OGLE PETROLEUM INC.

TELEPHONE (805) 969-5941
TELECOPIER (805) 969-3278
TELEX No. 658-430

P.O. BOX 5549
559 SAN YSIDRO ROAD
SANTA BARBARA, CALIFORNIA 93108

September 3, 1980

PLEASE DIRECT REPLY TO:
150 North Nichols Avenue
Casper, Wyoming 82601
(307) 266-6456

Mr. J. E. Rothfleisch
Uranium Recovery Licensing Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

RE: Commercial Source Material
License Application, Docket
No. 40-8745

SUBJECT: Wyoming Outdoor Council Letter

Dear Mr. Rothfleisch:

Enclosed please find Ogle Petroleum Inc.'s (OPI) responses to the comments contained in the letter from the Wyoming Outdoor Council dated August 7, 1980. Five complete sets of responses are enclosed. Responses were not provided for those comments that dealt with NRC policy issues or which referred to sections of the DES prepared by the NRC or Oak Ridge National Laboratory independent of information provided by OPI.

OPI wishes to point out that no NRC responses to the subject letter are required since it was received after the 45 day comment period specified in the Federal Register. OPI is not aware of any official request for extension of the comment period pursuant to 10 CFR 51.25 nor are we aware of the NRC granting an extension.

Sincerely,

OGLE PETROLEUM INC.

Glenn J. Catchpole
Project Manager

GJC:jm

Enclosure

CC: Dr. M. Kelly, ORNL, w/Enclosure (5 copies)
Document Management Branch w/Enclosure (1 copy)

NOOX
S
1/1

8009160462 C

RESPONSES TO SPECIFIC COMMENTS
CONTAINED IN THE WYOMING OUTDOOR COUNCIL LETTER
DATED AUGUST 7, 1980

1. COMMENT: Section 1.3, Page 1-2.

RESPONSE:

No response provided. This comment addresses the relationship between the NRC and the Wyoming DEQ - a matter Ogle Petroleum Inc. (the Applicant) has no control over.

2. COMMENT: Section 2.1, Page 2-1.

RESPONSE:

No response provided. This section of the Draft Environmental Statement (DES) was prepared by the NRC.

3. COMMENT: Section 2.2, Page 2-1 to 2-9.

RESPONSE:

No response provided. This section of the DES was prepared by the NRC.

4. COMMENT: Section 2.3.6, Page 2-17.

RESPONSE:

No direct response provided. It is the Applicant's understanding, based on discussions with the NRC staff, that the Applicant will be given one year to arrange for movement of waste from Bison Basin to an existing licensed tailings pond. If no operators of existing licensed tailings pond within a reasonable distance of Bison Basin will accept the waste, the Applicant will be allowed to dispose of the waste on-site using NRC-approved, state-of-the-art disposal methodology.

5. COMMENT: Section 2.3.10.1, Page 2-26.

RESPONSE:

As described in the DES, there will be a monitor well ring surrounding each wellfield unit. These wells, which will be completed in the "D" unit, will be installed for the purpose of detecting horizontal excursions. These same wells will be used to detect possible movement of contaminants down slope along the aquifer.

After additional review of the Bison Basin groundwater hydrology and discussions with the Wyoming DEQ, the NRC is now requiring monitoring of the sandy intervals (lower aquifer) below the production zone. The Final Environmental Statement will reflect this requirement. The permeability of the mudstone is on the order of 1/5,000 the permeability of the production zone. There is no hydraulic evidence of the mudstone being fractured.

6. COMMENT: Section 2.3.10.2, Page 2-32.

RESPONSE:

There will be approximately 18 slurry shipments per year from the Bison Basin Mine.

7. COMMENT: Sections 2.3.10.3 and 4.3.1, Pages 2-32 and 4-3.

RESPONSE:

The NRC and the Wyoming DEQ have mutually agreed that the restoration criteria for the Bison Basin Project are the target restoration values given in Table 3.27.

8. COMMENT: Section 2.3.10.4, Pages 2-34 to 2-36.

RESPONSE:

(The Applicant is not sure what is meant by the statements "quality control measures for proper installation of the seepage control measures" and "operational quality control measures." The Applicant must and will build the ponds according to the plans presented in the DES. The leak detection system and the shallow monitor wells surrounding the ponds will be monitored and the data reported to the NRC as stated in the DES.)

The drilling method used by the Applicant and all in-situ solution mining operators, which involves circulating drilling mud, dilutes the low grade uranium ore to such a point that the material left in the mudpit is less than 5 pCi/g which is non-hazardous and not classified as radioactive materials. After the mudpit dries, the residue is covered with a minimum of three feet of subsoil and one foot of topsoil providing further protection against any possible radiological hazard. The NRC is not aware of any evidence that indicates that the current procedure in Wyoming of reclaiming mudpits as discussed above creates a radioactive waste hazard. (This comment is similar to comment number 15 con-

tained in the National Wildlife Federation letter. The Applicant will forward additional information concerning this subject to the NRC in the near future.)

9. COMMENT: Section 2.3.10.5, Page 2-38.

RESPONSE:

No direct response provided. The Applicant submitted a decommissioning and reclamation plan in the Environmental Report. This plan, including the land reclamation portion, has been approved by the Wyoming DEQ. As per the R & D license, the R & D site will not be reclaimed as such unless the commercial license is not approved since the one-acre test area is located in proposed Mining Unit No. 1 and the R & D compound area and building will also be used in the commercial operation. If the commercial license is not approved, the Applicant is required to reclaim all land affected by the R & D operation. No test plot reclamation was required for the R & D operation and none is being required for the commercial operation. The NRC staff and the Wyoming DEQ (see letter from Robert Dorn, DEQ, that follows this page) have determined that the proposed mine and reclamation plans are such that reclamation of the lands to be disturbed is possible.

10. COMMENT: Section 2.3.11, Page 2-38.

RESPONSE:

First paragraph. No response provided.

Second paragraph. As stated in the response to comment number 5, the Applicant will be required to monitor both the host aquifer and the aquifer (sandy intervals) below. There is no evidence indicating the host aquifer is fractured. As stated in the DES, the Applicant must maintain the injection pressure below the formation fracture pressure.

11. COMMENT: Section 3.2, Page 3-4.

RESPONSE:

It is the NRC's position that the limited surface disturbance caused by in-situ uranium operations does not warrant on-site air quality baseline data collection.

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

LAND QUALITY DIVISION

HATHAWAY BUILDING TELEPHONE 307-777-7756 CHEYENNE, WYOMING 82002

November 26, 1979

Glenn J. Catchpole
Project Manager
OPI-Western Joint Venture
150 North Nichols Avenue
Casper, WY 82601

Dear Glenn:

Concerning your inquiry about references documenting that reclamation has been successfully accomplished on areas with similar soils and climate to your project area, I know of no such references. Based on our experience with reclamation throughout Wyoming and my visit to your project site, I have no doubt that your area can be reclaimed. It is possible that first year attempts may be unsuccessful if unfavorable weather conditions occur in that year, but we seldom have unfavorable conditions two years in a row. A mulching program will protect the soil if such a situation does occur.

If I can be of further assistance, let me know.

Sincerely,

Robert D. Dorn

Robert D. Dorn
Principal Environmental Analyst

RDD:sh
cc: Ed Francis

12. COMMENT: Section 3.4.3, Page 3-9.

RESPONSE:

No response provided.

13. COMMENT: Section 3.4.4.1, Page 3-10 and Table 3.9.

RESPONSE:

No response provided.

14. COMMENT: Section 3.4.4.1, Page 3-10.

RESPONSE:

No response provided.

15. COMMENT: Section 3.4.4.4, Page 3-14.

RESPONSE:

No response provided.

16. COMMENT: Section 3.6.2.1, Page 3-17.

RESPONSE:

The reference to the Welder and McGreevy study in the DES only serves as a literature review and introduction to regional groundwater conditions. Detailed information on the site specific hydrogeologic environment is presented in the DES. Groundwater in the production zone aquifer in the project area is moving at the rate of approximately nine feet per year.

17. COMMENT: Section 3.6.2.3, Pages 3-22 to 3-24.

RESPONSE:

The total depth of the faults is not known as they extend well beyond the production zone. As stated in the response to comment number 5, the Applicant will be required to monitor sand units both above and below the production zone. Figure 3.5 on page 3-20 is a geologic section that depicts the faults in and around the project area. The term "timely detection" means detecting an excursion before possible endangerment to public health or irreversible damage to the environment occurs. Yes, monitor wells will be placed so as to detect downward migration.

18. COMMENT: Section 3.6.2.3, Page 3-36.

RESPONSE:

No response provided to the first question.

Second question. What incremental change does the Bison Basin Project cause?

The Bison Basin Project will not cause any incremental change on current and potential drinking water supplies. The production zone aquifer, which does not meet drinking water standards, must be restored to a quality consistent with its pre-mining potential use. The restoration criteria (Table 3.22 of the DES) reflect this requirement. The Applicant has demonstrated, through its R & D operation, that it can restore the affected aquifer.

19. COMMENT: Section 4.4.1.1, Page 4-6.

RESPONSE:

The baselining method provides a procedure for comparing post-restoration water quality with pre-mining water quality so that the success or failure of restoration can be fairly and accurately assessed. There is a mechanism for handling an anomaly. A fourth round of sampling must take place if an anomaly occurs; and if the results of the fourth round confirm the anomaly, the anomalous value must be excluded.

20. COMMENT: Section 4.4.2.2, Page 4-7.

RESPONSE:

The DES states that SO_2 standards will not be exceeded. In the case of NO_2, the estimated levels have been greatly reduced as a result of a change from diesel powered to gas (propane or natural gas) powered electrical generators to produce the electricity needed at the site.

In August, 1979 when the Applicant submitted the Bison Basin Environmental Report, it was planned to use diesel powered electrical generators to supply power for the project. Emissions from the diesel generators used for that purpose would produce about 117,614 pounds out of an estimated total of 195,405 pounds of NOx from on-site operations, or about 60.2% of the total NOx emission.

Due to the increasingly high cost and occassional scarcity of diesel fuel, the Applicant is now proposing to use gas (propane or natural gas) fueled electrical generators to supply power at the site. NOx emission from propane and natural gas is approximately 5% of that from diesel fuel when used in re-

ciprocating engines. The reference for this percentage comparison is EPA Publication AP-42, "Compilation of Air Pollutant Emission Factors," Appendix C thereto, where it will be found that:

FUEL	UNIT	LBS OF NOx EMITTED/UNIT	BTU/UNIT	LBS OF NOx EMITTED PER MILLION BTU
Diesel Oil	1,000 Gal.	370	142,000,000	2.606
Natural Gas	MMCF	120	1,000,000,000	0.120
Propane	1,000 Gal.	11.7	91,500,000	0.128

Accordingly, by substituting propane for diesel fuel in the electrical generators, the total NOx emission from the project site area will be reduced from 195,405 pounds per year to 83,372 pounds per year. Thus, there is no longer any reason to believe that the State and Federal air standards of 100 $\mu g/M^3$ may be exceeded, and the NRC will not be requiring on-site operational monitoring of non-radiological air quality parameters. The TSP emissions will be maintained below maximum permissible levels by requiring the Applicant, through license conditions, to apply the mitigating measures detailed on page 4-13 of the DES.

21. COMMENT: Section 4.4.2.5, Page - 9.

RESPONSE:

Contingency corrective actions in the event of an excursion will normally consist of the following in order of application (i.e., if step one is not successful, step two will be initiated, and so on):

1. Adjust the flow rate of the injection and recovery wells in the affected area so as to increase the rate of over-production.

2. Cease injection of lixiviant in the affected area but continue pumping recovery wells.

3. Install pumps in the injection wells in the affected area and produce water from these wells while continuing to pump the recovery wells.

4. Drill and complete additional wells in the affected area and either produce water from or inject fresh water into these wells.

The Applicant will request approval of any corrective actions other than those stated above from the NRC.

22. COMMENT: Section 4.5.3.1, Page 4-14.

RESPONSE:

The contingency plans for operational leaks and spills are as follows:

1. If a pipeline leak occurs, the flow in the pipe will be immediately stopped and the liquid in the pipe will be transferred to the plant or the evaporation ponds. The pipe will then be repaired and any contamination resulting from the leak will be cleaned up.

2. A spill from a tank will not cause any problems since all process tanks will be located on a concrete pad that will drain to a sump and, thence, to the evaporation ponds via a PVC pipeline. Additionally, all critical process tanks will be equipped with high level warning devices. Because of the distance involved, there will be no significant or measureable impact on the Sweetwater River from pipeline leaks or tank spills.

23. COMMENT: Section 4.6.2.1, Page 4-26.

RESPONSE:

Decontamination of affected areas will consist of removing contaminated materials (soils, equipment, etc.) to the evaporation ponds for eventual disposal with the radioactive waste that remains after evaporation is complete.

First aid and fire fighting equipment are located at the mine site. MSHA inspectors have inspected the Applicant's R & D operation and will also inspect the commercial operation to insure that the operation is safe and that no explosive or fire hazards exist. The Applicant employees a full-time, MSHA certified, Safety Engineer who insures that all employees are trained in controlling fires. All mine employees must receive the required MSHA training.

24. COMMENT: Section 4.6.2.1, Page 4-28.

RESPONSE:

No response provided. (The Applicant will provide whatever information it can pertinent to this comment if the NRC or ORNL so desires.)

25. COMMENT: Section 4.6.5, Page 4-30.

RESPONSE:

No response provided.

26. COMMENT: Section 4.8.1, Page 4-31.

RESPONSE:

As stated on page 4-12 of the DES, the SO_2 emissions are well below applicable State and Federal standards. The projected NO_2 levels have been reduced to levels that do not exceed NO_2 standards by changing from diesel powered electrical generators to gas powered generators. This subject is more fully discussed in the response to comment number 20 (Section 4.4.2.2, Page 4-7).

27. COMMENT: Section 4.11.3, Page 4-34.

RESPONSE:

No response provided. (The Applicant will provide whatever information it can pertinent to this comment if the NRC or ORNL so desires.)