

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

**DETAILED RESPONSE TO NRC COMMENTS
DATED JULY 7, 1997
(NRC Docket No. 40-9015)**

For the

TOBICO MARSH STATE GAME AREA SITE

located at

**2301 Two Mile and Beaver Roads
Bay County
Kawkawlin, Michigan 48631**

**Mrs. Denise Gruben
Radiation Safety Officer
Michigan Department of Natural Resources
Office of Equal Opportunity, Litigation and Program Services
Citizens Building
817 State Street
Lansing, MI 48933**

September 5, 1997

General Comments

1. Comment:

The application should clearly state that Part I of the application contains the proposed license requirements (inspectable and verifiable), and that Part II of the application contains the descriptive information on how the applicant will demonstrate adherence to the requirements.

Response:

Section 1.0 of the License Application was revised to read: The following application is a request for a new NRC license. Part I of this application contains the license requirements that MDNR shall maintain in order to comply with NRC license application requirements. Part II (Section 13.0) describes how the MDNR will demonstrate adherence to Part I.

Specific Comments

2. Comment:

Table 1 Summary of Commitments - This table should be included in Part I of the application.

Response:

A new Section (10.21) was added to Part I of the license application which states the following:

10.21 Summary of Commitments

In order to ensure compliance with the Tobico Marsh Site NRC License, the following table presents a summary of the commitments listed in Part I of this application.

TABLE 10.2
Summary of Part I Commitments
Tobico Marsh State Game Area Site

License Application - Part 1. License Conditions

3. Comment:

Section 7.3.1 Radiation Safety Officer - The qualifications described for this position do not meet the minimum qualifications for a Radiation Safety Officer found in NRC Regulatory Guide 10.4. For example, there is no requirement for

on-the-job-training in radiation protection. Since the purpose for which the licensed material will be used includes possible intrusion into the waste for characterization, there should be a requirement for radiation protection experience.

Response:

During a telephone conversation with Jack Parrott on 8/14/97, he stated that the NRC would accept the RSO qualifications delineated in Section 7.3.1 of the License Application as sufficient for work through characterization of the site, because the RSO will be assisted by a staff of professional health physicists. He further stated that prior to the MDNR's modifying the license to perform decommissioning, the RSO would have to complete at least three weeks of documented on the job radiation protection training. The training shall be conducted under the direct supervision of an individual named on an NRC license authorizing the use of loose source material or other radioactive material of similar hazard, as stated in Item 7 of USNRC Regulatory Guide 10.4, Revision 2.

4. Comment:

Section 10.0 RADIATION SAFETY PROGRAM - Many of the NRC questions about Section 10.0 have to do with the specifics of the Radiation Safety Program (RSP). The RSP should be provided with the license application with references to specific parts of it in Section 10.0 where appropriate.

Response:

The Radiation Safety Program and associated procedures are included with this submittal to provide the NRC with references to specific questions regarding the amended license application. References to the RSP have been included where appropriate in Section 10.

5. Comment:

Section 10.1 ALARA Commitment - What are the ALARA targets?

Response:

Section 10.1 of the License Application requires that ALARA targets be set. Section 8.0 of the Radiation Safety Program states that an ALARA Program shall be developed and implemented that includes, at a minimum, targets for internal and external dose. The ALARA Program is included with this submittal and sections 5.0 and 6.0 of the program contains the following ALARA targets for external, internal, and TEDE for any individual and for all site workers.

	<u>Individuals in mrem/Year</u>	<u>Site Workers in mrem/Year</u>
External	250	500
Internal	500	2000
TEDE	700	2000

6. Comment:

Section 10.4 Audits and Inspections - Items found during the audits and inspections, and the follow-up on these items, should be distributed to all members of the Radiation Committee and covered during the next Radiation Committee meeting.

Response:

Section 10.4 of the License Application was revised to add the requirement that all items found during performance of audits and inspections required by Part 1 of the License Application will be distributed to all members of the Radiation Safety Committee and reviewed during the next Radiation Committee Safety meeting.

7. Comment:

Section 10.6 Records - Records of the Safety Committee meetings should be mentioned here.

Response:

Section 10.6 of the License Application was revised to include records of Radiation Safety Committee meetings.

8. Comment:

Section 10.8 Control of Licensed Material - There should be a sign in procedure for those entering the site.

Response:

Section 9.0 of the Radiation Safety Program requires that a Personnel Site Access procedure be established. A copy of the procedure is included with this submittal.

9. Comment:

Section 10.10 Instrumentation - What equipment will be used? Please list.

Response:

Section 15.0 of the Radiation Safety Program includes a list of instruments that are expected to be used at the site. The following is the list of instruments found in Section 15.0 of the Radiation Safety Program.

- Canberra ISOCS In-Situ object counting system connected to a HPGE Detector with a 60% relative efficiency;*
- Bicron Micro-rem LE;*
- Ludlum Model 16 ratemeter connected to a Ludlum Model 44-2 NaI gamma scintillator;*
- Eberline Model RM-20 ratemeter with Eberline Model AC-3 ZnS alpha scintillator or Model HP-260 GM beta/gamma detector;*
- Eberline Model SAC-4 ZnS scintillation alpha counter;*
- Ludlum Model 1000 scaler with Eberline Model HP-210 shielded GM, and;*
- Victoreen personal air sampler.*

10. Comment:

Section 10.13 Total Effective Dose Equivalent - What company will be doing the lapel monitoring?

Response:

Under the direction of the RSO or duly authorized representative, the Tobico Marsh Site Radiation Protection Staff is responsible for ensuring that individuals working with or around radioactive material are monitored for potential airborne inhalation using lapel air samplers. The staff is also responsible for performing the lapel monitoring and maintaining the lapel air samplers. The lapel air samplers will be used in accordance with standard operating procedures as specified in the Radiation Safety Program. The procedure for use of the lapel air sampler is included with this submittal.

11. Comment:

Section 10.14 Bioassay Program - A commitment should be made to follow Information Notice 96-18 if a bioassay is implemented.

Response:

Section 10.0 of the Radiation Safety Program states that procedures for monitoring the internal uptake of radionuclides shall be written in accordance with USNRC Information Notice 96-18, "Compliance with 10 CFR part 20 for Airborne Thorium."

12. Comment:

Section 10.17 Respiratory Protection - There should be a respiratory protection action level below the Part 20 limit that triggers the use of respiratory protection.

Response:

Section 10.17 Respiratory Protection was revised to include "Any area where an individual could receive 50% of the DAC specified in Appendix B of Part 20 shall be evaluated to determine if respiratory protection is warranted. If the area is determined to exceed the 50% of the DAC limits within 20.1003 and engineering controls cannot reduce the airborne concentration, respiratory protection will be required for individuals entering the area."

13. Comment:

Section 10.18 Materials and Equipment Released for Unrestricted Use - Documentation should be recorded and maintained of what equipment and/or materials were released from where, when, and the survey records that were made.

Response:

Section 9.0 of the Radiation Protection Program requires that a procedure exist for the Survey of Equipment or Others Items for Unrestricted Release. Paragraph 5.1.6 of that procedure delineates the documentation requirements for these surveys. A copy of the procedure is included in this submittal.

License Application - Part I. Section 12.0 DECOMMISSIONING FUNDING PLAN

14. Comment:

Section 3.0 DECOMMISSIONING CRITERIA - This section should also list the NRC BTP entitled "Disposal or On-site Storage of Residual Thorium or Uranium" as decommissioning criteria (see section 3.3, number 6).

Response:

Section 3.0 of the Decommissioning Funding Plan was revised to include the NRC Branch Technical Position entitled "Disposal or On-Site Storage of Residual Thorium or Uranium" in the list of Decommissioning Criteria.

15. Comment:

Table 7.7 Packaging, Shipping and Disposal of Radioactive Waste - Describe in more detail how the cost of \$125/ft³ for radioactive waste disposal was derived. It does not seem to agree with current disposal costs at available facilities.

Response:

The \$125/ft³ is based on the assumption that some of the waste may contain hazardous chemicals. Information obtained from telephone conversations with the manager of government disposal contracts at Envirocare of Utah have confirmed that the cost for disposal of radioactive waste containing hazardous chemicals could reach up to \$125/ft³

The following revisions to the DFP have been made:

Table 7.7 - (b) Cost is based on the assumption that some of the waste may contain hazardous chemicals.

- (c) Cost is based on the assumption that waste will be disposed of at Envirocare of Utah.

16. Comment:

Table 7.9 Final Radiation Survey - What is the basis for the total labor and management hours estimated for this activity? The total hours in Table 7.9 could not be derived from the hours listed in Table 7.4 and 7.5.

Response:

Tables 7.1, 7.4, 7.5, 7.6, 7.8, and 7.9 were revised to show the basis for the estimated total labor and management hours and cost for conducting a Final Radiation Survey of the Tobacco Marsh Game Area Site.

License Application - Part II. Safety Demonstration

17. Comment:

Section 16.2 RESUME OF KEY PERSONNEL IMPORTANT TO SAFETY - There is only one resume attached. The names and qualifications of any

individuals who will supervise the use of radioactive material and individuals who will work with radioactive materials without supervision should also be provided.

Response:

Additional resumes have been attached to Part II of the License Application for individuals who will supervise the use of radioactive material and individuals who will work with radioactive materials without supervision. Resumes of the following persons have been added:

*Mr. Steven Masciulli;
Mr. Lorenzo J. Cabrera;
Mr. David J. Watters; and
Mr. James Blute.*

18. Comment:

Section 17.5 Radiation Instrumentation - What source will be used to conduct the daily verification response checks and under what conditions will instruments be taken out of service.

Response:

After calibration, but before being placed into service, each instrument will be exposed to a check source in a reproducible geometry. The result will be used as the Quality Control (QC) standard and the acceptance criteria is +/- 20% of this value. A label with the QC response criteria and the check source ID number is affixed to the instrument. If an instrument fails the daily instrument check, has exceeded the calibration date, does not have a QC response check label or has any defects, dangers, or abnormalities the instrument must be removed from service. At a minimum and as applicable, these criteria are specified in the instrument procedures included with this submittal.

19. Comment:

Figure II-3 Organization Tobico Marsh State Game Area Site - This figure should be revised removing the Nuclear Regulatory Commission from the top of the organization. This position should identify the person (by name and/or title) in the licensee's organization that is ultimately responsible for the site and the license.

Response:

Figure 11-3 has been revised as requested.