40-8717

FORM NRC-2
(7-77)
10 CFR 40

Approved by GAO
R0203

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described.

1. (Check one)
- ☒ (a) New license
- ☐ (b) Amendment to License No. _____
- ☐ (c) Renewal of License No. _____
- ☐ (d) Previous License No. _____

2. NAME OF APPLICANT
UOCO, Inc. L+L 18370

3. PRINCIPAL BUSINESS ADDRESS
304 First Security Building
Salt Lake City, Utah 84111

4. STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED
See Attached

5. NAME OF PERSON TO BE CONTACTED CONCERNING THIS APPLICATION
John S. Wright

6. TELEPHONE NO. OF INDIVIDUAL NAMED IN ITEM 5
(801) 364-8505

7. DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED
Material will be turned over to domestic Public Utilities to be converted to fuel for power generation.

8. STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE

(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (*Including % U or Th.*)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (*kilograms*)
NATURAL URANIUM		.10% to 1% uranium ore	4,000 Kgs U_3O_8
	13%-86% Uranium Oxide	dried yellowcake or slurry	4,500 Kgs U_3O_8
URANIUM DEPLETED IN THE U-235 ISOTOPE	NONE		
THORIUM (ISOTOPE)	NONE		

(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (*kilograms*)
8,500 Kilograms U_3O_8

9. DESCRIBE THE CHEMICAL, PHYSICAL, METALLURGICAL, OR NUCLEAR PROCESS OR PROCESSES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDING A THOROUGH EVALUATION OF THE POTENTIAL RADIATION HAZARDS ASSOCIATED WITH EACH STEP OR THOSE PROCESSES.
See Attached

Applicant.....
Check No. 01278 $140.00
Amount Fee Category 1C
Type of Fee... app.....
Date Check Rec'd 12-20-78

10. LIST THE NAMES AND ATTACH A RESUME OF THE TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE OF APPLICANT'S SUPERVISORY PERSONNEL AND THE PERSON RESPONSIBLE FOR THE RADIATION SAFETY PROGRAM (OR OF APPLICANT IF AN INDIVIDUAL).
John S. Wright
Robert W. Gilmore

RECEIVED BY LFMB
Date DEC 21 1978
Log # 0127 Dept Nuc Lic
Orig. To.....
Action Compl. 12/22/78

11. DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE: (a) RADIATION DETECTION AND RELATED INSTRUMENTS (including film badges, dosimeters, solutions, air sampling, and other survey equipment as appropriate. The description of radiation detection instruments should include the instrument manufacturer's name, type, sensitivity to radiation detected, window thickness, and the range(s) of each instrument).
See Attached

(b) METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING SURVEY INSTRUMENTS LISTED IN (a) ABOVE, INCLUDING AIR SAMPLING EQUIPMENT (for film badges, specify method of calibrating and processing, or name supplier).

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11(c). VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MISTS, OR GASES, INCLUDING PLAN VIEW SHOWING TYPE AND LOCATION OF HOOD AND FILTERS. MINIMUM VELOCITIES MAINTAINED AT HOOD OPENINGS AND PROCEDURES FOR TESTING SUCH EQUIPMENT.

N/A

12. DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY AND RELATE THESE PROCEDURES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE: (a) SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC., IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS.

Material is stored at licensed mills on UF_6 plants under their license and control.

(b) EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTS WHICH MIGHT INVOLVE SOURCE MATERIAL.

N/A

(c) DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES.

N/A

13. WASTE PRODUCTS: *If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here* ☐ *and explain on a supplemental sheet:*

(a) Quantity and type of radioactive waste that will be generated. NONE

(b) Detailed procedures for waste disposal.

14. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 10 CFR 40 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING:

(a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.

(b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.

(c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (*Specify instrument used, date of calibration and calibration technique used*) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.

(d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

CERTIFICATE

(*This item must be completed by applicant*)

15. *The applicant, and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.*

BY: _____
(*Signature*)

Dated December 15, 1978

John S. Wright
(*Print or type name*)

Manager
(*Title of certifying official authorized to act on behalf of the applicant*)

WARNING: 18 U.S.C. Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

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Addresses at which source material will be stored;

United Nuclear - Homestake Partners Mill
P.O. Box 98
Grants, New Mexico 87020
(Mill located 6 miles N.W. of Grants)

Cotter Corporation Mill
P.O. Box 751
Carson City, Colorado 81212
(Mill located 5 miles south of Carson City)

Western Nuclear Mill
Jeffrey City, Wyoming
(Mill 3 miles north of Jeffrey City)

Allied Chemical UF_6 Plant
P.O. Box 430
Metropolis, Illinois 62960

Kerr-McGee Nuclear UF_6 Plant
P.O. Box 267
Gore, Oklahoma 74435

Possible other uranium mills with whom UOCO has been negotiating to toll mill uranium ores as we buy the ore and identify new producers.

Addresses at which source material will be possessed;

Peavine Siding
Western Pacific Railroad
Sierra County, California
(Sec. 19, T 21 N, R 18 E., M.D.B. & M.)

Appain Siding
Southern Pacific Railroad
Lyon County, Nevada
(Sec. 31, T 18 N, R 25 E., M.D.B. & M.)

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UOCO, Inc.

NRC - 2 ITEM 7

The possession of the source material by UOCO, Inc. is a temporary step in the process of buying uranium ore with contracts to sell concentrate to committed utilities. All of these utilities have in operation or under construction nuclear electric generating plants.

The objective of this program is to develop new uranium producing centers with the right to purchase production. This will augment participating utilities fuel purchases in providing for their fuel requirements.

By buying uranium from producers who do not presently have a market, UOCO give the producers a cash flow with which they can develop their property.

UOCO's ore-buying program is a method of financing exploration and development by buying, handling and milling ore at a cost which gives an early cash flow to a producer who otherwise could not finance himself to test and develop his property.

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UOCO, Inc.

NRC - 2 ITEM 9

UOCO buys the uranium thus having title to the uranium and arranges with licensed public carriers to move the ore or slurry to a mill with whom UOCO has an agreement to toll mill the production. The mill turns over the concentrate to UOCO out of a concentrate lot F.O.B. a UF_6 plant at which point it has been sampled and accepted at the UF_6 Plant.

At the UF_6 Plant as the pounds of yellowcake accumulates UOCO turns over title of the concentrate to one of the six participating utilities.

Under this procedure UOCO does not handle the material and the milling of ore at the mills is handled under the mill license.

The ore, after sampling at the mill, is co-mingled with other mill ore and becomes part of the mill inventory until turned over to UOCO at a UF_6 Plant.

Concentrate at the UF_6 Plant is again stored at the UF_6 Plant under their license until title is passed to UOCO and from UOCO to participating utilities.

Under the above procedure UOCO has title to the ore or slurry when purchased at the producers mine or plant and shipments may have to be stored for up to two months at the mill before it is sampled and milled and when concentrate is delivered

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to UOCO at a UF_6 Plant it may have to be stored until sufficient concentrate is accumulated to divide and transfer title to the utilities.

Utilities receiving final title to the source material from UOCO;

Baltimore Gas and Electric Company
General Public Utilities Corporation
Philadelphia Electric Company
Portland General Electric Company
Rochester Gas and Electric Corporation
Basic Resources, Inc. (Subsidiary of Texas Utility Fuel Co.)

Thus UOCO is not involved in any processing, sampling is done by licensed mills and UF_6 Plants and transportation is by public carriers under D.O.T. regulations. Therefore, UOCO does not pose any potential hazards to workers or the public as the process changes from natural uranium ore to yellowcake (uranium oxide concentrate) are done under present licensed mills co-mingled with regular mill production.

In many cases, however, because of the distance from the mill uranium ore is being shipped to (up to 1,100 miles), it is not economically feasible to ship ore by truck and it must go by railroad.

In this case of transferring uranium ore to a mill, when it is to be shipped by rail, UOCO has the need to stockpile ore at the railroad siding (temporarily taking possession) in order to accumulate up to a maximum of 500 tons at a time. This is necessary in order to offset adverse weather conditions effecting trucking on the roads from the mine to the railroad, the limitations of the mines and truckers to mine and haul the ore fast enough to load cars without demurrage building up and the need to ship up to 500 tons in one lot to Cotter Mill at Canon City, Colorado, so the ore can be sampled when it is received at the mill instead of having to be stockpiled and accumulated into lots at the mill.

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Two of the locations where we have established this stockpiling to be necessary are;

1) At Peavine siding on the Reno Branch of the Western Pacific Railroad under lease to UOCO, Inc. This is located in Sec. 19, T. 21 N., R. 18 E., M.D.B. & M. This leased siding is further described as being just off of U.S. Highway 395, north from Reno about 1 mile inside California. The closest hibitation is on the State Line and Highway 395 approximately 1 mile to the southeast of the leased siding (Lease map and location map attached).

2) The Appian siding on the Southern Pacific Railroad under lease to UOCO, Inc. on the Mina Branch located in Sec. 31, T. 18 N., R. 25 E., M.D.B. & M. approximately 2 miles south of Silver Spring, Nevada near U.S. Highway Alt. 95. The closest habitation is .9 of a mile N.W. from the leased siding where the stockpiling will take place. This is the only habitation within a mile in any direction.

Further, the freshly mined ore to be stockpiled has between 5 and 10 percent moisture which eliminates dust from trucks stockpiling ore and again when it is loaded into the railroad cars from the stockpile by front end loader. There is no contact by either the truck driver or the the loading operator with the uranium ore.

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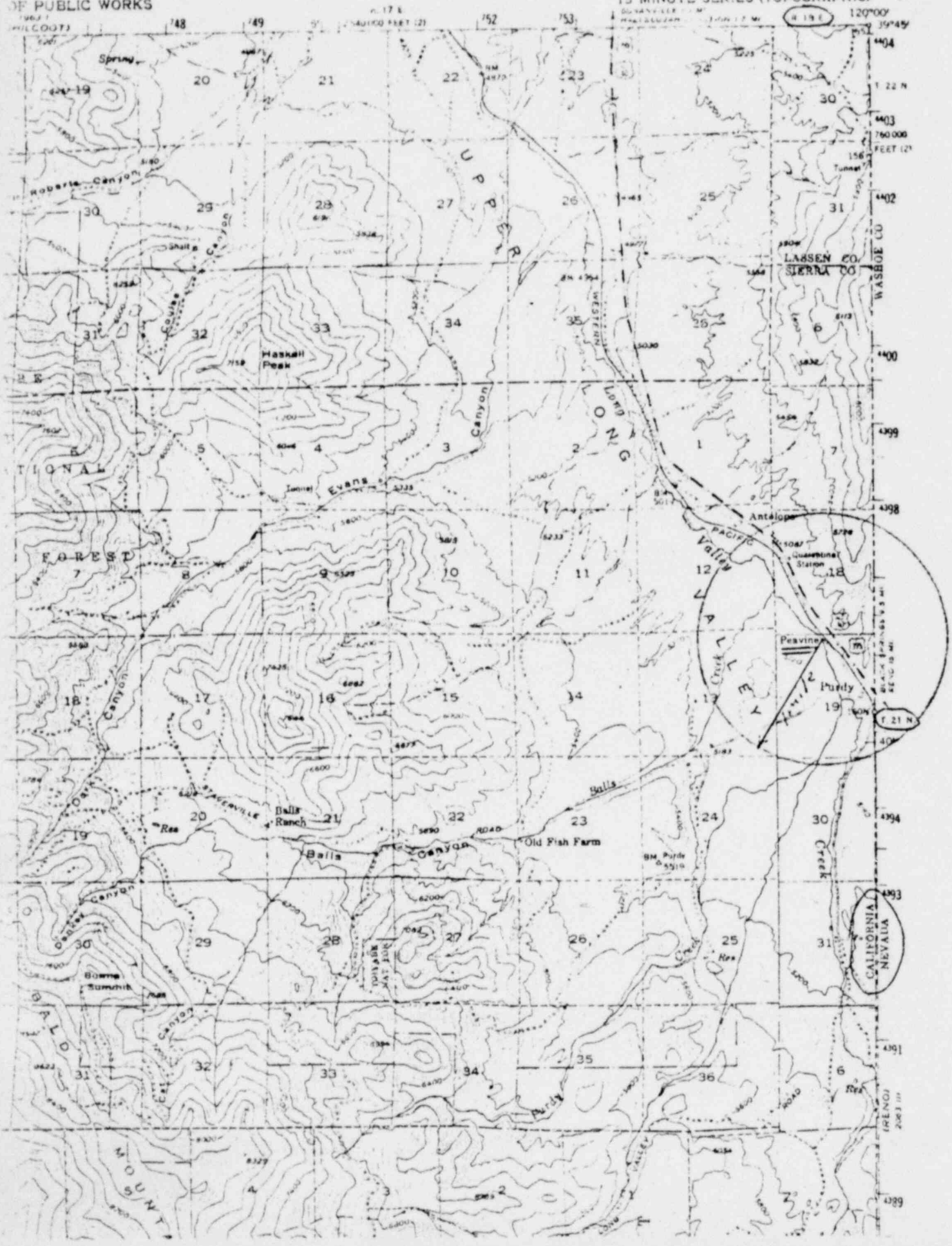
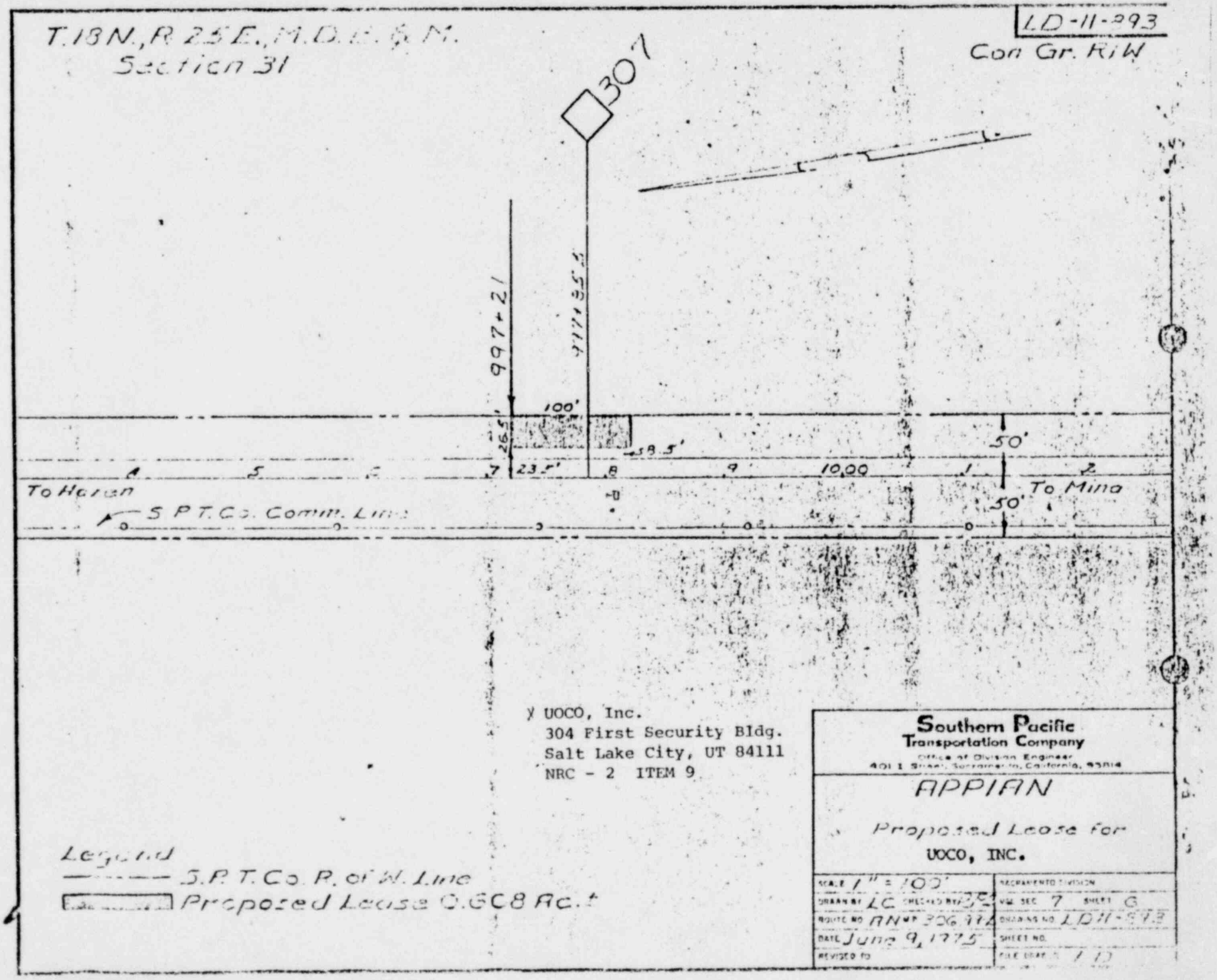
NRC - 2 ITEM 9

F CALIFORNIA
ENTED BY THE
OF PUBLIC WORKS

LOYALTON QUADRANGLE
CALIFORNIA—NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)




LD-11-293
Con Gr. R/W
T.18N., R.25E., M.D.B. & M.
Section 31
30'
997+21
1111+35.2
100'
26.5'
23.5'
58.5'
50'
50'
A
5
6
7
8
9
10.00
1
2
To Hiran
To Mina
S.P.T.Co. Comm. Line
UOCO, Inc.
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Legend
S.P.T.Co. R. of W. Line
Proposed Lease 0.608 Ac.±
Southern Pacific
Transportation Company
Office of Division Engineer
401 I Street, Sacramento, California, 95814
APPIAN
Proposed Lease for
UOCO, INC.
SCALE 1" = 100'
DRAWN BY LC
ROUTE NO AN-P 206.11A
DATE June 9, 1975
REVISED TO
SACRAMENTO DIVISION
VOL. SEC. 7 SHEET 6
DRAWING NO. LD-11-293
SHEET NO.
FILE DRAWING NO. 11

UOCO, INC.
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R25E
Silver Springs
1 mile
Appian
Campground
LAHONTAN RESERVOIR
CHURCHILL VALLEY
CARSON RIVER
SOUTHERN PACIFIC
SILVER SPRINGS BEACH
THE NARROWS
50
95
95A

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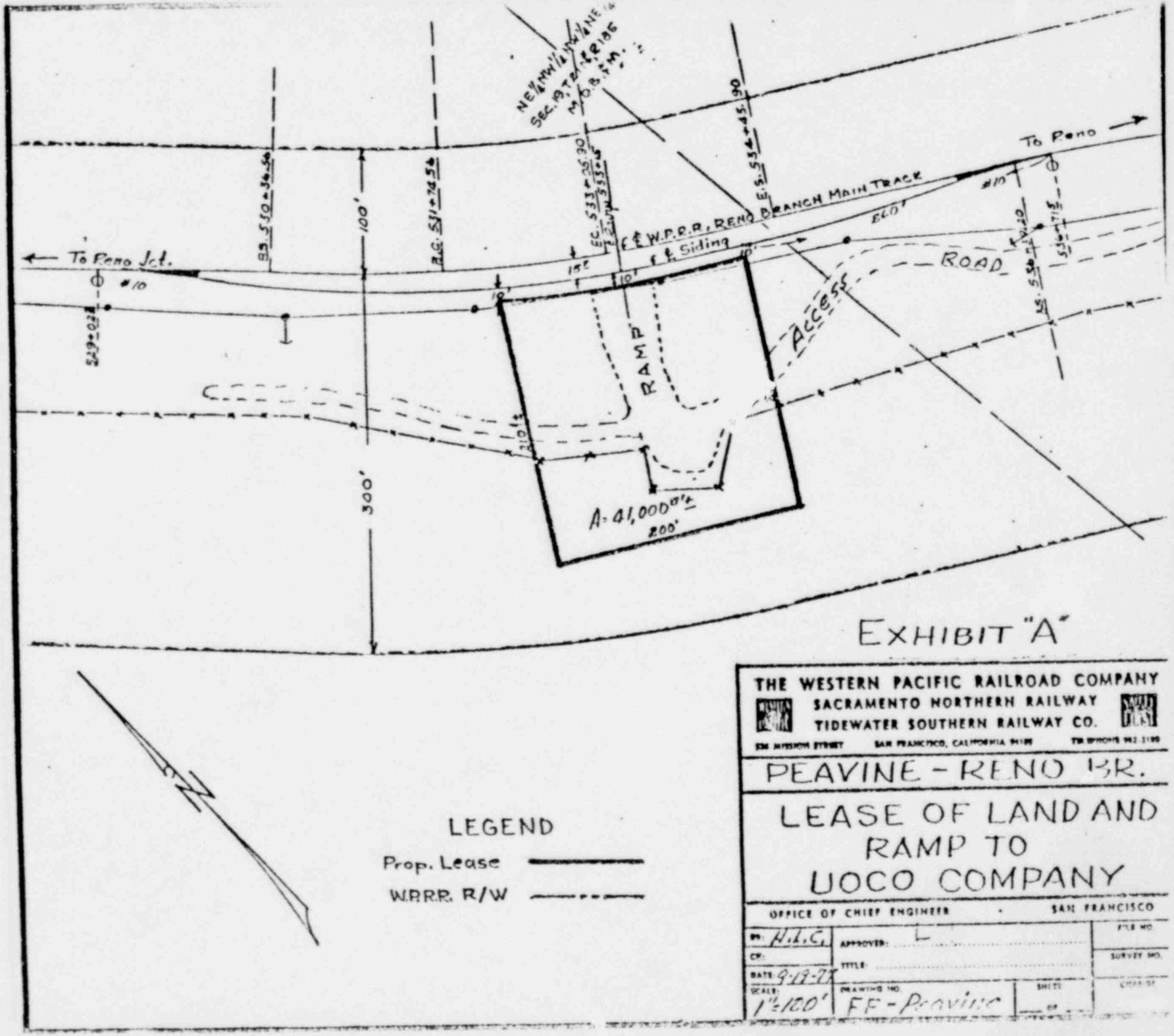

EXHIBIT "A"

THE WESTERN PACIFIC RAILROAD COMPANY
SACRAMENTO NORTHERN RAILWAY
TIDEWATER SOUTHERN RAILWAY CO.
526 MISSION STREET SAN FRANCISCO, CALIFORNIA 94105 TELEPHONE 982-3100

PEAVINE - RENO BR.

LEASE OF LAND AND RAMP TO UOCO COMPANY

OFFICE OF CHIEF ENGINEER · SAN FRANCISCO

BY: H.L.C.	APPROVED:	FILE NO.
CK:	TITLE:	SURVEY NO.
DATE: 9-13-77		
SCALE: 1"=100'	DRAWING NO. FF-Peavine	SHEET OF

UOCO, INC.
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Salt Lake City, Utah 8411

UOCO, Inc.

NRC - 2 ITEM 10

John S. Wright, Manager, UOCO, Inc., technical qualifications applicable to this license include; B.S. Mining Engineering, 1937. Montana Schools of Mines, Professional Degree E.M., 1950, Montana Schools of Mines, as Manager for Lucius Pitkin, Inc., Prime Contractor for AEC, Grand Junction, Colorado operations from 1970 to 1975, he was responsible for maintenance, security, sampling of 31,000 tons of U_3O_8 concentrate stored at the AEC compound, also responsible for shipping all of this concentrate without incident when it was moved from Grand Junction and compliance with regulations including radiological and chemical safety, responible for monitoring radiation of areas, correcting actions when needed, responsible for Electronics and Geophysics groups developing improved sources for uranium detection and assay, also radiological surveys of former ore buying stations and decontamination of former ore buying stations to acceptable levels of radiation.

Robert W. Gilmore, Assistant Manager, UOCO, Inc., experience applicable to this license. 20 years experience, all phases of mining and shipping uranium ore. As Safety Engineer for Kerr-McGee, Grants, New Mexico, was responsible for conformation of activities of mining and hauling ore to the mill to all state and federal regulations and making radioactivity measurements to insure compliance, protect health and minimize danger to life and property.

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UOCO, Inc.

NRC - 2 ITEM 11(a)

Equipment in use by UOCO, Inc. for eU_3O_8 measurements of ore only are;

2 each Mt. Sopris SC 132 scintallometers with DG52 scanners.
3 each Eberline E310E counters with T probe SP195.
1 each Eberline E210R counters with BP-175A probe and HP 270 probe.

NRC - 2 ITEM 11(b)

These are used for ore grade estimation before shipping ore to the mill and are calibrated every 3 months or after each repair at DOE, Grand Junction, Colorado, calibration pads with assistance of DOE contractor Bendix's personell.