UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 26, 1999

Ms. Kelli Sobel, Administrative Services Deputy
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, MI 48909

SUBJECT: ISSUANCE OF SOURCE MATERIALS LICENSE NO. SUC-1581 TO MICHIGAN DEPARTMENT OF NATURAL RESOURCES (MDNR) TO POSSESS CONTAMINATED MATERIAL AT THE MDNR TOBICO MARSH SITE (TAC NO. L51675)

Dear Ms. Sobel:

In accordance with statements, representations, and conditions specified in your application letter dated September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999, and pursuant to Title 10, *Code of Federal Regulations*, Part 40, the U.S. Nuclear Regulatory Commission (NRC) hereby issues Source Materials License No. SUC-1581 (Enclosure 1). License No. SUC-1581 authorizes the possession of sealed sources, contaminated soil, sludge, sediment, trash, building rubble, structures, and any other contaminated material, at the MDNR Tobico Marsh State Game Area site in Bay County, Michigan. The material will be used and possessed during site characterization and decommissioning activities.

License No. SUC-1581 contains five conditions which are stated below. You received a draft version of these license conditions by letter dated August 10, 1999. We have also discussed with you, via the telephone on August 12, 1999, the draft conditions for accuracy and your comments have been included in this final version. NRC staff's review of the license application is documented in a Safety Evaluation Report (Enclosure 2). The Environmental Assessment related to the issuance of this license is also enclosed (Enclosure 3) for your information. NRC staff has reviewed your radiation safety program and decommissioning funding plan and has no further questions.

This license incorporates the following in Condition 11:

A. MDNR shall submit, by license amendment request, no later than August 31, 2001, a Decommissioning Plan (DP) for the MDNR Tobico Marsh site, meeting the requirements of 10 CFR 40.42(g)(4). The DP will include site characterization information necessary to support the DP and a revised decommissioning funding plan, that includes a revised cost estimate and financial assurance mechanism in accordance with 10 CFR 40.36, for the preferred decommissioning approach.

B. If the Leachate Collection and Treatment System is ever operated, MDNR shall request approval, by license amendment request, prior to operation.

C. The Radiation Safety Officer for this license is Denise Gruben.

A125

D. For equipment and materials release, MDNR shall use decontamination limits in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," Policy and Guidance Directive 83-23, August 1987.

E. Except as specifically provided otherwise in this license, MDNR shall conduct its program in accordance with the statements, representations, and procedures contained in the application dated September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999; the Radiation Safety Program, dated August 15, 1997; the ALARA Program, dated August 15, 1997; and the Training Program, dated August 15, 1997. NRC's regulations shall govern unless the statements, representations and procedures in the licensee's application are more restrictive than the regulations.

Please be advised that you must conduct the characterization activities at the MDNR Tobico Marsh site in accordance with the conditions of your license, representations made in the application, and NRC's regulations. NRC will inspect your site at least annually until completion of decommissioning.

If you have any questions, please contact me at (301) 415-7234 or Ms. Sherry W. Lewis, NRC Project Manager for the Tobico Marsh site, at (301) 415-6619.

Sincerely,

Larry W. Camper, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 40-9015
License No. SUC-1581

cc: MDNR Distribution List

Enclosures:
1. License No. SUC-1581
2. Safety Evaluation Report
3. Environmental Assessment

Michigan Department of Natural Resources Distribution List - Letter Dated 08/26/99

Denise S. Gruben, Project Manager
Office of Equal Opportunity and Legal Services
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, MI 48909

Tim Bertram, Environmental Quality Analyst
Saginaw Bay District Office
Michigan Department of Environmental Quality
503 N. Euclid Avenue
Bay City, MI 48706

David W. Minnaar, Chief
Radiological Protection Section
Water and Radiological Protection Division
Michigan Department of Environmental Quality
P.O. Box 30630
Lansing, MI 48909-8130

James Forney, Remedial Project Manager
Waste Management, Inc.
17250 Newburgh Road, Suite 100
Livonia, MI 48152-2618

Steve Masciulli, Health Physicist-Industrial Hygienist
Cabrera Services, Inc.
45 Hartford Turnpike, Suite 10
Vernon, CT 06066

Cole T. Jacobson, Senior Environmental Scientist
Harding Lawson Associates
39255 Country Club Drive, Suite B-25
Farmington Hills, MI 48331

Enclosure 1

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Michigan Department of Natural Resources	3. License Number	SUC-1581
2. 611 Ottawa Street Lansing, MI 48933	4. Expiration Date	August 31, 2009
	5. Docket or Reference No.	040-09015

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. Thorium	A. Contaminated soil, sludge, sediment, trash, building rubble, structures, and any other material contaminated in excess of background levels.	A. 2.6 Ci
B. Uranium	B. Contaminated soil, sludge, sediment, trash, building rubble, structures, and any other material contaminated in excess of background levels.	B. 0.26 Ci
C. Thorium-230	C. Sealed sources.	C. 10 µCi
D. Americium-241	D. Sealed sources.	D. 0.5 µCi

9. Authorized Use: Licensed material shall be possessed during site activities leading to the decommissioning of the MDNR Tobico Marsh site.

10. Authorized Place of Use: The existing MDNR Tobico Marsh site, 2301 Two Mile and Beaver Roads, Bay County, MI 48631.

11. Conditions:

A. MDNR shall submit, by license amendment request, no later than August 31, 2001, a Decommissioning Plan (DP) for the MDNR Tobico Marsh site, meeting the requirements of 10 CFR 40.42(g)(4). The DP will include site characterization information necessary to support the DP and a revised decommissioning funding plan, that includes a revised cost estimate and financial assurance mechanism in accordance with 10 CFR 40.36, for the preferred decommissioning approach.

B. If the Leachate Collection and Treatment System is ever operated, MDNR shall request approval, by license amendment request, prior to operation.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number: SUC-1581

Docket or Reference Number: 040-9015

C. The Radiation Safety Officer for this license is Denise Gruben.

D. For equipment and materials release, MDNR shall use decontamination limits in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," Policy and Guidance Directive 83-23, August 1987.

E. Except as specifically provided otherwise in this license, MDNR shall conduct its program in accordance with the statements, representations, and procedures contained in the application dated September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999; the Radiation Safety Program, dated August 15, 1997; the ALARA Program, dated August 15, 1997; and the Training Program, dated August 15, 1997. NRC's regulations shall govern unless the statements, representations and procedures in the licensee's application are more restrictive than the regulations.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: August 26, 1999

By: Larry W. Camper

Larry W. Camper, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

Enclosure 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DOCKET NO: 40-9015

LICENSE NO: SUC-1581

LICENSEE: MICHIGAN DEPARTMENT OF NATURAL RESOURCES

SUBJECT: SAFETY EVALUATION REPORT, LICENSE APPLICATION DATED SEPTEMBER 5, 1997, AS SUPPLEMENTED ON JULY 27, 1998, AND MARCH 8, 1999, FOR POSSESSION OF THORIUM AND URANIUM AT THE MDNR TOBICO MARSH SITE

1. INTRODUCTION

Michigan Department of Natural Resources (MDNR) submitted a source material license application to the U.S. Nuclear Regulatory Commission, on September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999, to possess thorium (Th) and uranium (U) at the state-owned portion of the former Hartley and Hartley Landfill (Tobico Marsh site) in Kawkawlin, Michigan. Th and U currently exist at the Tobico Marsh site in the form of magnesium-Th slag, contaminated soil, and other contaminated debris and materials. MDNR also requested to possess sealed sources for instrument calibration.

Decommissioning of the Tobico Marsh site is proceeding in two phases. Site characterization and any short-term site stabilization activities are considered phase 1 decommissioning activities. Long-term stabilization or remediation activities performed at the site are considered phase 2 decommissioning activities. A Decommissioning Plan (DP) will be provided later to describe the phase 2 decommissioning activities leading to the termination of License No. SUC-1581. MDNR's DP must meet the requirements specified in applicable portions of 10 CFR 40.42.

Background

The MDNR Tobico Marsh site is located at 2301 Two Mile and Beaver Roads, Kawkawlin Township, Kawkawlin, Bay County, Michigan, northeast of Bay City, Michigan (Figures 1 and 2). The Tobico Marsh site covers approximately three acres adjacent to the former Hartley and Hartley Landfill that is currently owned by SCA Services, Inc. (SCA). The SCA site is being decommissioned under NRC License No. SUC-1565. In 1962, it was discovered that the entire property, owned by the Hartley and Hartley waste handling company, was being used as a landfill.

In 1972, the State of Michigan acquired in trade a portion of the Hartley and Hartley Landfill. Waste disposal activity on the state-owned portion of the site ended by 1972, but the Hartley and Hartley organization continued to operate the site until 1978 when operations at the landfill ceased.

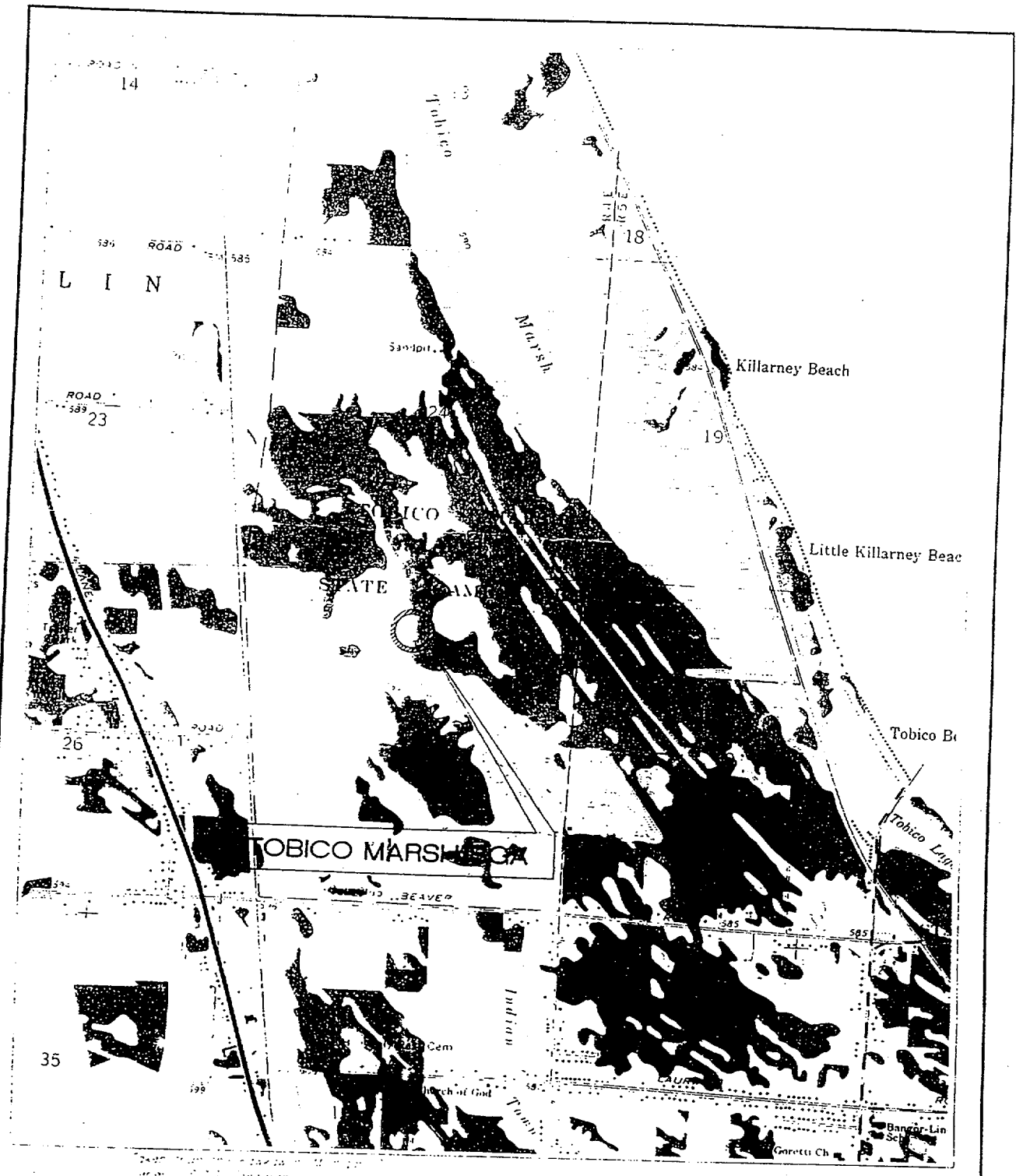

FIGURE 1
SITE LOCATION MAP
TOBICO MARSH SGA
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
BAY COUNTY, MICHIGAN

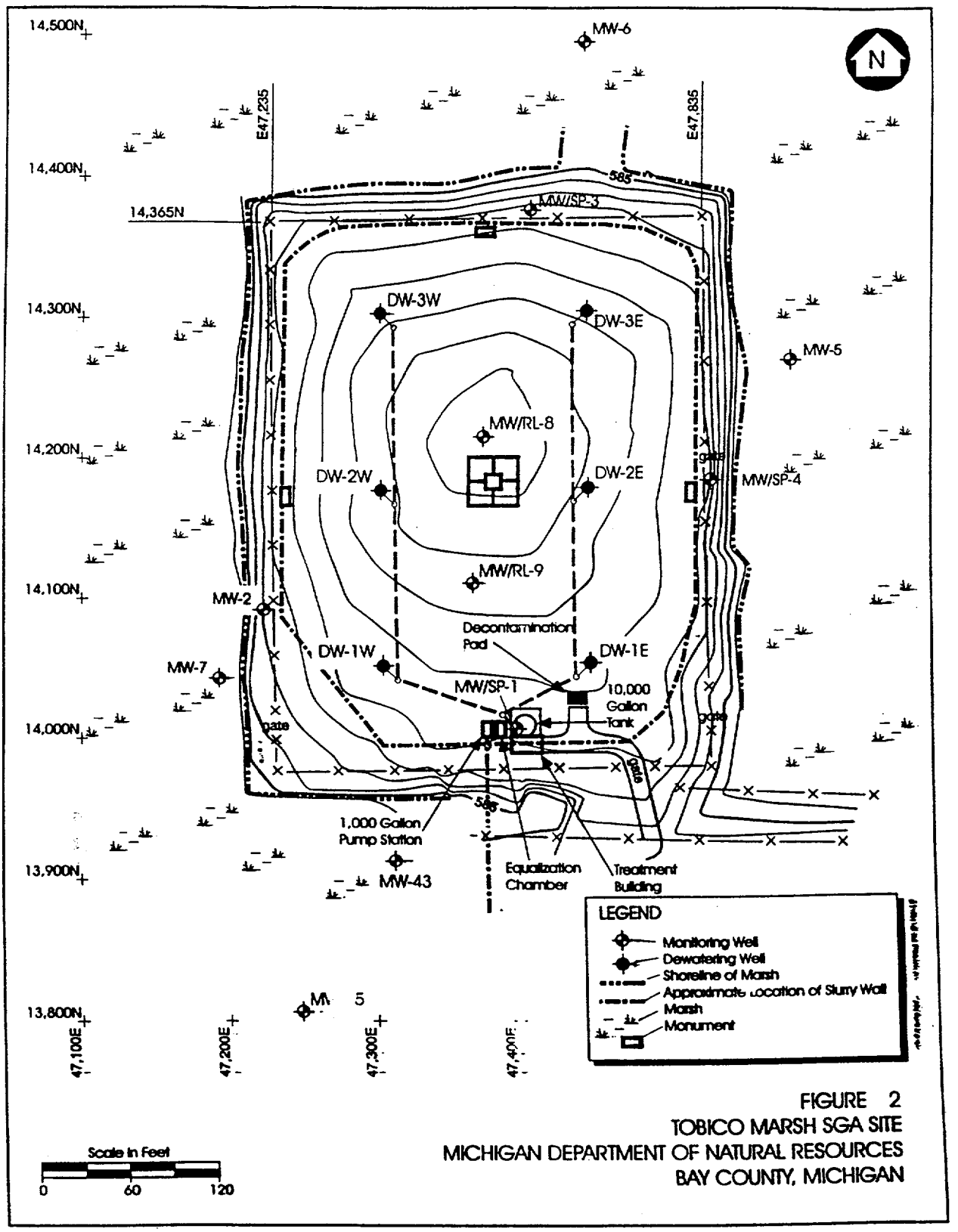

FIGURE 2
TOBICO MARSH SGA SITE
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
BAY COUNTY, MICHIGAN

In 1980, the State of Michigan conducted an aerial radiological survey of the landfill because State authorities were concerned that radioactive material from another facility in Michigan may have been disposed at the landfill. The survey indicated an excess of Thallium-208, a progeny of Thorium-232 (Th-232), over the landfill. In May 1983, the State of Michigan, Division of Radiological Health, informed NRC Region III that radioactive material was found in the Tobico Marsh site. Contamination was also found on the adjacent property owned by SCA.

The State of Michigan requested input from the NRC on whether the encapsulation measures being taken for the non-radiological hazardous wastes also would provide protection for the radioactive hazard. In response to this request, NRC staff agreed to perform a radiological survey of the Tobico Marsh site.

In July 1984, Oak Ridge Associated Universities undertook a radiological survey of the Tobico Marsh site. The survey included surface radiation scans, measurements of direct radiation levels, and analyses of radionuclide concentrations in soil, sediment, and water samples. The results of this survey indicated a 0.15 to 0.20-meter (m) (0.5 to 0.7 feet (ft)) thick layer of Th contaminated slag near the surface. The contaminated slag appeared to be distributed in a 10 to 20-m (33 to 66-ft) wide strip near the center of the property, extending almost the entire north/south length of the site. These radiological surveys were the basis for a hazard evaluation.

NRC and State of Michigan staff concluded, on the basis of the radiological survey, that the Th contamination exceeded the Option 1 level (0.37 Becquerel per gram (Bq/g) (10 picoCurie per gram (pCi/g)) of Thorium-232 + Thorium-228) of the 1981 Branch Technical Position (BTP) entitled, "Disposal or Onsite Storage of Thorium or Uranium Wastes From Past Operations" (46 FR 52061). They also concluded that the mixture of non-radiological hazardous and radioactive waste would make the wastes unacceptable at a chemical or radioactive waste disposal site (other than an authorized mixed waste disposal facility) and agreed to implement a monitoring program and to place a restriction on the deed prohibiting intrusion. NRC agreed that these measures would likely make the encapsulation of the Th contamination acceptable for the short term.

In 1984, MDNR undertook encapsulation measures at the Tobico Marsh site to isolate and prevent the migration of the non-radiological hazardous wastes. Encapsulation measures included the installation of a 1.5-m-thick (5-ft) clay cap and 0.9-m-thick (3-ft) bentonite slurry walls.

In 1985 and 1986, ABB Environmental Services, Inc. (formerly E.C. Jordan Company) performed an investigation to assess the nature and extent of environmental contamination around the encapsulation area. The investigation indicated that the level of leachate inside the encapsulation was approximately 0.9 m (3 ft) higher than the level of the surrounding area and that volatile organic chemicals were detected in the soils and groundwater outside the encapsulation.

In 1987 and 1988, GZA/Donohue performed a feasibility study of the Tobico Marsh site. The study recommended that site access be restricted by fencing, that monuments be installed stating the nature of the contaminants, that the clay cap be repaired where erosion had occurred, that hydraulic isolation be maintained by withdrawal of leachate from inside the encapsulated area, and that the leachate be treated and disposed.

In March 1990, the MDNR Tobico Marsh site was added to NRC's Site Decommissioning Management Plan (SDMP) list because of the quantity of Th-contaminated materials, the potential for mixed waste, and the fact that MDNR did not have a license. The purpose of the SDMP is to ensure safe and timely remediation of nonroutine decommissioning sites.

In 1991, design of the Leachate Collection and Treatment System (LCTS) and preliminary design of the pretreatment system was completed. In 1993 and 1994, the LCTS, treatment building, and the force main were installed. However, the LCTS has not operated for several reasons. They include possible presence of low-level radioactive materials in the leachate, insoluble radioactive material less than or equal to one μm (3.3E-6 ft) in diameter in the treated effluent, no holding tanks to verify effluent quality before discharge to the waste water treatment plant, and potential metal concentrations that are unacceptable for the waste water treatment plant.

2. PROPOSED ACTIVITIES

The license will authorize MDNR to possess source material Th and U and sealed sources at the Tobico Marsh site in order to control the material to ensure the protection of the public health and safety and the environment. The license covers all source material Th and U present in concentrations exceeding natural background. This license also authorized possession of sealed sources at the site for instrument calibration. The sealed sources allow proper calibration of instruments for the radiation types to be encountered at the site.

MDNR proposes to sample Th and U material during site characterization activities. The objective of site characterization is to determine the type and extent of radiological contamination of structures, residues, and environmental media (including the rate(s) of migration). Site characterization will also determine the environmental conditions that could affect the rate and directions of radionuclide transport and potential human and environmental exposures to radionuclides. The information obtained from site characterization activities is needed to: (1) assess the scope of proposed decommissioning actions, (2) ensure the safety of decommissioning workers, (3) evaluate potential environmental releases during decommissioning, (4) determine the adequacy of decommissioning funding or financial assurance, (5) support the evaluation of alternative decommissioning actions, and (6) plan the preferred approached for decommissioning, decontamination, and waste disposal.

The proposed site characterization is intended to characterize the concentration, lateral extent, and volume of radiologically contaminated material at the Tobico Marsh site. MDNR will provide proposal(s) for the disposition of any Th and U material found at the site in the DP. The DP will describe the procedures for site remediation, final survey, and license termination. Decommissioning will be authorized through a separate amendment to the license. To ensure the timely completion of Tobico Marsh site decommissioning, NRC staff recommends the following license condition:

CONDITION 11.A. MDNR shall submit, by license amendment request, no later than August 31, 2001, a Decommissioning Plan (DP) for the MDNR Tobico Marsh site, meeting the requirements of 10 CFR 40.42(g)(4). The DP will include site characterization information necessary to support the DP and a revised decommissioning funding plan, that includes a revised cost estimate and financial assurance mechanism in accordance with 10 CFR 40.36, for the preferred decommissioning approach.

NRC staff has reviewed MDNR's proposed methods for completing the site characterization activities to ensure that they can be carried out in accordance with NRC regulations and the as low as is reasonably achievable (ALARA) principle. The proposed methods for characterizing the site for radiological contamination are adequately described in the application. The sample techniques and equipment described are acceptable to NRC based on a comparison with the November 1994 draft BTP entitled "Site Characterization for Decommissioning Sites."

MDNR does not have any current plans to operate the LCTS. To ensure that the LCTS operates safely should MDNR decide to operate this system, NRC staff recommends the following license condition:

CONDITION 11.B. If the Leachate Collection and Treatment System is ever operated, MDNR shall request approval, by license amendment request, prior to operation.

3. ORGANIZATION AND QUALIFICATIONS

MDNR is responsible for radiation safety at the Tobico Marsh site. NRC staff has reviewed the MDNR organization, the qualifications of individuals assigned to key positions in the organization, the training program, Radiation Safety Program (RSP), an analysis of a postulated worse-case-credible accident scenario, the waste management program, and financial assurance for decommissioning. Figure 3 shows the organization responsible for radiation protection at the Tobico Marsh site. The Radiation Safety Officer (RSO) is responsible for the overall RSP at the site. The RSO Support Staff reports to the RSO.

The RSO reviews procedures and monitors activities to ensure that exposures are maintained ALARA and in accordance with applicable NRC requirements in 10 CFR Parts 20 and 40. The RSO is responsible for defining and implementing procedures related to radiological safety and for directing the radiological staff. The RSO Support Staff includes the Radiation Safety Engineer, who assists the RSO in duties that include procedure development, radiation work permit development, and radiological control planning. The Health and Safety Officer has overall responsibility for developing and implementing the site-specific Health and Safety Plan. The Health Physics supervisor is responsible for implementation of standard operating procedures and instructions. The Radiation Safety Committee (RSC) comprises of, at a minimum, the RSO, the Chief of Office of Equal Opportunity and Legal Services, and a Field Engineer. The Committee reviews abnormal occurrences, reviews the annual report of the RSO, and ensures that adverse results are resolved.

NRC staff has reviewed the proposed MDNR organization and the qualifications of designated RSO, Ms. Denise Gruben. The RSO designated for the Tobico Marsh site has over three years

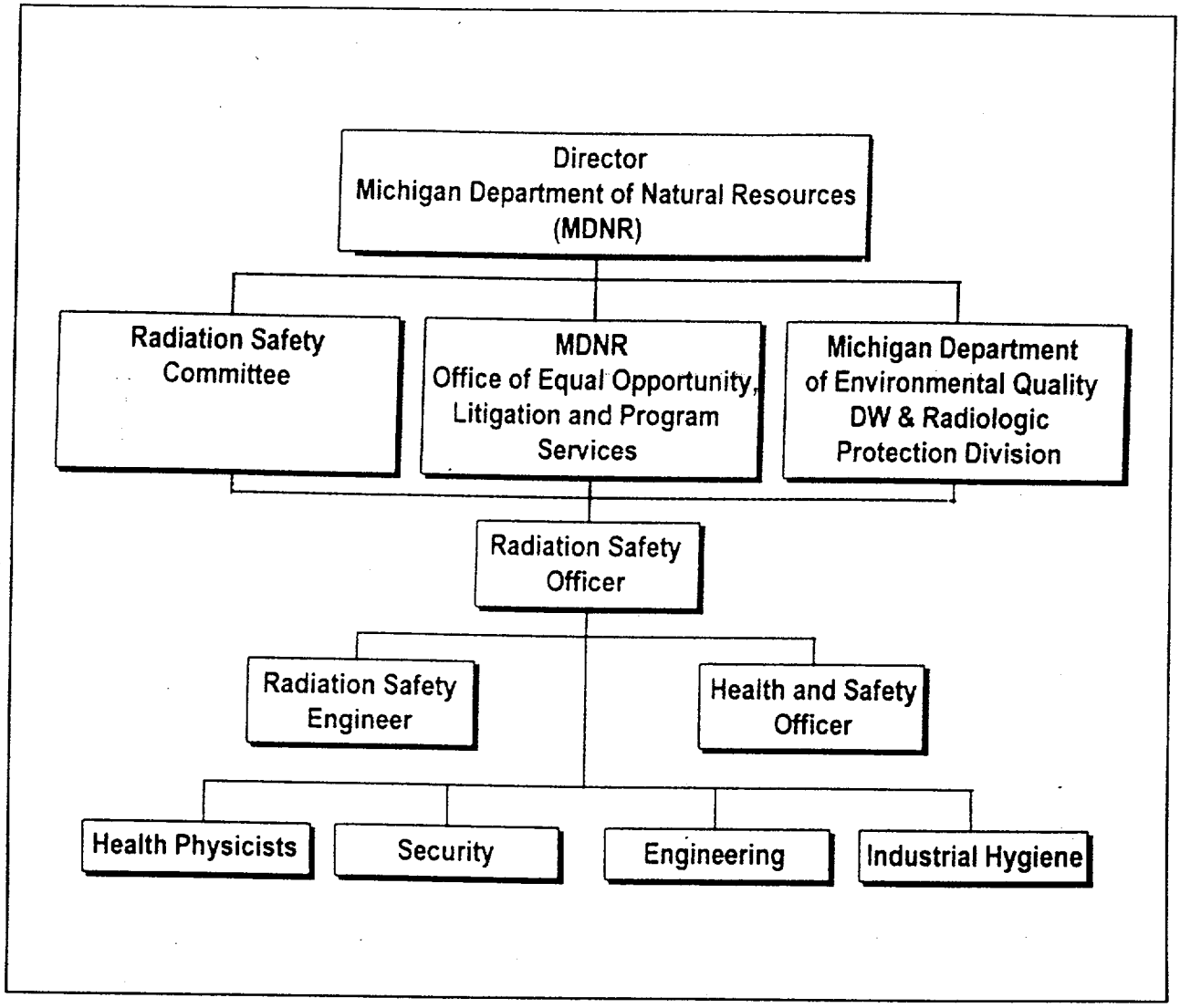

Figure 3

of relevant experience in radioactive materials management. She has attended a 40-hour course on Radiation Safety at Superfund sites and an 8-hour course on NRC's new license termination framework. The designated RSO has committed to taking annual radiological refresher training of approximately 8 hours, and this training can be either in a classroom taught by a lecturer or on the site taught by a consultant.

NRC staff concludes the provisions of 10 CFR 40.32(b) are met. The designated RSO is qualified to oversee radiation protection activities at the Tobico Marsh site, and the organization is adequate to carry out licensed activities. In order to ensure that the radiation protection activities at the site are monitored by a qualified individual, NRC staff included the following license condition:

CONDITION 11.C. The Radiation Safety Officer for this license is Denise Gruben.

4. RADIATION SAFETY TRAINING

MDNR will require Radiation Safety Training for workers and subcontractors who enter areas where potential for exposure exists. Individuals who work with radioactive material will be required to undergo, at a minimum, 6 to 8 hours of training pertaining to radiation safety that includes the awareness issues outlined in 10 CFR Parts 19, 20, 40, and 71. This training will be commensurate with the hazards faced by the worker. This training will also specifically focus on the health risks associated with the Th and U contamination present at the site and the appropriate precautions to control and monitor the contamination.

MDNR will to provide the training described in 10 CFR Part 19, including: (1) the storage, transfer, or use of radioactive materials or of radiation in the restricted area; and (2) the worker's responsibility to report promptly to the licensee any condition which may lead to, or cause, a violation of Commission regulations and licenses or an unnecessary exposure to radiation or radioactive material.

In summary, NRC staff reviewed the proposed radiation safety training program and found that the program is acceptable.

5. RADIATION SAFETY PROGRAM

a. Radioactive Material Areas

Almost all the areas (approximately 3 acres (1.2 hectare)) in the Tobico Marsh site are considered radioactive materials areas.

b. Personnel Monitoring

During site characterization, external occupational exposure is expected to be relatively low at the Tobico Marsh site because most of the contaminated material is covered by a clay cap. External and internal dosimetry is required for anyone who enters a radiologically controlled area in which the individual is likely to receive in one year doses in excess of those specified in 10 CFR 20.1502. Any person who enters or works in a radiation area will be required to have a personal dosimeter.

Thermoluminescence dosimeters (TLDs) will be processed for dose reading on at least a quarterly basis by a contractor accredited under the National Voluntary Laboratory Accreditation Program and approved for the type of radiation that most closely approximates the type of radiation for which the individual wearing the dosimeter is monitored as required by 10 CFR 20.1501.

Individuals' exposure records are maintained by MDNR at their Lansing office. Reports of exposures are provided to individuals upon written request.

c. Liquid Effluents Monitoring

MDNR stated that there will not be any liquid effluents from the site to sewers or drains. Limited volumes of contaminated liquid may be generated during sampling and decontamination. The site has sampling wells that are used to draw liquid samples to analyze for radioactive

materials. Prior to liquid discharges, the effluent samples will be submitted to licensed radiochemistry laboratories for analysis. MDNR has committed that no discharge of water containing concentrations of radioactive material in excess of the limits of 10 CFR Part 20, Appendix B, Table 2, Column 2 will occur. Liquid effluents above this level will be disposed of as radioactive waste in accordance to NRC regulations.

MDNR has committed to an action level for liquid effluents of 20 percent of the applicable 10 CFR Part 20, Appendix B value. The RSO will be notified and an investigation will be performed by the RSO if the level for liquid effluents exceeds the 20 percent of 10 CFR Part 20, Appendix B value. The RSC will review the results of the investigation and determine the appropriate corrective actions, as needed, and the corrective actions will be implemented.

d. Airborne Radioactivity Monitoring

During site characterization, intrusive work leading to airborne resuspension and inhalation of radioactive material is the likely primary pathway for internal occupational exposure at the Tobico Marsh site. MDNR will monitor the inhalation of airborne material primarily through air sampling. The primary method of monitoring for internal exposure from Th will be the use of personal air samplers with adequate detection sensitivity for demonstrating compliance with 10 CFR Part 20. The standard operating procedures, used to ensure exposure control at the site, will be consistent with NRC Information Notice 96-18, "Compliance with 10 CFR Part 20 for Airborne Thorium." In addition, MDNR will perform air sampling at the point of intrusive activity and downwind of the point.

The intake of radioactive material will be monitored for individuals likely to receive in excess of 10 percent of the applicable Annual Limit on Intake. MDNR has committed to an airborne concentration action level of 20 percent of the applicable 10 CFR Part 20, Appendix B value for the radioactive materials at the site. The RSO will be notified and an investigation will be performed by the RSO if the level for airborne effluents exceeds the 20 percent of 10 CFR Part 20, Appendix B value. The RSC will review the results of the investigation and determine the appropriate corrective actions, as needed, and the corrective actions will be implemented.

Requirements for determination of internal exposure are listed in 10 CFR 20.1204. Air sampling will be used to measure airborne radioactive material concentrations in the work area to assess the dose to determine compliance with occupational dose equivalent limits.

In order to minimize the potential for an internal uptake of radioactive material, the need for respiratory protection will be evaluated, and provided as needed. MDNR committed to determine if respiratory protection is warranted in any area where an individual could receive 50 percent of the values specified in 10 CFR Part 20, Appendix B, Table 1, Column 3. If the area is determined to exceed the 50 percent of the derived air concentration (DAC) specified in 10 CFR Part 20, Appendix B and engineering controls cannot reduce the airborne concentration, then respiratory protection will be required for individuals entering the area and equipment will be used pursuant to 10 CFR 20.1703.

The DAC-hours (hrs) for individuals will be reviewed daily, monthly, and yearly. Intakes greater than 4 DAC-hrs in one day for any individual and average intakes greater than 20 DAC-hrs for any individual in one month will be investigated by the RSO.

e. Bioassays

MDNR proposes to monitor the inhalation of airborne material primarily through air sampling. However, a bioassay program will be used to supplement the air sampling program.

The need for routine or special bioassays will be determined on a case-by-case basis from the individuals' exposure to airborne hazards, determined by air samples. If a respiratory protection program is utilized to limit intakes of radioactive material, then a bioassay program is implemented for confirmation and evaluation of intakes. If a bioassay program is required, then bioassay assessments of intakes will be performed on an annual basis, or for personnel likely to be exposed to airborne radioactive materials, a more frequent assessment may be necessary. MDNR will follow Information Notice 96-18, "Compliance with 10 CFR Part 20 for Airborne Thorium," if bioassay assessment is implemented.

f. Radiological Surveys

MDNR proposes to survey personnel, material, and equipment for contamination before exiting contaminated areas and to monitor for airborne radioactivity.

Radioactive contamination on surfaces may result from work activities, leaks of radioactive liquids, or gradual precipitation of airborne radioactive contamination onto exposed surfaces. Contamination control procedures will be considered in planning and performance of all jobs. However, the extent of the contamination control procedures used will be consistent with the amount of radioactivity being handled. MDNR proposes that contamination surveys be required on a weekly basis while work, involving radioactive material, is in progress at the Tobico Marsh site. In-use-step-off pads will be required to be surveyed on a daily basis, and areas not posted as contamination areas will be surveyed on a quarterly basis. The action levels for contamination surveys for loose contamination are 20 disintegrations per minute (dpm)/100 square centimeter (cm^2) (15.5 square inches (in^2)) alpha, 200 dpm/100 cm^2 (15.5 in^2) beta, and for fixed contamination are 100 dpm/100 cm^2 (15.5 in^2) alpha, 1000 dpm/100 cm^2 (15.5 in^2) beta. MDNR will perform contamination surveys of land areas by taking exposure rate measurements.

MDNR also proposes that routine radiation surveys be required on a monthly basis while intrusive activities in posted areas are being performed on site and will be performed during a monthly inspection of the site. In addition, MDNR proposes that a daily radiation survey be performed in restricted areas during periods of activity. Additional surveys will be performed for work-related activities and in support of Radiation Work Permits (RWPs) as required by responsible radiation protection staff.

In non-emergency situations, personnel exiting contaminated areas are required to survey themselves after removal of protective clothing to ensure that the individuals are free from contamination.

MDNR will perform both fixed and loose contamination surveys for equipment and materials. Fixed contaminated surveys will be performed using alpha/beta friskers, and loose contamination will be performed by taking smears and analyzing them on alpha/beta counting systems. Release of equipment and materials from restricted areas to clean areas onsite or unrestricted areas will be in accordance with the RSP and the "Guidelines for Decontamination

of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," Policy and Guidance Directive (PGD) 83-23, August 1987. Efforts will be made to reduce contamination to the action levels prior to release for unrestricted use. If contamination exceeds the levels in PGD 83-23, the materials will be containerized, labeled, and stored in accordance with NRC regulations. NRC staff recommends the following license condition:

CONDITION 11.D. For equipment and materials release, MDNR shall use decontamination limits in "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," Policy and Guidance Directive 83-23, August 1987.

g. Radiation Detection Instruments

Equipment at the Tobico Marsh site will provide appropriate radiological surveillance (i.e., an alpha-beta probe, or an alpha-beta-gamma probe). The radiation detection instruments will be calibrated by vendor(s) that are NRC or Agreement State licensees. Sources used for instrument calibration and response checks will be inventoried and stored in a secure location. Calibration certificates, a source inventory list, and all leak check survey documentation will be maintained at the MDNR office for review.

MDNR will use instruments that are appropriate for the radiation types to be encountered at the Tobico Marsh site and have minimum detectable activities well below the decontamination limits in PGD 83-23.

h. Radiation Safety Procedures

Radiation safety procedures will be instituted during Tobico Marsh site characterization activities. MDNR committed to the radiation safety procedures in Table 1.

In addition, MDNR proposes to use an RWP program to control site characterization activities involving licensed materials at the Tobico Marsh site. The RWPs will specify the methods to be used in completing the activity, as well as the controls required to complete the task safely and maintain exposures ALARA. An RWP is required and must be completed before beginning work whenever a safety hazard is suspected to exist or could be created. Cognizant individuals responsible for the task will generate the RWP. The RSO will review and approve it prior to implementation and is responsible for ensuring the proper implementation.

The RSO will prepare an annual report that reviews the RSP. The report will review overall employee radiation exposure data to determine: (1) if there are any unexpected trends developing in personnel exposures; (2) if personnel exposures might be reduced under the concept of ALARA; and (3) if equipment for personnel exposure control is properly used, maintained, and inspected.

Table 1: MDNR's Commitment for Radiation Safety

Commitment	Condition	Frequency
Review of Radiation Work Permits	When permits are opened for more than one month	Monthly
Review of Operating Procedures	none	Biennially
Audit of RSP	none	Annually
Inspections of RSP	none	Quarterly
Calibration of radiation detection instruments	none	Semiannually or when instruments undergo repairs that could affect calibration
Process TLDs	none	Quarterly
Routine contamination surveys	When work involving radioactive materials is in progress	weekly
Survey of step-off pad areas	When work involving radioactive materials is in progress	Daily
Routine contamination surveys	When areas are not posted as contamination areas	Quarterly
Routine radiation surveys	During intrusive activities in posted areas	Monthly
Routine radiation surveys	During site inspections	Monthly
Routine radiation surveys in Restricted Areas	If Restricted Areas are present during periods of activity	Daily

i. ALARA

In the license application, MDNR commits to maintaining radiation exposures ALARA, and will use an ALARA Program as a guide to achieve compliance with its ALARA commitments. The RSO will review Radiation Safety Procedures to ensure that the methods employed are ALARA. The MDNR commitment to ALARA is sufficient to meet the intent of 10 CFR 20.1101(b), to make every reasonable effort to maintain exposures ALARA.

MDNR has committed to the following policies at the site: (1) ALARA targets will be set and data trends will be monitored in accordance with the RSP; (2) in the interest of limiting exposures to the public, efforts are made to reduce effluent volumes to the minimum

practicable level; and (3) the preferred method of limiting intake is the use of engineering controls. In cases where engineering controls are not adequate or feasible to protect the workers, respiratory protection may be used in accordance with a respiratory protection program.

The ALARA organization consists of the RSO, the Radiological Safety Engineer, and the Health Physics Supervisor. The RSO is responsible for maintaining an ALARA program and updating management on any problems or concerns dealing with the overall health and safety of workers. The RSO will ensure completion of an annual review of the records, programs, and standard operating procedures, verifying that exposures remain ALARA for all projects and operation. A report of the ALARA review will be prepared, including any recommendations presented to or by the RSO, for consideration and possible implementation.

MDNR has set goals to keep exposures below the NRC limits for whole body exposure, effluent discharges, and radiological conditions. The ALARA goals for a radiation worker's whole body exposure for are 2.5 mSv/yr (250 mrem/yr) external, 5 mSv/yr (500 mrem/yr) internal, and 7.5 mSv/yr (750 mrem/yr) total effective dose equivalent (TEDE). The ALARA goal for liquid effluents is zero, and for airborne effluent is 20 percent of the 10 CFR Part 20, Appendix B value. The ALARA goals for loose contamination are 50 dpm/100 cm^2 (15.5 in^2) alpha, and 300 dpm/100 cm^2 (15.5 in^2) beta. The ALARA goal for radiation levels within each posted radiation area during intrusive activities is 0.02 mSv/hr (2 mrem/hr) at ground level.

j. Quality Assurance

Audits and inspections are performed to determine if operations are being conducted in accordance with license and the RSP. The audit of the RSP will be performed, at a minimum, annually. The annual audit will be performed by a qualified individual having no direct responsibility for the operation being audited to ensure unbiased results. Inspections will be scheduled, at a minimum, quarterly. Items requiring corrective action and follow-up actions are documented.

Abnormal occurrences are reported to the RSO and investigated. The level of investigation and the need for corrective action are determined based on the severity of the incident.

Records pertaining to licensed materials, health and safety, the RSC meetings, abnormal occurrences, inspections, ALARA, employee training, personnel exposures, instrumentation, and radiation and contamination surveys, are retained to demonstrate compliance with the conditions of the license and NRC regulations. These records are retained for at least two years, unless otherwise specified in the regulations. Records are stored in the MDNR office in Lansing, Michigan.

k. Summary

NRC staff has reviewed the proposed RSP including radioactive material area posting, personnel monitoring devices, liquid and airborne effluents monitoring, bioassays, radiological surveys, radiation detection instruments, radiation safety procedures, commitments to maintain exposures ALARA, and the quality assurance program. NRC staff concludes that, in accordance with 10 CFR 40.32, MDNR's proposed RSP and radiation safety procedures are adequate to protect the health and safety of workers and the public.

In addition, because the license application and RSP make commitments to radiation safety, NRC staff included the following license condition:

CONDITION 11.E. Except as specifically provided otherwise in this license, MDNR shall conduct its program in accordance with the statements, representations, and procedures contained in the application dated September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999; the Radiation Safety Program, dated August 15, 1997; the ALARA Program, dated August 15, 1997; and the Training Program, dated August 15, 1997. NRC's regulations shall govern unless the statements, representations and procedures in the licensee's application are more restrictive than the regulations.

6. RADIOLOGICAL ACCIDENT ANALYSIS

NRC staff reviewed the MDNR's estimated potential consequences of a postulated worse-case-credible accident. MDNR stated that a transportation accident involving shipment of excavated radioactive material represents the worst scenario for exposing members of the public to a large source of radioactivity from the site. Thus, MDNR evaluated a transportation accident that causes spillage of the entire contents of a radioactive waste transport vehicle. A calculation, estimating the TEDE to a member of the public, was performed for the spillage of thorium soils and debris.

The scenario assumed that a sufficient amount of soil is spilled during the transportation accident that the total airborne dust loading is due to the spilled material, that all the soil and dust inadvertently transferred to the mouth is from the spilled material, and that it represents an isotropic infinite plane source that is 15 cm (6 in) deep. The average concentration of Th-232 in the soil is assumed to be 5.2 Bq/g (140 pCi/g), which is 25 percent of the maximum concentration measured during the Oak Ridge Associated Universities Survey in 1985.

Other assumptions in the accident scenario are: (1) the exposure pathways are inhalation, ingestion, and direct exposures during the clean-up period, (2) the airborne dust loading is 4E-4 g/m^3 (1.1E-5 g/ft^3), (3) the spill takes 24 hr to clean up and the individual is exposed the entire time, (4) the breathing rate is 1.4 m^3/hr (50 ft^3/hr), (5) the effective transfer rate for ingestion of soil and dust transferred to the mouth is 0.05 g/d, and (6) the density of the spilled contaminated soil is 1.6 g/cm^3 (26.2 g/in^3).

MDNR stated that the maximum dose to a member of the public from the spillage is 0.196 mSv (19.6 mrem) TEDE. In actuality, this is the maximum occupational dose to a radiation worker because MDNR used ALI values and a 50 mSv (5000 mrem) annual whole body dose limit. The maximum non-occupational dose to a member of the public would be less than 0.196 mSv (19.6 mrem) TEDE, and is within NRC requirements. For comparison purposes, the 10 CFR Part 20 dose limit is 1 mSv/yr (100 mrem/yr) for members of the public.

NRC staff has determined that this postulated accident is appropriate to evaluate a worst case credible accident analysis of a radiation worker for the Tobico Marsh site. The resulting dose to the radiation worker is within NRC requirements for a member of the public. NRC staff has concluded that this postulated accident does not have the potential for non-occupational

radiation doses that exceed the 10 CFR Part 20 limit of 1 mSv/yr (100 mrem/yr) for members of the public, and is, therefore, acceptable.

7. WASTE MANAGEMENT

A very small amount of LLW is expected to be generated during site characterization. LLW will be transported off-site for disposal at a licensed LLW disposal site. These wastes will be classified and meet waste form requirements of 10 CFR Part 61, and shipped in accordance with 10 CFR Part 71 and U.S. Department of Transportation (DOT) regulations, and applicable LLW disposal site requirements.

If necessary, MDNR will temporarily store small quantities of LLW within the LCTS building or within locked containers located onsite. Otherwise, a locked sea-land container, a temporary building, or a similar structure will be utilized. MDNR has committed to having storage facilities that will secure the LLW against unauthorized access and prevent weathering or other damage that could result in release of source materials. At a minimum, the package containers used to store the LLW will meet DOT requirements. Packages containing liquid waste will be placed in a secondary containment with sufficient capacity to capture the entire contents of the primary package in the event of leakage. LLW may be temporarily stored for up to one year onsite, provided that the integrity and exterior contamination of the waste package is examined quarterly. LLW may be stored for up to five years onsite as interim storage provided that the waste is adequately prevented from weathering or other damage.

In summary, NRC staff reviewed the proposed waste management program and found that the program is acceptable.

8. FINANCIAL ASSURANCE

In accordance with 10 CFR 40.36 (e)(4), MDNR submitted a decommissioning funding plan that included a Statement of Intent and a cost estimate for decommissioning of $12.5 million. The Statement of Intent was signed by the Director of the MDNR. The cost estimate included the costs for both the pre-decommissioning site characterization and decommissioning.

MDNR's cost estimate to conduct the site characterization activities leading to the development and preparation of the Decommissioning Plan is in the amount of 2.5 million dollars. The cost of the implementation of the final decommissioning is estimated to be 10 million dollars. NRC staff reviewed the submittal and found the cost estimate to be reasonable and the Statement of Intent acceptable. A revised decommissioning funding plan will be provided with the submittal of the DP no later than August 31, 2001, in accordance with License Condition 11.A.

9. CONCLUSION

NRC staff has reviewed the MDNR license application and proposed characterization activities. NRC staff has also evaluated the organization responsible for radiation safety of the Tobico Marsh site, the qualifications of individuals assigned to key positions in the organization, the training program, the RSP, an radiological accident analysis, the waste management program, and financial assurance for decommissioning.

With the proposed license conditions, NRC staff determines that the license to possess calibration standards, Th, and U on the Tobico Marsh site, and to perform site characterization activities, can be issued without undue risk to workers, the public, or the environment. Thus, NRC staff concludes the application meets the requirements for approval described in 10 CFR 40.32.

Principal Contributor: S. Lewis

Larry W. Camper, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure 3

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Docket No.: 40-9015
License No.: SUC-1581

APPLICANT: Michigan Department of Natural Resources

FACILITY: MDNR Tobico Marsh Site
Kawkawlin, MI

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR THE LICENSING OF MDNR TOBICO MARSH SITE

BACKGROUND

By letters dated September 5, 1997, as supplemented on July 27, 1998, and March 8, 1999, Michigan Department of Natural Resources (MDNR) submitted an application to the U.S. Nuclear Regulatory Commission (NRC) on Source Material License No. SUC-1581 to possess thorium (Th) and uranium (U) at the state-owned portion of the former Hartley and Hartley Landfill (Tobico Marsh site) in Kawkawlin, Michigan. The Th and U currently exist at the MDNR Tobico Marsh site in the form of magnesium-Th slag, contaminated soil, and other material and debris contaminated above background levels. MDNR also requested to include possession of sealed sources for instrument calibration on a license.

INTRODUCTION

MDNR submitted a source material license application to possess Th and U at the Tobico Marsh site. The site is located at 2301 Two Mile and Beaver Roads, Kawkawlin Township, Kawkawlin, Bay County, Michigan, northeast of Bay City, Michigan. The Tobico Marsh site covers approximately 3 acres (1.2 hectare) adjacent to the former Hartley and Hartley Landfill that is currently owned by SCA Services, Inc. (SCA). The SCA site is being decommissioned under NRC License No. SUC-1565. In 1962, it was discovered that the entire property, owned by the Hartley and Hartley waste handling company, was being used as a landfill.

In 1972, the State of Michigan acquired in trade a portion of the Hartley and Hartley Landfill. Waste disposal activity on the state-owned portion of the site ended by 1972, but the Hartley and Hartley organization continued to operate the site until 1978 when operations at the landfill ceased.

In 1980, the State of Michigan conducted an aerial radiological survey of the landfill because State authorities were concerned that radioactive material from another facility in Michigan may have been disposed at the landfill. The survey indicated an excess of Thallium-208, a progeny of Thorium-232 (Th-232), over the landfill. In May 1983, the State of Michigan, Division of Radiological Health, informed NRC Region III that radioactive material was found in the Tobico Marsh site. Contamination was also found on the adjacent property owned by SCA.

The State of Michigan requested input from the NRC on whether the encapsulation measures being taken for the non-radiological hazardous wastes also would provide protection for the

radioactive hazard. In response to this request, NRC staff agreed to perform a radiological survey of the Tobico Marsh site.

In July 1984, Oak Ridge Associated Universities undertook a radiological survey of the Tobico Marsh site. The survey included surface radiation scans, measurements of direct radiation levels, and analyses of radionuclide concentrations in soil, sediment, and water samples. The results of this survey indicated a 0.15 to 0.20-meter (m) (0.5 to 0.7 feet (ft)) thick layer of Th contaminated slag near the surface. The contaminated slag appeared to be distributed in a 10 to 20-m (33 to 66-ft) wide strip near the center of the property, extending almost the entire north/south length of the site.

NRC and State of Michigan staff concluded, on the basis of the radiological survey, that the Th contamination exceeded the Option 1 level (0.37 Becquerel per gram (Bq/g) (10 picoCurie per gram (pCi/g)) of Thorium-232 + Thorium-228) of the 1981 Branch Technical Position (BTP) entitled, "Disposal or Onsite Storage of Thorium or Uranium Wastes From Past Operations" (46 FR 52061). They also concluded that the mixture of non-radiological hazardous and radioactive waste would make the wastes unacceptable at a chemical or radioactive waste disposal site (other than an authorized mixed waste disposal facility) and agreed to implement a monitoring program and to place a restriction on the deed prohibiting intrusion. NRC agreed that these measures would likely make the encapsulation of the Th contamination acceptable for the short term.

In 1984, MDNR undertook encapsulation measures at the Tobico Marsh site to isolate and prevent the migration of the non-radiological hazardous wastes. Encapsulation measures included the installation of a 1.5-m-thick (5-ft) clay cap and 0.9-m-thick (3-ft) bentonite slurry walls.

In 1985 and 1986, ABB Environmental Services, Inc. (formerly E.C. Jordan Company) performed an investigation to assess the nature and extent of environmental contamination around the encapsulation area. The investigation indicated that the level of leachate inside the encapsulation was approximately 0.9 m (3 ft) higher than the level of the surrounding area and that volatile organic chemicals were detected in the soils and groundwater outside the encapsulation.

In 1987 and 1988, GZA/Donohue performed a feasibility study of the Tobico Marsh site. The study recommended that site access be restricted by fencing, that monuments be installed stating the nature of the contaminants, that the clay cap be repaired where erosion had occurred, that hydraulic isolation be maintained by withdrawal of leachate from inside the encapsulated area, and that the leachate be treated and disposed.

In March 1990, the MDNR Tobico Marsh site was added to NRC's Site Management Decommissioning Plan (SDMP) list because of the quantity of Th-contaminated materials, the potential for mixed waste, and the fact that MDNR did not have a license. The purpose of the SDMP is to ensure safe and timely remediation of nonroutine decommissioning sites.

In 1991, design of the Leachate Collection and Treatment System (LCTS) and preliminary design of the pretreatment system was completed. In 1993 and 1994, the LCTS, treatment building, and the force main were installed. However, the LCTS has not operated for several reasons. They include possible presence of low-level radioactive materials in the leachate,

insoluble radioactive material less than or equal to one μm (3.3 μft) in diameter in the treated effluent, no holding tanks to verify effluent quality before discharge to the waste water treatment plant, and potential metal concentrations that are unacceptable for the waste water treatment plant.

PROPOSED ACTION

The primary purpose for issuing Source Material License No. SUC-1581, is to authorize MDNR to possess source material Th and U and sealed sources at the Tobico Marsh site in order to control the material to ensure the protection of the public health and safety and the environment. The license covers all source material Th and U present in concentrations exceeding natural background. This license also authorized possession of sealed sources at the site for instrument calibration. The sealed sources allow proper calibration of instruments for the radiation types to be encountered at the site.

MDNR proposes to sample Th and U material during site characterization activities. The proposed site characterization is intended to characterize the concentration, lateral extent, and volume of radiologically contaminated material at the Tobico Marsh site. The decommissioning alternatives for this site will depend on the information obtained from the site characterization.

At a later date, MDNR will provide proposal(s) for the disposition of any Th and U material found at the site in a Decommissioning Plan (DP). The DP will describe remediation alternatives and the proposed procedures for site remediation, final survey, and license termination.

THE NEED FOR PROPOSED ACTION

Th and U exist on the Tobico Marsh site in concentrations that pose a long-term risk to the public and the environment. Before encapsulation measures were taken in 1984, Th-232 and Th-228 had been identified in the soil in concentrations up to 20.8 Bq/g (561 pCi/g) and 9.5 Bq/g (527 pCi/g), respectively. U-238 concentrations were elevated in samples with elevated Th levels.

MDNR applied for a specific license to possess, use, or transfer Th and U during site characterization activities because U-238, Th-228, and Th-232 activity levels may result in doses substantially in excess of the unrestricted release requirements in 10 CFR Part 20. The issuance of License No. SUC-1581 would ensure that the radioactive material at the Tobico Marsh site is possessed, used, or transferred in accordance with NRC regulations, and that MDNR will have a structured regulatory program in place to protect public health and safety.

ALTERNATIVES TO PROPOSED ACTION

NRC staff considered no action as an alternative to the proposed action. The no-action alternative would result in no specific license and would not ensure MDNR will have a structured regulatory program in place to protect public health and safety.

ENVIRONMENTAL IMPACTS OF PROPOSED ACTION

The activities that NRC staff proposes to authorize through the issuance of License No. SUC-1581 are expected to have an insignificant impact on the environment. In fact, the activities are anticipated to improve control of the Th and U-contaminated material. The control of the Th and U-contaminated material under the license to MDNR will reduce the potential for the release of radiological contamination to the environment.

During the proposed site characterization, the primary potential radiological impact on the environment would be the release of radioactive material during excavation and handling of contaminated materials. No waste water that is contaminated with radionuclides above the 10 CFR Part 20, Appendix B limits, will be allowed to be discharged to sewers and drains from the site.

The proposed activities that would be licensed at this site are for the purpose of controlling and characterizing the radiologically contaminated material. Because MDNR has committed to comply with NRC requirements, has adequate radiation protection procedures and capabilities, and will implement an acceptable as low as is reasonably achievable (ALARA) program, the proposed actions are not anticipated to result in a dose to workers or the public in excess of 10 CFR Part 20 limits. Past experiences with site characterization activities at sites similar to the MDNR Tobico Marsh site indicate that public and worker exposure will be far below the limits found in 10 CFR Part 20.

The proposed action will result in the irreversible use of energy resources during excavation and handling of contaminated material. There are no reasonable alternatives to these resource uses and there are no unresolved conflicts concerning alternative uses of available resources.

AGENCIES AND INDIVIDUALS CONSULTED

This environmental assessment (EA) was prepared entirely by NRC staff. The staff from the State of Michigan Department of Environmental Quality (MDEQ) and MDNR reviewed a draft of this EA. MDEQ had no comments. MDNR has suggested editorial corrections and noted that the presence of U-238 has not been unequivocally proven at the Tobico Marsh site in the Need for Proposed Action section. Their comments have been incorporated in this version. No other sources were used beyond those referenced in this EA.

CONCLUSIONS

Issuance of Source Material License No. SUC-1581 to authorize the possession and control of source material located on the MDNR Tobico Marsh site will have an insignificant impact on the environment. Proposed activities at the site are designed to improve control and reduce the potential for release of radiological contamination to the environment. In addition, based on information to be gathered at the site, the licensee will develop a plan for the cleanup of radiological contamination at the site.

FINDING OF NO SIGNIFICANT IMPACT

NRC has prepared this EA related to the proposed license application by MDNR for the Tobico Marsh site. On the basis of the EA, NRC has concluded that this licensing action would not

significantly affect the quality of the environment and has determined not to prepare an environmental impact statement for the proposed action.