

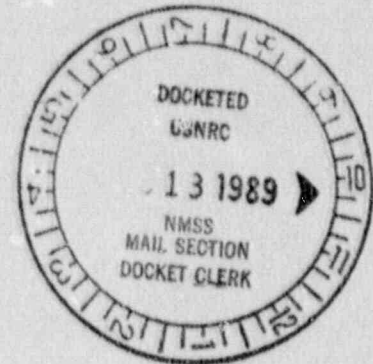
RETURN TO ^{P1-37} 396-SS

70-925

CIMARRON CORPORATION

P.O. BOX 25861 • OKLAHOMA CITY, OKLAHOMA 73125

December 12, 1989



Mr. Glen L. Sjoblom, Deputy Director
Division of Fuel Cycle, Medical,
Academic and Commercial Use Safety
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

RE: License SNM-928; Docket 70-925
Amendment Request: Onsite Disposition of Uranium Containing
Soils Meeting NRC Branch Technical Position Option 2 Criteria

Dear Mr. Sjoblom:

During our December 1, 1989 meeting with you and your staff, Kerr-McGee agreed to perform additional subsurface soil sampling at the Cimarron Facility. Attached for your information is a copy of the sampling protocol for this effort. We began the program on Monday, December 11, 1989.

Sincerely,

J.C. Stauter
J.C. Stauter, Director
Environmental Affairs

JCS:gw

Attachments

cc: Don Srenjawski, NRC Region III
James Berger, ORAU

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*Additional information
26/86*

CIMARRON FACILITY
SPECIAL SAMPLING PROTOCOL
DECEMBER 1989

INTRODUCTION

At the December 1, 1989, meeting between the Nuclear Regulatory Commission and Kerr-McGee Corporation, Kerr-McGee agreed to conduct a special sampling and excavation program to evaluate further subsurface uranium contamination at the Cimarron Uranium Facility. This protocol addresses the sampling portion of that evaluation. Kerr-McGee will sample comprehensively a selected portion of the site and perform random sampling over the potentially impacted area. The excavation process will be discussed in a separate procedure.

EXCAVATION AREA SAMPLING

A demonstration area for excavation was selected just north of the Uranium Plant Yard and east of the Coal R&D Plant. Sixteen sample locations were selected within a 30m x 30m area at 10m grid intervals. The locations are specified in Table 1 and shown in Figure 1. Soil samples will be collected at 2 foot intervals to a depth of 20 feet. Each sample will be analyzed for total uranium activity using the Cimarron Facility gamma spec. analysis system. Ten percent of the samples will be analyzed for K-40, U-238, U-235, U-234, Th-232, Ra-226 and Ra-228 activity.

RANDOM SAMPLING

An area potentially contaminated from previous uranium operations at the Cimarron Facility was defined. This area is shown in Figure 2 and is bounded by a broken line, with each corner coordinate indicated in parentheses.

Twenty sample locations selected randomly are specified in Table 2 and shown in Figure 2. Soil samples will be collected at 2 foot intervals to a depth of 20 feet. Each sample will be analyzed for total uranium activity using the Cimarron Facility gamma spec. analysis system. Ten percent of the samples will be analyzed for K-40, U-238, U-235, U-234, Th-232, Ra-226 and Ra-228 activity.

GAMMA LOGGING

Each of the boreholes will be gamma logged at two foot intervals corresponding to soil sample locations. Count rate data will be evaluated relative to the uranium concentration results.

(DEC 1989)

TABLE 1

CIMARRON FACILITY
EXCAVATION AREA SAMPLING LOCATIONS
DECEMBER 1989

SAMPLE GRID LOCATIONS

<u>SAMPLE NO.</u>	<u>NORTH (METERS)</u>	<u>EAST (METERS)</u>
E-1	170	110
E-2	160	110
E-3	150	110
E-4	140	110
E-5	170	120
E-6	160	120
E-7	150	120
E-8	140	120
E-9	170	130
E-10	160	130
E-11	150	130
E-12	140	130
E-13	170	140
E-14	160	140
E-15	150	140
E-16	140	140

TABLE 2

CIMARRON FACILITY
RANDOM SAMPLING LOCATIONS
DECEMBER 1989

<u>SAMPLE GRID LOCATIONS</u>		
<u>SAMPLE NO.</u>	<u>NORTH (METERS)</u>	<u>EAST (METERS)</u>
R-1	273	188
R-2	133	123
R-3	46	112
R-4*	17	81
R-5*	215	123
R-6	23	123
R-7	212	119
R-8	176	207
R-9	58	172
R-10	65	33
R-11	291	111
R-12	32	151
R-13	164	280
R-14	6	136
R-15	10	60
R-16	221	135
R-17*	186	144
R-18	162	175
R-19*	121	135
R-20	5	158

* Original random location was not accessible, replaced with next random location generated.

FIGURE 1

CIMARRON FACILITY
EXCAVATION AREA SAMPLING LOCATIONS
DECEMBER, 1989

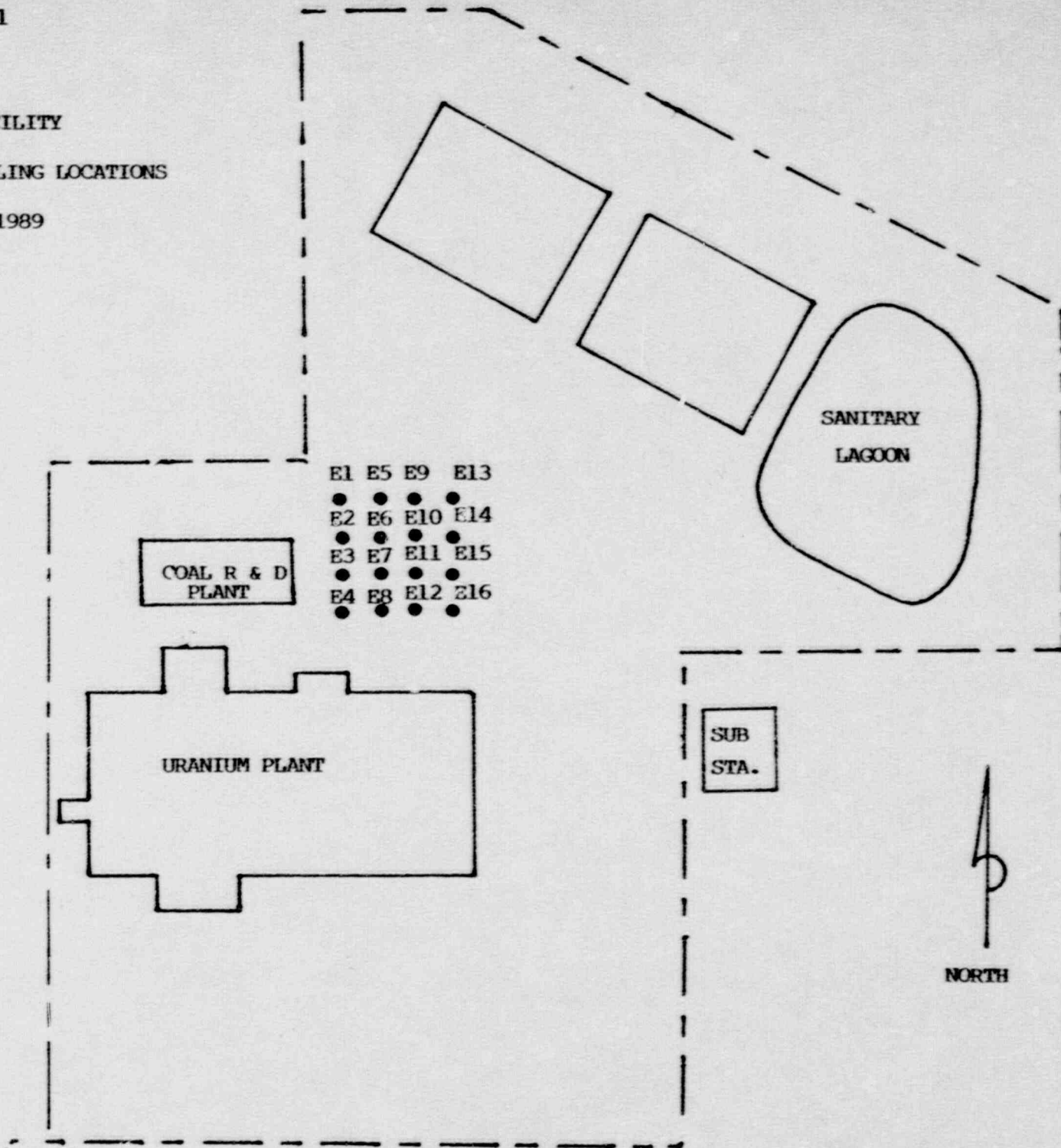
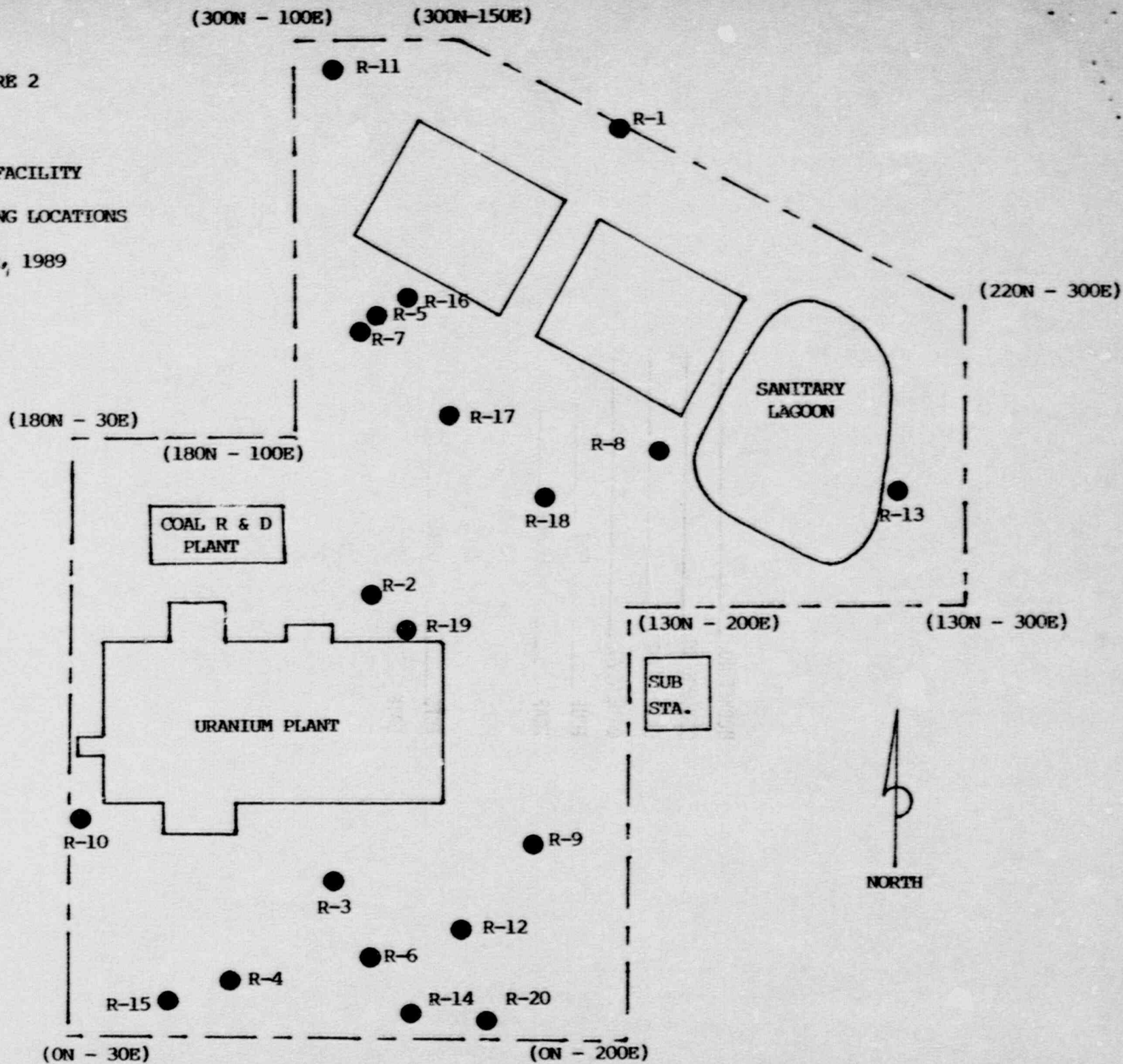


FIGURE 2

CIMARRON FACILITY
RANDOM SAMPLING LOCATIONS

DECEMBER, 1989



DOCKET NO. 70-925
CONTROL NO. 26186
DATE OF DOC. Dec. 12, 1989
DATE RCVD. Dec. 18, 1989
FCUF PDR
FCAF _____ LPDR _____
I & E REF.
SAFEGUARDS
FCFC _____ OTHER _____
DATE 12/18/89 INITIAL SLF