	2	
27		1C	120	0	2	0	
28		1D	204	1265	0	0	
29		1E	228	1058	4	5	
30		1F	192	1334	2	2	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	230E - 90N	1A	96	0	2	7	
2		1B	168	0	0	0	
3		1C	144	69	0	3	
4		1D	192	966	0	0	
5		1E	132	1196	0	7	
6		1F	132	989	0	3	
7	229E - 93N	1A	108	0	2	0	
8		1B	240	0	0	0	
9		1C	336	161	0	0	
10		1D	192	644	0	0	
11		1E	144	1403	5	2	
12		1F	204	782	2	5	
13	229E - 96N	1A	168	0	0	0	
14		1B	216	0	0	0	
15		1C	240	92	2	0	
16		1D	180	851	2	5	
17		1E	156	1012	0	7	
18		1F	180	1449	0	0	
19	229E - 99N	1A	72	414	0	3	
20		1B	192	690	0	3	
21		1C	264	322	0	0	
22		1D	192	966	0	0	
23		1E	204	1196	5	0	
24		1F	240	782	0	5	
25	229E - 101N	1A	84	0	0	0	
26		1B	204	46	0	0	
27		1C	180	0	0	5	
28		1D	144	1173	0	0	
29		1E	144	1058	2	0	
30		1F	120	1058	0	5	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	230E - 104N	1A	156	0	2	12	
2		1B	144	299	2	5	
3		1C	240	759	0	5	
4		1D	108	621	2	2	
5		1E	204	1012	0	0	
6		1F	192	1012	2	0	
7	230E - 107N	1A	120	0	0	0	
8		1B	228	0	0	0	
9		1C	180	115	0	0	
10		1D	240	1265	0	0	
11		1E	180	1012	2	7	
12		1F	216	759	0	0	
13	230E - 111N	1A	252	759	0	0	
14		1B	156	230	0	3	
15		1C	228	46	0	0	
16		1D	84	920	2	2	
17		1E	300	621	0	3	
18		1F	240	1081	7	4	
19	229E - 114N	1A	252	529	0	7	
20		1B	240	69	5	0	
21		1C	228	0	2	0	
22		1D	192	1771	10	4	
23		1E	252	1265	0	5	
24		1F	156	851	0	0	
25	229E - 117N	1A	168	92	0	7	
26		1B	156	460	0	5	
27		1C	180	23	0	0	
28		1D	288	1173	2	0	
29		1E	216	621	0	0	
30		1F	180	828	0	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	229E - 120N	1A	132	851	2	0	
2		1B	204	368	0	0	
3		1C	204	253	2	2	
4		1D	168	1035	0	3	
5		1E	144	1265	2	5	
6		1F	168	782	0	0	
7	229E - 124N	1A	228	0	4	7	
8		1B	192	0	0	5	
9		1C	144	0	2	7	
10							
11							
12							
13	229E - 124N	1A	168	0	0	0	
14		1B	204	69	0	0	
15		1C	300	0	2	0	
16		1D	432	1610	0	0	
17		1E	348	644	0	7	
18		1F	396	1610	2	5	
19	229E - 126N	1A	216	230	0	5	
20		1B	252	138	2	0	
21		1C	168	253	0	5	
22		1D	264	1104	0	0	
23		1E	576	1702	0	5	
24		1F	168	1380	4	9	
25	229E - 128N	1A	180	345	0	3	
26		1B	144	230	0	0	
27		1C	192	0	0	0	
28							
29							
30							

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	229E - 128N	1A	132	46	5	3	
2		1B	144	0	0	3	
3		1C	204	0	2	0	
4		1D	780	1196	0	13	
5		1E	456	1748	4	8	
6		1F	840	2829	0	6	
7	229E - 131N	1A	156	0	0	1	
8		1B	108	0	0	6	
9		1C	348	345	0	6	
10		1D	516	1127	0	8	
11		1E	408	1028	4	10	
12		1F	240	1150	0	3	
13	229E - 134N	1A	72	575	2	0	
14		1B	120	0	2	3	
15		1C	0	184	2	0	
16		1D	312	506	5	0	
17		1E	156	713	0	11	
18		1F	60	0	0	1	
19	229E - 137N	1A	216	92	0	1	
20		1B	96	506	2	8	
21		1C	372	0	0	0	
22		1D	684	828	5	0	
23		1E	456	851	2	3	
24		1F	420	805	2	0	
25	229E - 139N	1A	180	0	0	1	
26		1B	144	345	0	0	
27		1C	240	0	2	0	
28		1D	384	322	2	3	
29		1E	360	1081	0	3	
30		1F	300	529	2	3	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	227E - 141N	1A	192	69	2	8	
2		1B	192	322	4	5	
3		1C	240	0	0	0	
4		1D	276	667	2	0	
5		1E	288	713	0	3	
6		1F	180	690	7	5	
7	224E - 143N	1A	240	483	0	11	
8		1B	192	0	2	3	
9		1C	216	0	0	0	
10		1D	264	644	0	11	
11		1E	312	644	0	0	
12		1F	240	989	5	3	
13	222E - 145N	1A	180	0	0	6	
14		1B	132	299	0	6	
15		1C	240	0	0	0	
16		1D	168	966	2	0	
17		1E	300	414	2	0	
18		1F	276	897	2	10	
19	220E - 147N	1A	252	0	0	3	
20		1B	360	0	0	0	
21		1C	216	0	2	6	
22		1D	360	1219	0	6	
23		1E	144	621	0	8	
24		1F	276	1242	0	13	
25	218E - 148N	1A	264	0	2	0	
26		1B	264	299	0	18	
27		1C	204	644	0	13	
28		1D	228	506	2	6	
29		1E	216	1219	7	0	
30		1F	324	989	2	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	216E - 150N	1A	156	0	2	0	
2		1B	168	0	0	1	
3		1C	120	207	0	0	
4		1D	276	1104	2	6	
5		1E	252	989	0	0	
6		1F	336	552	0	3	
7	214E - 152N	1A	240	0	2	6	
8		1B	180	0	2	0	
9		1C	204	0	0	6	
10		1D	180	1449	2	0	
11		1E	240	552	7	3	
12		1F	384	1678	0	11	
13	212E - 153N	1A	276	506	0	3	
14		1B	156	529	0	3	
15		1C	132	0	2	13	
16		1D	324	1380	5	0	
17		1E	348	1035	7	3	
18		1F	228	1426	0	3	
19	208E - 156N	1A	96	667	5	3	
20		1B	288	276	5	3	
21		1C	300	437	2	10	
22		1D	204	690	0	1	
23		1E	324	1242	2	8	
24		1F	312	1840	5	0	
25	207E - 157N	1A	72	0	2	0	
26		1B	300	0	0	6	
27		1C	228	184	2	6	
28		1D	330	594	2	3	
29		1E	264	989	4	5	
30		1F	252	1012	0	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	204E - 158N	1A	300	0	0	0	
2		1B	192	552	0	3	
3		1C	204	0	2	3	
4		1D	288	1357	5	0	
5		1E	348	943	0	3	
6		1F	312	782	2	0	
7	202E - 160N	1A	228	0	0	1	
8		1B	132	460	0	11	
9		1C	216	0	0	0	
10		1D	276	1081	0	6	
11		1E	252	759	0	6	
12		1F	144	828	2	6	
13	200E - 162N	1A	216	322	0	0	
14		1B	156	0	0	1	
15		1C	264	552	5	0	
16		1D	288	598	0	3	
17		1E	288	368	0	3	
18		1F	240	989	0	0	
19	197E - 163N	1A	144	575	0	1	
20		1B	120	115	2	0	
21		1C	252	805	0	6	
22		1D	276	506	0	3	
23		1E	324	1035	0	0	
24		1F	108	667	0	3	
25	195E - 164N	1A	108	345	0	1	
26		1B	288	138	2	0	
27		1C	348	230	4	5	
28		1D	468	506	0	6	
29		1E	284	1357	0	1	
30		1F	372	1886	4	5	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	192E - 166N	1A	240	690	0	1	
2		1B	444	782	0	0	
3		1C	360	667	0	3	
4							
5							
6							
7	192E - 166N	1A	720	782	0	0	
8		1B	756	1035	2	3	
9		1C	720	575	2	1	
10		1D	696	1334	2	1	
11		1E	492	1403	2	6	
12		1F	1020	1472	2	1	
13	192E - 167N	1A	516	1081	2	0	
14		1B	552	989	0	8	
15		1C	696	1035	2	0	
16							
17							
18							
19	192E - 167N	1A	216	644	0	0	
20		1B	384	552	2	3	
21		1C	276	0	2	5	
22		1D	264	1725	0	3	
23		1E	444	2093	0	3	
24		1F	468	1518	2	5	
25	190E - 168N	1A	276	713	2	0	
26		1B	324	161	0	8	
27		1C	516	552	0	3	
28		1D	180	299	2	0	
29		1E	156	1495	2	8	
30		1F	192	1587	4	3	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	188E - 169N	1A	240	253	2	0	
2		1B	216	299	0	8	
3		1C	432	713	4	3	
4		1D	180	2024	2	0	
5		1E	168	989	2	5	
6		1F	312	2231	0	3	
7	185E - 170N	1A	252	437	5	0	
8		1B	276	23	0	3	
9		1C	408	759	0	5	
10		1D	372	1518	2	13	
11		1E	312	1380	10	5	
12		1F	300	1541	5	0	
13	182E - 172N	1A	264	874	0	5	
14		1B	288	713	0	0	
15		1C	348	690	0	0	
16		1D	396	1357	4	12	
17		1E	396	1886	4	10	
18		1F	420	2024	4	3	
19	180E - 173N	1A	312	506	0	0	
20		1B	324	460	2	10	
21		1C	324	276	0	0	
22		1D	420	1633	0	3	
23		1E	516	1748	7	0	
24		1F	336	1909	0	8	
25	178E - 175N	1A	132	828	2	0	
26		1B	444	299	0	5	
27		1C	408	253	4	3	
28		1D	240	943	2	0	
29		1E	372	1725	0	8	
30		1F	516	1380	2	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	176E - 176N	1A	276	506	2	8	
2		1B	396	1127	2	5	
3		1C	480	1081	2	3	
4		1D	492	621	7	0	
5		1E	396	1196	2	0	
6		1F	360	345	2	0	
7	173E - 178N	1A	420	644	0	0	
8		1B	384	966	0	3	
9		1C	408	552	0	5	
10		1D	444	1656	2	0	
11		1E	360	1357	0	8	
12		1F	300	1817	2	5	
13	170E - 180N	1A	336	1288	0	0	
14		1B	444	759	0	0	
15		1C	576	1081	0	0	
16		1D	480	1840	2	5	
17		1E	600	1748	2	3	
18		1F	672	1104	2	8	
19	168E - 181N	1A	240	667	0	3	
20		1B	636	759	2	10	
21		1C	588	1334	0	5	
22		1D	264	667	2	3	
23		1E	240	897	2	3	
24		1F	299	230	0	0	
25	165E - 183N	1A	480	690	0	8	
26		1B	348	414	0	3	
27		1C	600	529	0	1	
28		1D	276	1771	0	5	
29		1E	264	1012	2	0	
30		1F	1380	2645	0	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	164E - 183.5N	1A	276	1495	0	1	
2		1B	456	1104	0	8	
3		1C	204	943	0	5	
4							
5							
6							
7	164E - 183.5N	1A	768	2231	2	3	
8		1B	840	1472	4	5	
9		1C	732	1472	7	0	
10		1D	1728	2714	10	9	
11		1E	2208	5290	0	1	
12		1F	2112	3473	2	5	
13	162E - 184N	1A	1320	3243	0	3	
14		1B	3084	2829	0	0	
15		1C	792	1863	2	10	
16							
17							
18							
19	162E - 184N	1A	2088	1748	2	0	
20		1B	1020	2001	5	0	
21		1C	672	2898	2	0	
22		1D	2364	4830	5	0	
23		1E	1188	2760	2	0	
24		1F	2592	4876	4	5	
25	159E - 186N	1A	1068	5221	0	1	
26		1B	1128	3910	0	1	
27		1C	852	2070	2	0	
28							
29							
30							

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	158E - 186N	1A	324	782	5	0	
2		1B	240	1150	2	0	
3		1C	300	782	2	0	
4		1D	408	1978	2	0	
5		1E	396	1840	0	3	
6		1F	756	1541	2	3	
7	156E - 187N	1A	408	1334	0	1	
8		1B	468	529	2	0	
9		1C	442	1058	5	0	
10		1D	396	1679	2	3	
11		1E	564	1449	4	3	
12		1F	612	1748	0	1	
13	153E - 188N	1A	396	115	0	3	
14		1B	468	345	0	3	
15		1C	396	276	0	1	
16		1D	504	1265	2	0	
17		1E	600	667	0	0	
18		1F	444	966	0	0	
19	150E - 189N	1A	300	138	0	3	
20		1B	468	575	0	3	
21		1C	576	207	7	10	
22		1D	624	1495	0	0	
23		1E	504	1288	0	1	
24		1F	420	391	0	0	
25	148E - 190N	1A	444	851	0	1	
26		1B	432	0	4	5	
27		1C	504	782	0	3	
28		1D	492	1863	5	0	
29		1E	504	874	4	3	
30		1F	288	1219	0	3	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	144E - 192N	1A	516	713	4	0	
2		1B	456	345	2	3	
3		1C	540	828	0	0	
4		1D	504	920	2	3	
5		1E	504	759	0	3	
6		1F	612	1081	0	3	
7	142E - 193N	1A	300	552	2	5	
8		1B	372	483	0	0	
9		1C	648	805	0	0	
10		1D	468	1242	0	8	
11		1E	396	1242	0	3	
12		1F	588	1058	10	4	
13	139E - 194N	1A	528	920	0	0	
14		1B	420	253	0	0	
15		1C	660	828	0	3	
16		1D	720	920	4	7	
17		1E	564	1518	0	3	
18		1F	432	1127	0	3	
19	137E - 195N	1A	540	897	0	3	
20		1B	300	345	0	3	
21		1C	816	690	2	0	
22		1D	600	391	0	0	
23		1E	516	1219	4	0	
24		1F	468	897	0	0	
25	134E - 196N	1A	540	276	2	0	
26		1B	480	92	0	5	
27		1C	624	782	2	0	
28		1D	576	1311	7	2	
29		1E	540	805	0	5	
30		1F	480	874	0	8	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	131E - 197N	1A	576	368	0	0	
2		1B	828	299	2	0	
3		1C	708	460	2	0	
4		1D	564	943	10	2	
5		1E	576	529	10	4	
6		1F	492	1219	15	0	
7	128E - 198N	1A	576	736	0	3	
8		1B	768	345	2	0	
9		1C	744	345	2	0	
10		1D	468	943	2	0	
11		1E	492	1035	0	0	
12		1F	252	1495	0	0	
13	125E - 199N	1A	552	322	2	0	
14		1B	600	414	0	0	
15		1C	600	0	0	0	
16		1D	264	1357	5	0	
17		1E	300	1633	0	3	
18		1F	252	1058	2	5	
19	119E - 202N	1A	252	0	2	0	
20		1B	240	0	0	0	
21		1C	120	0	0	3	
22		1D	456	1288	7	5	
23		1E	600	920	0	8	
24		1F	420	1426	4	10	
25	117E - 203N	1A	456	897	2	3	
26		1B	684	828	2	0	
27		1C	636	184	0	3	
28		1D	552	1495	0	8	
29		1E	468	2208	0	17	
30		1F	444	1242	0	0	

CIMARRON FACILITY

FENCE SURVEY **SUB-AREA 'N'**

ALPHA AND BETA/GAMMA SURVEY **FENCE**

INSTRUMENTS	S/N	RESULTS IN	BKG	MDA
LUDLUM 2220	37807	DPM/100cm²	10 cpm	134 DPM
LUDLUM 2220	50064	DPM/100cm²	348 cpm	606 DPM
ALPHA-BETA/GAMMA SMEARS TENNELEC LB-5100	CI-01	ALPHA DPM/100cm² BETA DPM/100cm²	0.3 cpm 2.0 cpm	12 DPM/100cm² 18 DPM/100cm²

REVIEWED BY: **DATE:**

LN #	LOCATION	READING ID	DIRECT ALPHA	DIRECT BETA	SMEAR ALPHA	SMEAR BETA	
1	113E - 204N	1A	384	575	0	8	
2		1B	456	0	0	3	
3		1C	480	0	10	9	
4							
5							
6							
7							
8							
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CIMARRON CORPORATION - CIMARRON FACILITY
FENCE POST
HOT SPOT AVERAGING

LOCATION : U - YARD
NORTH FENCE
POST # 33
183.5 N - 164 E

(DPM) - DISINTEGRATION PER MINUTE
(CM) - CENTIMETER
(M) - METER

MAXIMUM DIRECT BETA READINGS			(NO. OF 100 cm ² AREAS)		
D	2714	(DPM / 100 cm²) X	23	=	62422
E	5290	(DPM / 100 cm²) X	23	=	121670
F	3473	(DPM / 100 cm²) X	23	=	79879
			69		263971
			TOTAL NO. OF 100 cm ² AREAS		TOTAL WEIGHTED DPM

WEIGHTED AVERAGE FOR THE AREA: 3826 DPM / 100 cm ²

7 CM (DIAMETER) ← 1 METER (100 CM) →

SURFACE AREA = 2(Pi)rh + 2(Pi) r ²

SURFACE AREA = 0.2198 + 0.0077

SURFACE AREA = 0.2275 OR 0.23 CM ²

(.23 X 1) + (.23 X 1) + (.23 X 1) = 0.69

SURVEYED AREA REPRESENTED BY GRID : 0.69 M ² OR 6900 CM ²

PERFORMED BY: IRVING POWELL **DATE :** 7 - 16 - 98

c:quattro pro/area-n/fence 33

CIMARRON CORPORATION - CIMARRON FACILITY
FENCE POST
HOT SPOT AVERAGING

LOCATION : U - YARD
NORTH FENCE
POST # 36
186 N - 159 E

(DPM) - DISINTEGRATION PER MINUTE
(CM) - CENTIMETER
(M) - METER

MAXIMUM DIRECT BETA READINGS			(NO. OF 100 cm ² AREAS)		
A	5221	(DPM / 100 cm²) X	23	=	120083
B	3910	(DPM / 100 cm²) X	23	=	89930
C	2070	(DPM / 100 cm²) X	23	=	47610
			69		257623
			TOTAL NO. OF 100 cm ² AREAS		TOTAL WEIGHTED DPM

WEIGHTED AVERAGE FOR THE AREA: 3734 DPM / 100 cm ²

7 CM (DIAMETER) ← 1 METER (100 CM) →

SURFACE AREA = 2(Pi)rh + 2(Pi) r ²

SURFACE AREA = 0.2198 + 0.0077

SURFACE AREA = 0.2275 OR 0.23 CM ²

(.23 X 1) + (.23 X 1) + (.23 X 1) = 0.69

SURVEYED AREA REPRESENTED BY GRID : 0.69 M ² OR 6900 CM ²

PERFORMED BY: IRVING POWELL **DATE :** 7 - 16 - 98

c:quattro pro/area-n/fence 36

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	192.0	-159.6	25482.4
2	144.0	-207.6	43111.1
3	120.0	-231.6	53653.4
4	252.0	-99.6	9926.6
5	252.0	-99.6	9926.6
6	228.0	-123.6	15284.9
7	192.0	-159.6	25482.4
8	72.0	-279.6	78194.1
9	84.0	-267.6	71626.9
10	216.0	-135.6	18396.1
11	180.0	-171.6	29457.6
12	192.0	-159.6	25482.4
13	108.0	-243.6	59356.6
14	156.0	-195.6	38271.9
15	276.0	-75.6	5720.2
16	312.0	-39.6	1570.7
17	216.0	-135.6	18396.1
18	216.0	-135.6	18396.1
19	240.0	-111.6	12461.7
20	108.0	-243.6	59356.6
21	108.0	-243.6	59356.6
22	168.0	-183.6	33720.8
23	228.0	-123.6	15284.9
24	204.0	-147.6	21795.2
25	144.0	-207.6	43111.1
26	156.0	-195.6	38271.9
27	144.0	-207.6	43111.1
28	228.0	-123.6	15284.9
29	240.0	-111.6	12461.7
30	264.0	-87.6	7679.4
31	264.0	-87.6	7679.4
32	108.0	-243.6	59356.6
33	168.0	-183.6	33720.8
34	216.0	-135.6	18396.1
35	144.0	-207.6	43111.1
36	240.0	-111.6	12461.7
37	240.0	-111.6	12461.7
38	120.0	-231.6	53653.4
39	144.0	-207.6	43111.1
40	252.0	-99.6	9926.6
41	276.0	-75.6	5720.2
42	300.0	-51.6	2665.9
43	192.0	-159.6	25482.4
44	228.0	-123.6	15284.9
45	312.0	-39.6	1570.7
46	312.0	-39.6	1570.7
47	180.0	-171.6	29457.6
48	288.0	-63.6	4049.0
49	192.0	-159.6	25482.4
50	180.0	-171.6	29457.6
	9756.0		1445067.4
	9504.0		1434658.0
	13212.0		1830557.1
	12144.0		819320.4
	14222.0		1217317.3
	18264.0		1240847.3
	40583.0		33951134.0
	24238.0		1610062.8
	21084.0		1900881.1
	0.0		0.0
	173003		46794097.3
	Sum(n)		Sum(n-N)²

No. of Samples (x) : 492

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : 351.63

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: 308.71

2 Std Deviations: 617.43

Degree of Freedom(df).= (x) - 1 Data listed on Table B-1

(df) = 1.650

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = 374.60 DPM/100cm²

GUIDELINE VALUE: 5000 DPM/100cm²

Acceptable Level: 5000 DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines

(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	491	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	491	1.650	95%

PERFORMED BY: [signature] DATE: 1-3-02

REVIEWED BY: W. A. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	192.0	-159.63	25482.41
52	156.0	-195.63	38271.92
53	288.0	-63.63	4049.05
54	240.0	-111.63	12461.73
55	108.0	-243.63	59356.61
56	276.0	-75.63	5720.22
57	228.0	-123.63	15284.90
58	228.0	-123.63	15284.90
59	324.0	-27.63	763.53
60	300.0	-51.63	2665.88
61	108.0	-243.63	59356.61
62	252.0	-99.63	9926.56
63	120.0	-231.63	53653.44
64	216.0	-135.63	18396.07
65	240.0	-111.63	12461.73
66	288.0	-63.63	4049.05
67	144.0	-207.63	43111.09
68	168.0	-183.63	33720.75
69	216.0	-135.63	18396.07
70	228.0	-123.63	15284.90
71	396.0	44.37	1968.51
72	204.0	-147.63	21795.24
73	120.0	-231.63	53653.44
74	156.0	-195.63	38271.92
75	132.0	-219.63	48238.27
76	180.0	-171.63	29457.58
77	240.0	-111.63	12461.73
78	228.0	-123.63	15284.90
79	132.0	-219.63	48238.27
80	132.0	-219.63	48238.27
81	228.0	-123.63	15284.90
82	132.0	-219.63	48238.27
83	168.0	-183.63	33720.75
84	192.0	-159.63	25482.41
85	120.0	-231.63	53653.44
86	192.0	-159.63	25482.41
87	120.0	-231.63	53653.44
88	204.0	-147.63	21795.24
89	228.0	-123.63	15284.90
90	192.0	-159.63	25482.41
91	96.0	-255.63	65347.78
92	168.0	-183.63	33720.75
93	144.0	-207.63	43111.09
94	192.0	-159.63	25482.41
95	132.0	-219.63	48238.27
96	132.0	-219.63	48238.27
97	108.0	-243.63	59356.61
98	240.0	-111.63	12461.73
99	336.0	-15.63	244.36
100	192.0	-159.63	25482.41
	9756.0		1445067.4
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	144.0	-207.63	43111.09
102	204.0	-147.63	21795.24
103	168.0	-183.63	33720.75
104	216.0	-135.63	18396.07
105	240.0	-111.63	12461.73
106	180.0	-171.63	29457.58
107	156.0	-195.63	38271.92
108	180.0	-171.63	29457.58
109	72.0	-279.63	78194.12
110	192.0	-159.63	25482.41
111	264.0	-87.63	7679.39
112	192.0	-159.63	25482.41
113	204.0	-147.63	21795.24
114	240.0	-111.63	12461.73
115	84.0	-267.63	71626.95
116	204.0	-147.63	21795.24
117	180.0	-171.63	29457.58
118	144.0	-207.63	43111.09
119	144.0	-207.63	43111.09
120	120.0	-231.63	53653.44
121	156.0	-195.63	38271.92
122	144.0	-207.63	43111.09
123	240.0	-111.63	12461.73
124	108.0	-243.63	59356.61
125	204.0	-147.63	21795.24
126	192.0	-159.63	25482.41
127	120.0	-231.63	53653.44
128	228.0	-123.63	15284.90
129	180.0	-171.63	29457.58
130	240.0	-111.63	12461.73
131	180.0	-171.63	29457.58
132	216.0	-135.63	18396.07
133	252.0	-99.63	9926.56
134	156.0	-195.63	38271.92
135	228.0	-123.63	15284.90
136	84.0	-267.63	71626.95
137	300.0	-51.63	2665.88
138	240.0	-111.63	12461.73
139	252.0	-99.63	9926.56
140	240.0	-111.63	12461.73
141	228.0	-123.63	15284.90
142	192.0	-159.63	25482.41
143	252.0	-99.63	9926.56
144	156.0	-195.63	38271.92
145	168.0	-183.63	33720.75
146	156.0	-195.63	38271.92
147	180.0	-171.63	29457.58
148	288.0	-63.63	4049.05
149	216.0	-135.63	18396.07
150	180.0	-171.63	29457.58
	9504.0		1434658.0
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	132.0	-219.63	48238.27
152	204.0	-147.63	21795.24
153	204.0	-147.63	21795.24
154	168.0	-183.63	33720.75
155	144.0	-207.63	43111.09
156	168.0	-183.63	33720.75
157	228.0	-123.63	15284.90
158	192.0	-159.63	25482.41
159	144.0	-207.63	43111.09
160	168.0	-183.63	33720.75
161	204.0	-147.63	21795.24
162	300.0	-51.63	2665.88
163	432.0	80.37	6459.00
164	348.0	-3.63	13.19
165	396.0	44.37	1968.51
166	216.0	-135.63	18396.07
167	252.0	-99.63	9926.56
168	168.0	-183.63	33720.75
169	264.0	-87.63	7679.39
170	576.0	224.37	50340.95
171	168.0	-183.63	33720.75
172	180.0	-171.63	29457.58
173	144.0	-207.63	43111.09
174	192.0	-159.63	25482.41
175	132.0	-219.63	48238.27
176	144.0	-207.63	43111.09
177	204.0	-147.63	21795.24
178	780.0	428.37	183499.05
179	456.0	104.37	10892.66
180	840.0	488.37	238503.19
181	156.0	-195.63	38271.92
182	108.0	-243.63	59356.61
183	348.0	-3.63	13.19
184	516.0	164.37	27016.80
185	408.0	56.37	3177.34
186	240.0	-111.63	12461.73
187	72.0	-279.63	78194.12
188	120.0	-231.63	53653.44
189	0.0	0.00	0.00
190	312.0	-39.63	1570.70
191	156.0	-195.63	38271.92
192	60.0	-291.63	85049.29
193	216.0	-135.63	18396.07
194	96.0	-255.63	65347.78
195	372.0	20.37	414.85
196	684.0	332.37	110468.41
197	456.0	104.37	10892.66
198	420.0	68.37	4674.17
199	180.0	-171.63	29457.58
200	144.0	-207.63	43111.09
	13212.0		1830557.1
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	240.0	-111.63	12461.73
202	384.0	32.37	1047.68
203	360.0	8.37	70.02
204	300.0	-51.63	2665.88
205	192.0	-159.63	25482.41
206	192.0	-159.63	25482.41
207	240.0	-111.63	12461.73
208	276.0	-75.63	5720.22
209	288.0	-63.63	4049.05
210	180.0	-171.63	29457.58
211	240.0	-111.63	12461.73
212	192.0	-159.63	25482.41
213	216.0	-135.63	18396.07
214	264.0	-87.63	7679.39
215	312.0	-39.63	1570.70
216	240.0	-111.63	12461.73
217	180.0	-171.63	29457.58
218	132.0	-219.63	48238.27
219	240.0	-111.63	12461.73
220	168.0	-183.63	33720.75
221	300.0	-51.63	2665.88
222	276.0	-75.63	5720.22
223	252.0	-99.63	9926.56
224	360.0	8.37	70.02
225	216.0	-135.63	18396.07
226	360.0	8.37	70.02
227	144.0	-207.63	43111.09
228	276.0	-75.63	5720.22
229	264.0	-87.63	7679.39
230	264.0	-87.63	7679.39
231	204.0	-147.63	21795.24
232	228.0	-123.63	15284.90
233	216.0	-135.63	18396.07
234	324.0	-27.63	763.53
235	156.0	-195.63	38271.92
236	168.0	-183.63	33720.75
237	120.0	-231.63	53653.44
238	276.0	-75.63	5720.22
239	252.0	-99.63	9926.56
240	336.0	-15.63	244.36
241	240.0	-111.63	12461.73
242	180.0	-171.63	29457.58
243	204.0	-147.63	21795.24
244	180.0	-171.63	29457.58
245	240.0	-111.63	12461.73
246	384.0	32.37	1047.68
247	276.0	-75.63	5720.22
248	156.0	-195.63	38271.92
249	132.0	-219.63	48238.27
250	324.0	-27.63	763.53
	12144.0		819320.4
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
251	348.0	-3.63	13.19
252	228.0	-123.63	15284.90
253	96.0	-255.63	65347.78
254	288.0	-63.63	4049.05
255	300.0	-51.63	2665.88
256	204.0	-147.63	21795.24
257	324.0	-27.63	763.53
258	312.0	-39.63	1570.70
259	72.0	-279.63	78194.12
260	300.0	-51.63	2665.88
261	228.0	-123.63	15284.90
262	330.0	-21.63	467.95
263	264.0	-87.63	7679.39
264	252.0	-99.63	9926.56
265	300.0	-51.63	2665.88
266	192.0	-159.63	25482.41
267	204.0	-147.63	21795.24
268	288.0	-63.63	4049.05
269	348.0	-3.63	13.19
270	312.0	-39.63	1570.70
271	228.0	-123.63	15284.90
272	132.0	-219.63	48238.27
273	216.0	-135.63	18396.07
274	276.0	-75.63	5720.22
275	252.0	-99.63	9926.56
276	144.0	-207.63	43111.09
277	216.0	-135.63	18396.07
278	156.0	-195.63	38271.92
279	264.0	-87.63	7679.39
280	288.0	-63.63	4049.05
281	288.0	-63.63	4049.05
282	240.0	-111.63	12461.73
283	144.0	-207.63	43111.09
284	120.0	-231.63	53653.44
285	252.0	-99.63	9926.56
286	276.0	-75.63	5720.22
287	324.0	-27.63	763.53
288	108.0	-243.63	59356.61
289	108.0	-243.63	59356.61
290	288.0	-63.63	4049.05
291	348.0	-3.63	13.19
292	468.0	116.37	13541.48
293	284.0	-67.63	4574.10
294	372.0	20.37	414.85
295	240.0	-111.63	12461.73
296	444.0	92.37	8531.83
297	360.0	8.37	70.02
298	720.0	368.37	135694.90
299	756.0	404.37	163513.39
300	720.0	368.37	135694.90
	14222.0		1217317.3
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
301	696.0	344.37	118589.24
302	492.0	140.37	19703.14
303	1020.0	668.37	446715.63
304	516.0	164.37	27016.80
305	552.0	200.37	40147.29
306	696.0	344.37	118589.24
307	216.0	-135.63	18396.07
308	384.0	32.37	1047.68
309	276.0	-75.63	5720.22
310	264.0	-87.63	7679.39
311	444.0	92.37	8531.83
312	468.0	116.37	13541.48
313	276.0	-75.63	5720.22
314	324.0	-27.63	763.53
315	516.0	164.37	27016.80
316	180.0	-171.63	29457.58
317	156.0	-195.63	38271.92
318	192.0	-159.63	25482.41
319	240.0	-111.63	12461.73
320	216.0	-135.63	18396.07
321	432.0	80.37	6459.00
322	180.0	-171.63	29457.58
323	168.0	-183.63	33720.75
324	312.0	-39.63	1570.70
325	252.0	-99.63	9926.56
326	276.0	-75.63	5720.22
327	408.0	56.37	3177.34
328	372.0	20.37	414.85
329	312.0	-39.63	1570.70
330	300.0	-51.63	2665.88
331	264.0	-87.63	7679.39
332	288.0	-63.63	4049.05
333	348.0	-3.63	13.19
334	396.0	44.37	1968.51
335	396.0	44.37	1968.51
336	420.0	68.37	4674.17
337	312.0	-39.63	1570.70
338	324.0	-27.63	763.53
339	324.0	-27.63	763.53
340	420.0	68.37	4674.17
341	516.0	164.37	27016.80
342	336.0	-15.63	244.36
343	132.0	-219.63	48238.27
344	444.0	92.37	8531.83
345	408.0	56.37	3177.34
346	240.0	-111.63	12461.73
347	372.0	20.37	414.85
348	516.0	164.37	27016.80
349	276.0	-75.63	5720.22
350	396.0	44.37	1968.51
	18264.0		1240847.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
351	480.0	128.37	16478.31
352	492.0	140.37	19703.14
353	396.0	44.37	1968.51
354	360.0	8.37	70.02
355	420.0	68.37	4674.17
356	384.0	32.37	1047.68
357	408.0	56.37	3177.34
358	444.0	92.37	8531.83
359	360.0	8.37	70.02
360	300.0	-51.63	2665.88
361	336.0	-15.63	244.36
362	444.0	92.37	8531.83
363	576.0	224.37	50340.95
364	480.0	128.37	16478.31
365	600.0	248.37	61686.61
366	672.0	320.37	102635.58
367	240.0	-111.63	12461.73
368	636.0	284.37	80865.09
369	588.0	236.37	55869.78
370	264.0	-87.63	7679.39
371	240.0	-111.63	12461.73
372	299.0	-52.63	2770.14
373	480.0	128.37	16478.31
374	348.0	-3.63	13.19
375	600.0	248.37	61686.61
376	276.0	-75.63	5720.22
377	264.0	-87.63	7679.39
378	1380.0	1028.37	1057540.51
379	276.0	-75.63	5720.22
380	456.0	104.37	10892.66
381	204.0	-147.63	21795.24
382	768.0	416.37	173362.22
383	840.0	488.37	238503.19
384	732.0	380.37	144679.73
385	1728.0	1376.37	1894388.56
386	2208.0	1856.37	3446101.73
387	2112.0	1760.37	3098895.09
388	1320.0	968.37	937736.36
389	3084.0	2732.37	7465834.27
390	792.0	440.37	193923.88
391	2088.0	1736.37	3014973.44
392	1020.0	668.37	446715.63
393	672.0	320.37	102635.58
394	2364.0	2012.37	4049624.51
395	1188.0	836.37	699511.24
396	2592.0	2240.37	5019248.27
397	1068.0	716.37	513182.95
398	1128.0	776.37	602747.09
399	852.0	500.37	250368.02
400	324.0	-27.63	763.53
	40583		33951134.023
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
401	240.0	-111.63	12461.73
402	300.0	-51.63	2665.88
403	408.0	56.37	3177.34
404	396.0	44.37	1968.51
405	756.0	404.37	163513.39
406	408.0	56.37	3177.34
407	468.0	116.37	13541.48
408	442.0	90.37	8166.35
409	396.0	44.37	1968.51
410	564.0	212.37	45100.12
411	612.0	260.37	67791.44
412	396.0	44.37	1968.51
413	468.0	116.37	13541.48
414	396.0	44.37	1968.51
415	504.0	152.37	23215.97
416	600.0	248.37	61686.61
417	444.0	92.37	8531.83
418	300.0	-51.63	2665.88
419	468.0	116.37	13541.48
420	576.0	224.37	50340.95
421	624.0	272.37	74184.27
422	504.0	152.37	23215.97
423	420.0	68.37	4674.17
424	444.0	92.37	8531.83
425	432.0	80.37	6459.00
426	504.0	152.37	23215.97
427	492.0	140.37	19703.14
428	504.0	152.37	23215.97
429	288.0	-63.63	4049.05
430	516.0	164.37	27016.80
431	456.0	104.37	10892.66
432	540.0	188.37	35482.46
433	504.0	152.37	23215.97
434	504.0	152.37	23215.97
435	612.0	260.37	67791.44
436	300.0	-51.63	2665.88
437	372.0	20.37	414.85
438	648.0	296.37	87833.92
439	468.0	116.37	13541.48
440	396.0	44.37	1968.51
441	588.0	236.37	55869.78
442	528.0	176.37	31105.63
443	420.0	68.37	4674.17
444	660.0	308.37	95090.75
445	720.0	368.37	135694.90
446	564.0	212.37	45100.12
447	432.0	80.37	6459.00
448	540.0	188.37	35482.46
449	300.0	-51.63	2665.88
450	816.0	464.37	215637.53
	24238.0		1610062.8
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY ALPHA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
451	600.0	248.37	61686.61
452	516.0	164.37	27016.80
453	468.0	116.37	13541.48
454	540.0	188.37	35482.46
455	480.0	128.37	16478.31
456	624.0	272.37	74184.27
457	576.0	224.37	50340.95
458	540.0	188.37	35482.46
459	480.0	128.37	16478.31
460	576.0	224.37	50340.95
461	828.0	476.37	226926.36
462	708.0	356.37	126998.07
463	564.0	212.37	45100.12
464	576.0	224.37	50340.95
465	492.0	140.37	19703.14
466	576.0	224.37	50340.95
467	768.0	416.37	173362.22
468	744.0	392.37	153952.56
469	468.0	116.37	13541.48
470	492.0	140.37	19703.14
471	252.0	-99.63	9926.56
472	552.0	200.37	40147.29
473	600.0	248.37	61686.61
474	600.0	248.37	61686.61
475	264.0	-87.63	7679.39
476	300.0	-51.63	2665.88
477	252.0	-99.63	9926.56
478	252.0	-99.63	9926.56
479	240.0	-111.63	12461.73
480	120.0	-231.63	53653.44
481	456.0	104.37	10892.66
482	600.0	248.37	61686.61
483	420.0	68.37	4674.17
484	456.0	104.37	10892.66
485	684.0	332.37	110468.41
486	636.0	284.37	80865.09
487	552.0	200.37	40147.29
488	468.0	116.37	13541.48
489	444.0	92.37	8531.83
490	384.0	32.37	1047.68
491	456.0	104.37	10892.66
492	480.0	128.37	16478.31
493	0.0	0.00	0.00
494	0.0	0.00	0.00
495	0.0	0.00	0.00
496	0.0	0.00	0.00
497	0.0	0.00	0.00
498	0.0	0.00	0.00
499	0.0	0.00	0.00
500	0.0	0.00	0.00
	21084		1900881.050
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
501	0.0	0.00	0.00
502	0.0	0.00	0.00
503	0.0	0.00	0.00
504	0.0	0.00	0.00
505	0.0	0.00	0.00
506	0.0	0.00	0.00
507	0.0	0.00	0.00
508	0.0	0.00	0.00
509	0.0	0.00	0.00
510	0.0	0.00	0.00
511	0.0	0.00	0.00
512	0.0	0.00	0.00
513	0.0	0.00	0.00
514	0.0	0.00	0.00
515	0.0	0.00	0.00
516	0.0	0.00	0.00
517	0.0	0.00	0.00
518	0.0	0.00	0.00
519	0.0	0.00	0.00
520	0.0	0.00	0.00
521	0.0	0.00	0.00
522	0.0	0.00	0.00
523	0.0	0.00	0.00
524	0.0	0.00	0.00
525	0.0	0.00	0.00
526	0.0	0.00	0.00
527	0.0	0.00	0.00
528	0.0	0.00	0.00
529	0.0	0.00	0.00
530	0.0	0.00	0.00
531	0.0	0.00	0.00
532	0.0	0.00	0.00
533	0.0	0.00	0.00
534	0.0	0.00	0.00
535	0.0	0.00	0.00
536	0.0	0.00	0.00
537	0.0	0.00	0.00
538	0.0	0.00	0.00
539	0.0	0.00	0.00
540	0.0	0.00	0.00
541	0.0	0.00	0.00
542	0.0	0.00	0.00
543	0.0	0.00	0.00
544	0.0	0.00	0.00
545	0.0	0.00	0.00
546	0.0	0.00	0.00
547	0.0	0.00	0.00
548	0.0	0.00	0.00
549	0.0	0.00	0.00
550	0.0	0.00	0.00
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
1	0.0	0.0	0.0
2	253.0	-565.8	320091.5
3	0.0	0.0	0.0
4	1150.0	331.2	109715.8
5	1058.0	239.2	57232.8
6	460.0	-358.8	128713.2
7	713.0	-105.8	11186.5
8	920.0	101.2	10248.3
9	529.0	-289.8	83964.5
10	483.0	-335.8	112739.0
11	322.0	-496.8	246776.7
12	621.0	-197.8	39111.5
13	230.0	-588.8	346645.7
14	483.0	-335.8	112739.0
15	690.0	-128.8	16580.7
16	1196.0	377.2	142305.3
17	759.0	-59.8	3572.0
18	736.0	-82.8	6850.3
19	322.0	-496.8	246776.7
20	529.0	-289.8	83964.5
21	598.0	-220.8	48737.7
22	1242.0	423.2	179126.8
23	1012.0	193.2	37339.3
24	828.0	9.2	85.3
25	0.0	0.0	0.0
26	23.0	-795.8	633243.9
27	690.0	-128.8	16580.7
28	1035.0	216.2	46757.0
29	1748.0	929.2	863475.3
30	1702.0	883.2	780101.8
31	828.0	9.2	85.3
32	1150.0	331.2	109715.8
33	598.0	-220.8	48737.7
34	1357.0	538.2	289695.6
35	1242.0	423.2	179126.8
36	1495.0	676.2	457292.1
37	138.0	-680.8	463442.7
38	138.0	-680.8	463442.7
39	0.0	0.0	0.0
40	1403.0	584.2	341329.1
41	1104.0	285.2	81358.3
42	1265.0	446.2	199124.6
43	299.0	-519.8	270157.0
44	0.0	0.0	0.0
45	322.0	-496.8	246776.7
46	1242.0	423.2	179126.8
47	1610.0	791.2	626050.8
48	943.0	124.2	15434.0
49	345.0	-473.8	224454.5
50	460.0	-358.8	128713.2
	32430.0		5860845.7
	30774.0		8313930.3
	28674.0		12825379.1
	27139.0		5272096.5
	33760.0		7841930.2
	50646.0		19531517.2
	89907.0		129726906.1
	44528.0		10682627.2
	28704.0		7961182.8
	0.0		0.0
	402833		217025140.7
	Sum(n)		Sum(n-N)²

No. of Samples (x) : **492**

COUNT TIME: 0.5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)
Sample Mean (N) : **818.77**

Standard Deviation (Sd) = SQRT [(n-N)² ÷ (x - 1)]

Standard Deviation: **664.84**
2 Std Deviations: **1329.67**
Degree of Freedom(df).= (x) - 1 Data listed on Table B-1
(df) = **1.650**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **868.22** DPM/100cm²
GUIDELINE VALUE: **5000** DPM/100cm²
Acceptable Level: **5000** DPM/100cm²

TABLE B - 1

Factors for Comparision of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:
Interpolate between the listed values.

(df) high value(Z)	INFINITE	is (B)	1.645	95%
(df) low value(Y)	400	is (A)	1.649	95%
Desired value(df) (X)	491	is calculated as follow:		

EXP[((Ln(B)-Ln(A)) ÷ (Z-Y)) (X-Y) + Ln(A)]

The (df) value for (X)	491	1.650	95%

PERFORMED BY: SKeyin DATE: 1-2-02

REVIEWED BY: W.A. Rogers DATE: 1-2-02

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
51	0.0	0.00	0.00
52	874.0	55.23	3050.77
53	1058.0	239.23	57232.78
54	989.0	170.23	28979.53
55	621.0	-197.77	39111.49
56	644.0	-174.77	30543.25
57	644.0	-174.77	30543.25
58	1357.0	538.23	289695.56
59	1150.0	331.23	109715.79
60	1518.0	699.23	488927.82
61	736.0	-82.77	6850.25
62	414.0	-404.77	163835.73
63	828.0	9.23	85.26
64	414.0	-404.77	163835.73
65	0.0	0.00	0.00
66	897.0	78.23	6120.52
67	1150.0	331.23	109715.79
68	1587.0	768.23	590183.08
69	943.0	124.23	15434.02
70	391.0	-427.77	182983.97
71	0.0	0.00	0.00
72	782.0	-36.77	1351.76
73	851.0	32.23	1039.01
74	782.0	-36.77	1351.76
75	598.0	-220.77	48737.74
76	138.0	-680.77	463442.70
77	0.0	0.00	0.00
78	253.0	-565.77	320091.46
79	1334.0	515.23	265465.81
80	690.0	-128.77	16580.75
81	253.0	-565.77	320091.46
82	667.0	-151.77	23033.00
83	0.0	0.00	0.00
84	0.0	0.00	0.00
85	1265.0	446.23	199124.55
86	1058.0	239.23	57232.78
87	1334.0	515.23	265465.81
88	0.0	0.00	0.00
89	0.0	0.00	0.00
90	69.0	-749.77	562149.44
91	966.0	147.23	21677.77
92	1196.0	377.23	142305.29
93	989.0	170.23	28979.53
94	0.0	0.00	0.00
95	0.0	0.00	0.00
96	161.0	-657.77	432656.45
97	644.0	-174.77	30543.25
98	1403.0	584.23	341329.06
99	782.0	-36.77	1351.76
100	0.0	0.00	0.00
	32430.0		5860845.7
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
101	0.0	0.00	0.00
102	92.0	-726.77	528189.20
103	851.0	32.23	1039.01
104	1012.0	193.23	37339.28
105	1449.0	630.23	397194.57
106	414.0	-404.77	163835.73
107	690.0	-128.77	16580.75
108	322.0	-496.77	246776.72
109	966.0	147.23	21677.77
110	1196.0	377.23	142305.29
111	782.0	-36.77	1351.76
112	0.0	0.00	0.00
113	46.0	-772.77	597167.69
114	0.0	0.00	0.00
115	1173.0	354.23	125481.54
116	1058.0	239.23	57232.78
117	1058.0	239.23	57232.78
118	0.0	0.00	0.00
119	299.0	-519.77	270156.97
120	759.0	-59.77	3572.01
121	621.0	-197.77	39111.49
122	1012.0	193.23	37339.28
123	1012.0	193.23	37339.28
124	0.0	0.00	0.00
125	0.0	0.00	0.00
126	115.0	-703.77	495286.95
127	1265.0	446.23	199124.55
128	1012.0	193.23	37339.28
129	759.0	-59.77	3572.01
130	759.0	-59.77	3572.01
131	230.0	-588.77	346645.71
132	46.0	-772.77	597167.69
133	920.0	101.23	10248.27
134	621.0	-197.77	39111.49
135	1081.0	262.23	68766.53
136	529.0	-289.77	83964.49
137	69.0	-749.77	562149.44
138	0.0	0.00	0.00
139	1771.0	952.23	906749.10
140	1265.0	446.23	199124.55
141	851.0	32.23	1039.01
142	92.0	-726.77	528189.20
143	460.0	-358.77	128713.23
144	23.0	-795.77	633243.94
145	1173.0	354.23	125481.54
146	621.0	-197.77	39111.49
147	828.0	9.23	85.26
148	851.0	32.23	1039.01
149	368.0	-450.77	203190.22
150	253.0	-565.77	320091.46
	30774.0		8313930.3
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
151	1035.0	216.23	46757.03
152	1265.0	446.23	199124.55
153	782.0	-36.77	1351.76
154	0.0	0.00	0.00
155	0.0	0.00	0.00
156	0.0	0.00	0.00
157	0.0	0.00	0.00
158	69.0	-749.77	562149.44
159	0.0	0.00	0.00
160	1610.0	791.23	626050.83
161	644.0	-174.77	30543.25
162	1610.0	791.23	626050.83
163	230.0	-588.77	346645.71
164	138.0	-680.77	463442.70
165	253.0	-565.77	320091.46
166	1104.0	285.23	81358.29
167	1702.0	883.23	780101.84
168	1380.0	561.23	314983.31
169	345.0	-473.77	224454.47
170	230.0	-588.77	346645.71
171	0.0	0.00	0.00
172	46.0	-772.77	597167.69
173	0.0	0.00	0.00
174	0.0	0.00	0.00
175	1196.0	377.23	142305.29
176	1748.0	929.23	863475.34
177	2829.0	2010.23	4041039.69
178	0.0	0.00	0.00
179	0.0	0.00	0.00
180	345.0	-473.77	224454.47
181	1127.0	308.23	95008.04
182	1028.0	209.23	43778.76
183	1150.0	331.23	109715.79
184	575.0	-243.77	59421.99
185	0.0	0.00	0.00
186	184.0	-634.77	402928.21
187	506.0	-312.77	97822.73
188	713.0	-105.77	11186.50
189	0.0	0.00	0.00
190	92.0	-726.77	528189.20
191	506.0	-312.77	97822.73
192	0.0	0.00	0.00
193	828.0	9.23	85.26
194	851.0	32.23	1039.01
195	805.0	-13.77	189.51
196	0.0	0.00	0.00
197	345.0	-473.77	224454.47
198	0.0	0.00	0.00
199	322.0	-496.77	246776.72
200	1081.0	262.23	68766.53
	28674.0		12825379.1
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
201	529.0	-289.77	83964.49
202	69.0	-749.77	562149.44
203	322.0	-496.77	246776.72
204	0.0	0.00	0.00
205	667.0	-151.77	23033.00
206	713.0	-105.77	11186.50
207	690.0	-128.77	16580.75
208	483.0	-335.77	112738.98
209	0.0	0.00	0.00
210	0.0	0.00	0.00
211	644.0	-174.77	30543.25
212	644.0	-174.77	30543.25
213	989.0	170.23	28979.53
214	0.0	0.00	0.00
215	299.0	-519.77	270156.97
216	0.0	0.00	0.00
217	966.0	147.23	21677.77
218	414.0	-404.77	163835.73
219	897.0	78.23	6120.52
220	0.0	0.00	0.00
221	0.0	0.00	0.00
222	0.0	0.00	0.00
223	1219.0	400.23	160187.05
224	621.0	-197.77	39111.49
225	1242.0	423.23	179126.80
226	0.0	0.00	0.00
227	299.0	-519.77	270156.97
228	644.0	-174.77	30543.25
229	506.0	-312.77	97822.73
230	1219.0	400.23	160187.05
231	989.0	170.23	28979.53
232	0.0	0.00	0.00
233	0.0	0.00	0.00
234	207.0	-611.77	374257.96
235	1104.0	285.23	81358.29
236	989.0	170.23	28979.53
237	552.0	-266.77	71164.24
238	0.0	0.00	0.00
239	0.0	0.00	0.00
240	0.0	0.00	0.00
241	1449.0	630.23	397194.57
242	552.0	-266.77	71164.24
243	1678.0	859.23	738282.62
244	506.0	-312.77	97822.73
245	529.0	-289.77	83964.49
246	0.0	0.00	0.00
247	1380.0	561.23	314983.31
248	1035.0	216.23	46757.03
249	1426.0	607.23	368732.81
250	667.0	-151.77	23033.00
	27139.0		5272096.5
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
251	276.0	-542.77	294595.21
252	437.0	-381.77	145745.48
253	690.0	-128.77	16580.75
254	1242.0	423.23	179126.80
255	1840.0	1021.23	1042918.35
256	0.0	0.00	0.00
257	0.0	0.00	0.00
258	184.0	-634.77	402928.21
259	594.0	-224.77	50519.87
260	989.0	170.23	28979.53
261	1012.0	193.23	37339.28
262	0.0	0.00	0.00
263	552.0	-266.77	71164.24
264	0.0	0.00	0.00
265	1357.0	538.23	289695.56
266	943.0	124.23	15434.02
267	782.0	-36.77	1351.76
268	0.0	0.00	0.00
269	460.0	-358.77	128713.23
270	0.0	0.00	0.00
271	1081.0	262.23	68766.53
272	759.0	-59.77	3572.01
273	828.0	9.23	85.26
274	322.0	-496.77	246776.72
275	0.0	0.00	0.00
276	552.0	-266.77	71164.24
277	598.0	-220.77	48737.74
278	368.0	-450.77	203190.22
279	989.0	170.23	28979.53
280	575.0	-243.77	59421.99
281	115.0	-703.77	495286.95
282	805.0	-13.77	189.51
283	506.0	-312.77	97822.73
284	1035.0	216.23	46757.03
285	667.0	-151.77	23033.00
286	345.0	-473.77	224454.47
287	138.0	-680.77	463442.70
288	230.0	-588.77	346645.71
289	506.0	-312.77	97822.73
290	1357.0	538.23	289695.56
291	1886.0	1067.23	1138987.86
292	690.0	-128.77	16580.75
293	782.0	-36.77	1351.76
294	667.0	-151.77	23033.00
295	782.0	-36.77	1351.76
296	1035.0	216.23	46757.03
297	575.0	-243.77	59421.99
298	1334.0	515.23	265465.81
299	1403.0	584.23	341329.06
300	1472.0	653.23	426714.32
	33760.0		7841930.2
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
301	1081.0	262.23	68766.53
302	989.0	170.23	28979.53
303	1035.0	216.23	46757.03
304	644.0	-174.77	30543.25
305	552.0	-266.77	71164.24
306	0.0	0.00	0.00
307	1725.0	906.23	821259.59
308	2093.0	1274.23	1623671.62
309	1518.0	699.23	488927.82
310	713.0	-105.77	11186.50
311	161.0	-657.77	432656.45
312	552.0	-266.77	71164.24
313	299.0	-519.77	270156.97
314	1495.0	676.23	457292.07
315	1587.0	768.23	590183.08
316	253.0	-565.77	320091.46
317	299.0	-519.77	270156.97
318	713.0	-105.77	11186.50
319	2024.0	1205.23	1452588.37
320	989.0	170.23	28979.53
321	2231.0	1412.23	1994404.14
322	437.0	-381.77	145745.48
323	23.0	-795.77	633243.94
324	759.0	-59.77	3572.01
325	1518.0	699.23	488927.82
326	1380.0	561.23	314983.31
327	1541.0	722.23	521621.57
328	874.0	55.23	3050.77
329	713.0	-105.77	11186.50
330	690.0	-128.77	16580.75
331	1357.0	538.23	289695.56
332	1886.0	1067.23	1138987.86
333	2024.0	1205.23	1452588.37
334	506.0	-312.77	97822.73
335	460.0	-358.77	128713.23
336	276.0	-542.77	294595.21
337	1633.0	814.23	662976.58
338	1748.0	929.23	863475.34
339	1909.0	1090.23	1188609.61
340	828.0	9.23	85.26
341	299.0	-519.77	270156.97
342	253.0	-565.77	320091.46
343	943.0	124.23	15434.02
344	1725.0	906.23	821259.59
345	1380.0	561.23	314983.31
346	506.0	-312.77	97822.73
347	1127.0	308.23	95008.04
348	1081.0	262.23	68766.53
349	621.0	-197.77	39111.49
350	1196.0	377.23	142305.29
	50646.0		19531517.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
351	345.0	-473.77	224454.47
352	644.0	-174.77	30543.25
353	966.0	147.23	21677.77
354	552.0	-266.77	71164.24
355	1656.0	837.23	700960.34
356	1357.0	538.23	289695.56
357	1817.0	998.23	996470.60
358	1288.0	469.23	220180.30
359	759.0	-59.77	3572.01
360	1081.0	262.23	68766.53
361	1840.0	1021.23	1042918.35
362	1748.0	929.23	863475.34
363	1104.0	285.23	81358.29
364	667.0	-151.77	23033.00
365	759.0	-59.77	3572.01
366	1334.0	515.23	265465.81
367	667.0	-151.77	23033.00
368	897.0	78.23	6120.52
369	230.0	-588.77	346645.71
370	690.0	-128.77	16580.75
371	414.0	-404.77	163835.73
372	529.0	-289.77	83964.49
373	1771.0	952.23	906749.10
374	1012.0	193.23	37339.28
375	2645.0	1826.23	3335129.67
376	1495.0	676.23	457292.07
377	1104.0	285.23	81358.29
378	943.0	124.23	15434.02
379	2231.0	1412.23	1994404.14
380	1472.0	653.23	426714.32
381	1472.0	653,23	426714.32
382	2714.0	1895.23	3591910.93
383	5290.0	4471.23	19991931.16
384	3473.0	2654.23	7044956.75
385	3243.0	2424.23	5876909.23
386	2829.0	2010.23	4041039.69
387	1863.0	1044.23	1090424.10
388	1748.0	929.23	863475.34
389	2001.0	1182.23	1397676.62
390	2898.0	2079.23	4323212.94
391	4830.0	4011.23	16089996.12
392	2760.0	1941.23	3768388.43
393	4876.0	4057.23	16461145.62
394	5221.0	4402.23	19379661.90
395	3910.0	3091.23	9555726.03
396	2070.0	1251.23	1565585.87
397	782.0	-36.77	1351.76
398	1150.0	331.23	109715.79
399	782.0	-36.77	1351.76
400	1978.0	1159.23	1343822.86
	89907		129726906.134
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
401	1840.0	1021.23	1042918.35
402	1541.0	722.23	521621.57
403	1334.0	515.23	265465.81
404	529.0	-289.77	83964.49
405	1058.0	239.23	57232.78
406	1679.0	860.23	740002.09
407	1449.0	630.23	397194.57
408	1748.0	929.23	863475:34
409	115.0	-703.77	495286.95
410	345.0	-473.77	224454.47
411	276.0	-542.77	294595.21
412	1265.0	446.23	199124.55
413	667.0	-151.77	23033.00
414	966.0	147.23	21677.77
415	138.0	-680.77	463442.70
416	575.0	-243.77	59421.99
417	207.0	-611.77	374257.96
418	1495.0	676.23	457292.07
419	1288.0	469.23	220180.30
420	391.0	-427.77	182983.97
421	851.0	32.23	1039.01
422	0.0	0.00	0.00
423	782.0	-36.77	1351.76
424	1863.0	1044.23	1090424.10
425	874.0	55.23	3050.77
426	1219.0	400.23	160187.05
427	713.0	-105.77	11186.50
428	345.0	-473.77	224454.47
429	828.0	9.23	85.26
430	920.0	101.23	10248.27
431	759.0	-59.77	3572.01
432	1081.0	262.23	68766.53
433	552.0	-266.77	71164.24
434	483.0	-335.77	112738.98
435	805.0	-13.77	189.51
436	1242.0	423.23	179126.80
437	1242.0	423.23	179126.80
438	1058.0	239.23	57232.78
439	920.0	101.23	10248.27
440	253.0	-565.77	320091.46
441	828.0	9.23	85.26
442	920.0	101.23	10248.27
443	1518.0	699.23	488927.82
444	1127.0	308.23	95008.04
445	897.0	78.23	6120.52
446	345.0	-473.77	224454.47
447	690.0	-128.77	16580.75
448	391.0	-427.77	182983.97
449	1219.0	400.23	160187.05
450	897.0	78.23	6120.52
	44528.0		10682627.2
	Sum(n)		Sum(n-N)²

CIMARRON CORPORATION - CIMARRON FACILITY BETA/GAMMA DIRECT
TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE
PHASE III, SUB-AREA "N" AFFECTED - FENCE

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
451	276.0	-542.77	294595.21
452	92.0	-726.77	528189.20
453	782.0	-36.77	1351.76
454	1311.0	492.23	242294.05
455	805.0	-13.77	189.51
456	874.0	55.23	3050.77
457	368.0	-450.77	203190.22
458	299.0	-519.77	270156.97
459	460.0	-358.77	128713.23
460	943.0	124.23	15434.02
461	529.0	-289.77	83964.49
462	1219.0	400.23	160187.05
463	736.0	-82.77	6850.25
464	345.0	-473.77	224454.47
465	345.0	-473.77	224454.47
466	943.0	124.23	15434.02
467	1035.0	216.23	46757.03
468	1495.0	676.23	457292.07
469	322.0	-496.77	246776.72
470	414.0	-404.77	163835.73
471	0.0	0.00	0.00
472	1357.0	538.23	289695.56
473	1633.0	814.23	662976.58
474	1058.0	239.23	57232.78
475	0.0	0.00	0.00
476	0.0	0.00	0.00
477	0.0	0.00	0.00
478	1288.0	469.23	220180.30
479	920.0	101.23	10248.27
480	1426.0	607.23	368732.81
481	897.0	78.23	6120.52
482	828.0	9.23	85.26
483	184.0	-634.77	402928.21
484	1495.0	676.23	457292.07
485	2208.0	1389.23	1929970.38
486	1242.0	423.23	179126.80
487	575.0	-243.77	59421.99
488	0.0	0.00	0.00
489	0.0	0.00	0.00
490	0.0	0.00	0.00
491	0.0	0.00	0.00
492	0.0	0.00	0.00
493	0.0	0.00	0.00
494	0.0	0.00	0.00
495	0.0	0.00	0.00
496	0.0	0.00	0.00
497	0.0	0.00	0.00
498	0.0	0.00	0.00
499	0.0	0.00	0.00
500	0.0	0.00	0.00
	28704		7961182.766
	Sum(n)		Sum(n-N)²

n = DPM/100cm²

Number	n	(n-N)	(n-N)²
501	0.0	0.00	0.00
502	0.0	0.00	0.00
503	0.0	0.00	0.00
504	0.0	0.00	0.00
505	0.0	0.00	0.00
506	0.0	0.00	0.00
507	0.0	0.00	0.00
508	0.0	0.00	0.00
509	0.0	0.00	0.00
510	0.0	0.00	0.00
511	0.0	0.00	0.00
512	0.0	0.00	0.00
513	0.0	0.00	0.00
514	0.0	0.00	0.00
515	0.0	0.00	0.00
516	0.0	0.00	0.00
517	0.0	0.00	0.00
518	0.0	0.00	0.00
519	0.0	0.00	0.00
520	0.0	0.00	0.00
521	0.0	0.00	0.00
522	0.0	0.00	0.00
523	0.0	0.00	0.00
524	0.0	0.00	0.00
525	0.0	0.00	0.00
526	0.0	0.00	0.00
527	0.0	0.00	0.00
528	0.0	0.00	0.00
529	0.0	0.00	0.00
530	0.0	0.00	0.00
531	0.0	0.00	0.00
532	0.0	0.00	0.00
533	0.0	0.00	0.00
534	0.0	0.00	0.00
535	0.0	0.00	0.00
536	0.0	0.00	0.00
537	0.0	0.00	0.00
538	0.0	0.00	0.00
539	0.0	0.00	0.00
540	0.0	0.00	0.00
541	0.0	0.00	0.00
542	0.0	0.00	0.00
543	0.0	0.00	0.00
544	0.0	0.00	0.00
545	0.0	0.00	0.00
546	0.0	0.00	0.00
547	0.0	0.00	0.00
548	0.0	0.00	0.00
549	0.0	0.00	0.00
550	0.0	0.00	0.00
	Sum(n)		Sum(n-N)²