WM-11

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
AUG 10 1979

MEMORANDUM FOR: Michael J. Bell, Chief
Low-Level Waste Branch

FROM: Timothy C. Johnson
Low-Level Waste Branch

SUBJECT: MEETING WITH SOUTHWEST-NUCLEAR ON DISPOSAL OF LLW AT CAREY SALT MINE, LYONS, KA

1. Purpose: The purpose of this meeting was to discuss with representatives of Southwest-Nuclear Company (SWN) the use of the Carey Salt Mine in Lyons, KA for disposal of Low-Level Wastes. The development of this site impacts on the Sheffield licensing proceedings and the NRC alternatives study.

2. Attendees: See attached list

3. Discussion: Southwest Nuclear Company of Pleasanton, CA has exercised an option to purchase the Carey Salt Mine, formerly the ORNL Project Salt Vault Site and later the intended HLW Repository Site. SWN was originally contacted by the Lyons Chamber of Commerce to possibly develop the Carey Mine for LLW disposal. They responded with interest and applied to purchase the site. Until recently another organization held the purchase rights and when this option expired, SWN placed a down payment on the site.

SWN has been in contact with State Senators Jansen and Berman and the Lyons Chamber of Commerce, all of whom, SWN reported, are eager to develop the mine for LLW. Governor Bennett, who objected to the use of Lyons for HLW, has not objected to using the mine for LLW. Senator Jansen has introduced legislation which would allow Kansas to except land for perpetuity and, therefore, enable development of the site. SWN indicated they would apply for a perpetual storage permit and incorporate retrievability in their design and operating plan.

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We discussed the corrosion effects on material in a salt mine environment and SWN indicated that the environment appeared to be ideal for waste storage. Equipment which remained from early mining days (early 1900's) showed little corrosion from the constant temperature (20c) and relative humidity (50%) atmosphere. Some corrosion was, however, present where carbon steel was in contact with moisture and salt (shaft materials).

The volume of the mine currently is 45×10^6 ft and additional space could easily be mined. Additional volume could also be obtained by mining above the present level.

The depth of the present mine is 1000 ft. At this depth loadings on the salt are low and mined cubicles are not expected to close by plastic movement (creep) of the salt.

The American Salt Company is currently mining a site approximately 1000 ft from a section of the Carey Mine. In addition, several gas wells are active in an area adjacent to the site. SWM feels that with appropriate controls these activities should not affect waste operations.

SWN indicated that they could dispose of LLW at the same prices charged by NECO and Chem-Nuclear. They would be limited, however, to small packages. The elevator capacity and shaft size would prevent large or heavy items from being transferred into the mine.

SWN indicated a concern for waste form characteristics. They said a completely dry waste would be required and they might not allow UF solidified waste to be stored.

Conslusions: In order to operate the mine, SWN needs to improve the elevator assembly, install power and lighting, install ventilation equipment and possibly filters, and contruct surface facilties.

A great deal of work has been performed by ORNL and AEC in the course of their work at Lyons. Therefore, there is considerable information on salt properties, geology, hydrology, mine operations, and site hazards. The use of the site for LLW disposal appears feasible at this time. SWN, however, I feel, has greatly underestimated the licensing effort required for a permit. They feel Kansas will issue them a permit for pilot plant operation with actual wastes in 2-3 weeks.

SWN has taken steps to maintain communications with political leaders and local citizens, and they realize that the political issues are extemely important.

Attached are copies of the site map, a letter from the Lyons Chamber of Commerce and a sketch of a proposed surface receiving area.

Timothy C. Johnson
Low-Level Waste Branch

Enclosure:
As stated

SOUTHWEST NUCLEAR/NRC 8-2-75

FRED P BEIERLE - SWNC

James L. Harvey - Southwest Nuclear Co.

Lloyd Bolling - U.S. NRC - State Programs

Billy S Dragonette - NRC Waste Mgt

Fleming M Empson NRC Fuel Reprocessing

Tim Johnson NRC Waste Mngt

Martin S Wenden NRC Standards Development

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Land Of Coronado
And Father Padilla

Member
UNITED STATES CHAMBER OF COMMERCE
KANSAS STATE CHAMBER OF COMMERCE

The Lyons Chamber of Commerce

(316) 257-2842

P. O. Box 87
LYONS, KANSAS 67554

March 27, 1978

Mr. Fred Beierle
SWECO
Livingston, Louisiana 70754

Dear Fred;

I am sending a copy of a map that covers mined out areas of the Lyons property (Carey Mine.) Area in red represents that area owned by Interpace and area in blue represents salt rights acquired through long term lease arrangement. I cannot give you a date when this was drawn, we obtained it from Dan Hannah, Lyons Realty.

I am also enclosing a county "land owners" map of Rice for you to work from also. Mrs. Dette Kennedy of Porter Abstract here in Lyons did all of the research for Mapco, so you might want to contact her also, (316) 257-3532. She is a member of the Board of Directors of our Chamber, so you can rest assured all will be kept confidential.

Nelson Hall will be contacting you regarding Friday's meeting with some local people. It was decided at that meeting that Nelson would be the main contact with you, he especially felt that several people should not be bothering you. However, in case you cannot reach him at any time, please feel free to call Dewey Breese, city administrator or myself.

I sincerely hope we can get this project off the ground floor. Glen briefed Nelson Friday on any activity that has taken place between you and him in regard to the project. He also attended the meeting.

It was good visiting with you last Thursday and I look forward to seeing you in Lyons. Please don't hesitate to suggest ways we can help.

Sincerely,

(Mrs.) Pat Walker, Manager
Lyons Chamber of Commerce

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cc: Nelson Hall, Executive Director, RICEDCO
Jack Wempe, President, RICEDCO
Mike Hunt, President, Lyons Chamber of Commerce
Dewey Breese, City Administrator

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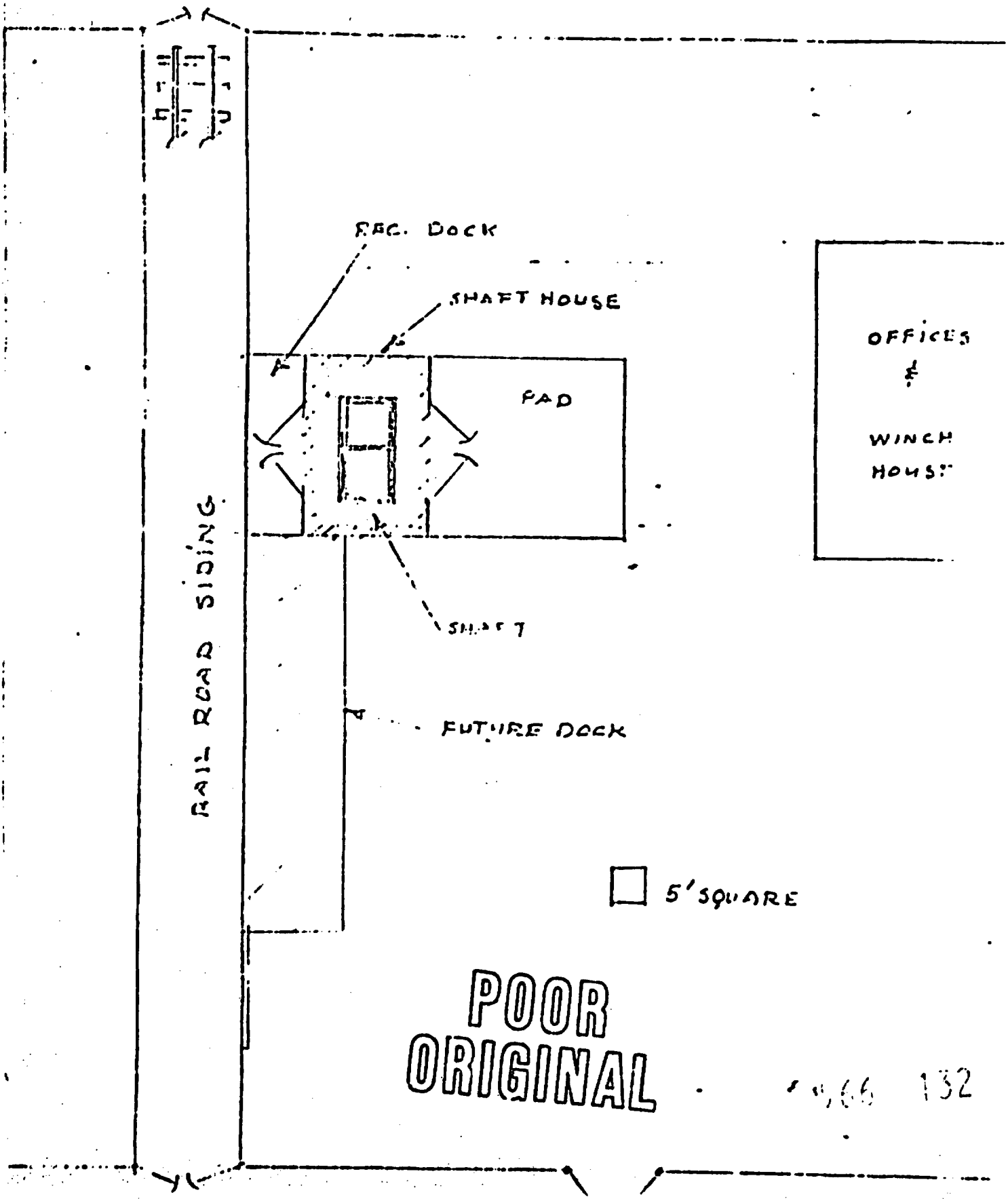
Lynn Mine
Receiving Area.



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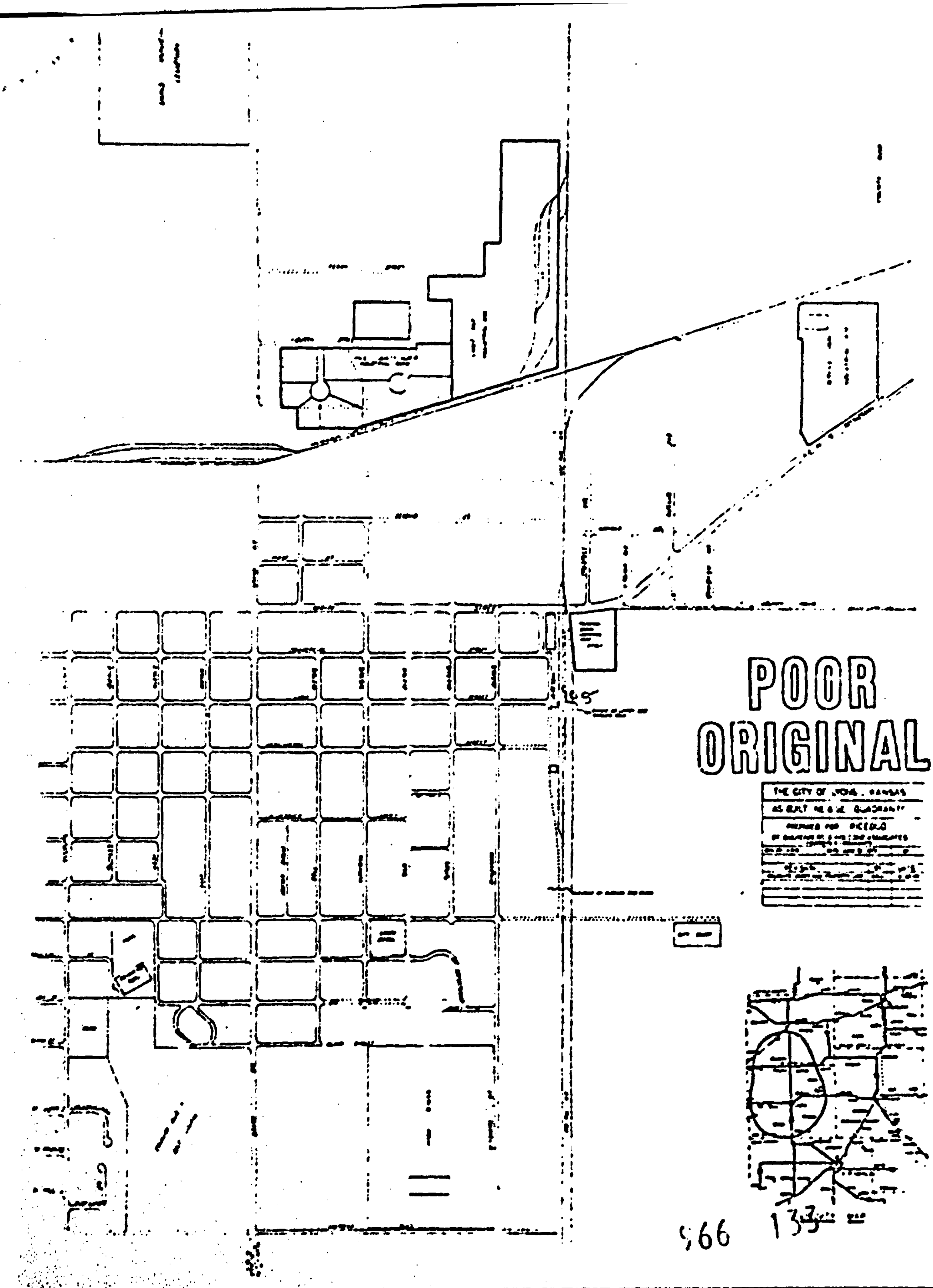

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