



UNION CARBIDE CORPORATION  
P.O. BOX 8361, SOUTH CHARLESTON, WV 25303

January 31, 1997

Certified Mail, Return Receipt Requested

Mr. Frank Talbot  
Ohio Department of Health, Bureau of Radiation Protection  
P. O. Box 118  
Columbus, Ohio 43266-0118

Re: Union Carbide SMDP Radiological Materials -  
Marietta Ohio Annual Waste Generation Report

Dear Mr. Talbot:

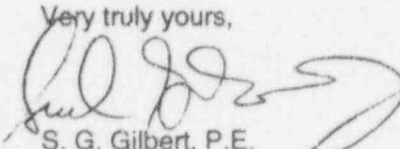
Enclosed is the waste generation report for 1996 for the radiological materials now stored at the Elkem Metals facility located near Marietta, Ohio. This site is undergoing cleanup by Union Carbide. The site is in the Site Decommissioning Management Plan (SDMP) of the Nuclear Regulatory Commission.

There were two items unclear to us. We consulted with you and made the following responses on the form. In the table at the bottom of Part 3, Page 4, we changed the name of the column to "Volume". The text on Part 3 - Page 5 was modified to indicate that the materials are in long-term storage. This storage is not intended to be decay-in-storage as the form, before our revision, implies.

Additionally, we have overstated in this submittal the quantity of radiological materials generated in 1996. Reconciliation of quantities indicated that the physical inventory of wastes does not exactly match the quantities that have been reported in the past plus the quantity known to be generated this year by our cleanup. We know that the actual quantity generated in 1996 from site cleanup totals 472 cubic feet. In order to fully account for the materials now stored on site, the attached report overstates the quantity generated in 1996 so that the total quantity of stored radiological materials is accounted for in the two generator reports that Union Carbide has submitted to the Ohio Department of Health. The quantity stated on this submittal as generated in 1996 is 742 cubic feet. The total now stored at the site is 8302 cubic feet (7560 cubic feet in the 1995 annual report and 742 cubic feet in the 1996 annual report). The under-reporting in the 1995 annual report was the result of an inadvertent oversight of a small portion of the stored wastes.

Should you have questions regarding this submittal, please contact me at (304)747-5326.

Very truly yours,

  
S. G. Gilbert, P.E.  
Program Manager

9704170064 970131  
PDR ADDCK 04007708  
C PDR

SGG:dvc

enclosure: Ohio Department of Health Low-Level Radioactive Waste Annual Report

cc: Mr. Sean Norris, Norris Environmental  
Mr. Clayton Pittiglio, Nuclear Regulatory Commission, Headquarters  
Mr. John House, Nuclear Regulatory Commission, Region III  
Mr. Rik Melvin, Elkem Metals  
Mr. Frank Talbot, Ohio Department of Health





OHIO DEPARTMENT OF HEALTH  
BUREAU OF RADIATION PROTECTION

RADIOACTIVE MATERIALS USERS  
LOW-LEVEL RADIOACTIVE WASTE ANNUAL REPORT

**PLEASE READ ALL INSTRUCTIONS BEFORE COMPLETING THIS FORM**

This report or any part of this report may be photocopied, as needed.

Under the provisions of Rule 3701-77 of the Ohio Administrative Code, all users of radioactive material that generate low-level radioactive waste as defined in Paragraph 3748.01(L) of the Ohio Revised Code must report annually to the Ohio Department of Health, on forms provided by the Director, regarding radioactive waste generated by them during the preceeding calendar year.

**INTRODUCTION:**

**PLEASE READ**

THIS REPORT IS NOT A DUPLICATE OF THE MIDWEST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE COMMISSION ANNUAL REPORT FORM.

THE COMPLETION OF THIS FORM IS REQUIRED BY OHIO STATE STATUTE, CHAPTER 3748 OF THE OHIO REVISED CODE AND 3701-77 OF THE OHIO ADMINISTRATIVE CODE. FAILURE TO COMPLETE THIS FORM ACCURATELY, COMPLETELY, AND IN A MANNER CONSISTENT WITH THE REQUIREMENTS OF CHAPTER 3701-77 OF THE OHIO ADMINISTRATIVE CODE CAN LEAD TO PENALTIES AS ALLOWED BY OHIO STATE STATUTE SECTION 3748.99 OF THE REVISED CODE.

**Applicable Definitions -- Low-level Radioactive Waste Generator Annual Report - 1996**

Under Ohio State Statute, the Ohio Department of Health is tasked with the development of a report on the generation of low-level radioactive waste within the State of Ohio. Chapter 3747 of the Ohio Revised Code defines low-level radioactive waste as:

*radioactive waste that is not classified as high-level radioactive waste, and that is Class A, B or C low-level radioactive waste as defined in 10 C.F.R. 61.55, as that section existed on January 26, 1983.*

Chapter 3748 of the Ohio Revised Code (the Radiation Protection Act) defines low-level radioactive waste as:

*...the same meaning as in section 3747.01 of the Revised Code with regard to the disposal*

- waste;
- 7) *A description of any actions taken or planned to be taken to reduce low-level radioactive waste volume or production; and*
  - 8) *The types and amounts of low-level radioactive waste expected to be generated during the next calendar year.*

Reporting units for use on this form shall be:

- becquerels for activity (1 millicurie equals 37 megabecquerels; 1 disintegration per second equals 1 becquerel)
- cubic feet for volume (27 cubic feet equals one cubic meter; 1 cubic meter equals 35.3 cubic feet)

No report will be accepted with a general volume, i.e., less than fifty cubic feet ( $<50 \text{ ft}^3$ ). Volume of generation will be reported in whole cubic feet (to the nearest tenth when possible) and will be reported starting with one cubic foot.

#### **Generator Fee Requirements**

Division 3748.04(H) of the Revised Code directs the Public Health Council to develop rules to:

*Establish... fees to be collected annually from generators of low-level radioactive waste, which shall be based upon the volume and radioactivity of the waste generated and the costs of administering low-level radioactive waste management activities under this chapter and rules adopted under it. ...*

Paragraph 3701-77-02(c) states:

*Generators shall pay to the director, on or before March first of each year, a fee of three dollars and fifty cents per cubic foot of low-level radioactive waste generated during the previous calendar year, except generators that generate less than fifty cubic feet of low-level radioactive waste during any calendar year shall be exempt from paying any fee under this rule.*

It should be noted, the term "**Waste Generated**" refers to all low-level radioactive waste generated at your facility as well as that which is stored or will eventually be shipped to a licensed facility for treatment and/or disposal.

**DO NOT SEND ANY FEE PAYMENT WITH YOUR COMPLETED REPORT FORM. YOU WILL BE INVOICED FOR ANY FEES DUE BASED ON THIS REPORT AND OTHER INFORMATION RECEIVED BY THE DEPARTMENT'S ACCOUNTS RECEIVABLE UNIT**

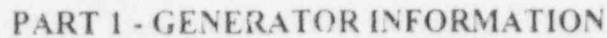
## READ ALL INSTRUCTIONS BEFORE BEGINNING

Instructions for this form are provided in text boxes such as this. Any instruction in a text box should be followed to ensure accurate, complete and timely completion of the form. Questions on applicability of the form may be directed to:

Ohio Department of Health  
(614) 644-2727  
attention: Low-level Radioactive Waste Section.

Generators and handlers of radioactive materials licensed by the U.S. NRC and under registration by the State of Ohio are reminded that the requirements for records for the maintenance of low-level radioactive waste disposal are found in Title 10 Code of Federal Regulations Part 20.2108. This Annual Low-level Radioactive Waste Generator's Report Form is the vehicle utilized by the State of Ohio to compile and correlate this information in a concise annual report.





Generator No:

Do not write in this space

1. Name of NRC Licensee/Ohio Registrant organization, company or other entity

2. Mailing address of organization, company, entity named above

3. Classification of organization, company, entity named above: (check all applicable)

☐ - Academic (Education, Research, other)    ☒ - Industrial (Manufacturer, other)    ☐ - Medicine☐ - Utility    ☐ - Government (City, County, Municipality, other)

4. Name, Title of person responsible for completing this report

5. Address of person named in #4.

6. Telephone number of person named in #4.

7. Fax number of person named in #4.

Continue



2(b) Class B Low-level Radioactive Waste

Complete the following table for all Class B waste presented for transportation to a TSDF in calendar 1996. Do not include a radionuclide if activity is below the lower limit of detection (LLD) of your facility's counting system.

Waste Type Code	Total Volume (ft <sup>3</sup> )	Total Activity (MBq)	Nuclide	MBq	Nuclide	MBq	Nuclide	MBq
Class B Totals	0	0						

2(c) Class C Low-level Radioactive Waste

Complete the following table for all Class C waste presented for transportation to a TSDF in calendar 1996. Do not include a radionuclide if activity is below the lower limit of detection (LLD) of your facility's counting system.

Waste Type Code	Total Volume (ft <sup>3</sup> )	Total Activity (MBq)	Nuclide	MBq	Nuclide	MBq	Nuclide	MBq
Class C Totals	0	0						

NOTE: This page may be photocopied as needed. Use additional pages if necessary

3(a). If any waste reported in Part 2, Number 1 contained Special Nuclear Materials provide amount, in grams, in each box below by radionuclide. If none, enter "0" in first box.

U-233	U-235	Pu	Other
0			

Continue

Part 2 Page 3



### Part 3 - All Other Low-level Radioactive Waste Generated, Stored, Treated, Processed, Held for Decay-in-storage, Disposed

The following sections (3a, 3b, and 3c) should be completed by:

The radioactive material handler who uses radioactive material in medical facilities, hospitals, for radiopharmaceuticals (manufacture, generation, and/or use with humans);

The radioactive material handler who uses NORM/NARM materials;

The radioactive material handler who holds waste materials in storage for decay prior to disposal in hazardous waste. This includes radioactive medical waste and other radioactive waste held under certain license conditions. This DOES NOT include waste in storage waiting for shipment to a licensed TSDF;

The radioactive material handler who discharges radioactive waste to sanitary sewerage under the auspice of Title 10 Code of Federal Regulations Part 20.2003;

The radioactive material handler who generates "mixed waste" or waste containing both a radioactive component and a hazardous material component;

The radioactive material handler of sealed sources and/or devices who have returned these devices to the original distributor. This includes radioactive material returned under a general license as defined in Title 10 Code of Federal Regulations Part 31; and/or

The radioactive material handler who disposes of radioactive material as waste in Greater than Class C quantities.

Licenseses of the U.S. NRC and users of radioactive material who are registered with the State of Ohio who utilize radiopharmaceuticals within the State of Ohio should complete part 3(b) regardless of the location of the nuclear pharmacy where the radiopharmaceuticals were ordered or returned, i.e., purchased from outside of Ohio.

[illegible]

Part 3 - Page 3



3(c) Continuing.

Title 10 Code of Federal Regulations Part 20.2001

- a) A licensee shall dispose of licensed material only —
- 1) By transfer to an authorized recipient as provided in §20.2006 or in the regulations in parts 30, 40, 60, 61, 70 or 72 of this chapter; or
  - 2) By decay-in-storage; or
  - 3) By release in effluents within the limits in §20.1301; or
  - 4) As authorized under §§20.2002, 20.2003, 20.2004, or §20.2005.

Under certain licensing conditions of the U.S. NRC, some licensed material with half-lives greater than 65 days are allowed for decay in storage. By my signature below, I certify that:

NRC License No. NA

issued to the facility named in Part 1 above is allowed to decay-in-storage radioactive material as low-level radioactive waste with half-lives greater than 65 days.

\_\_\_\_\_  
Signature of person responsible for license

\_\_\_\_\_  
title of signatory authority

Radionuclides allowed ~~for decay~~ in storage at this facility: Thorium

Volume in storage for decay in storage: 8302 Cubic feet  
(NOTE: one 55 gallon drum equals approximately 7.4 cubic feet.)

Date(s) material placed in storage: 1993-1996

Total activity at time of this report currently in decay in storage: 126 MegaBecquerels  
(An estimate is acceptable).

Physical form of waste: solid Chemical form of waste: contaminated soil

Packaging of waste in storage i.e., drums, boxes, liners, etc: B-25 boxes and drums

NRC Form 374A  
(2-84)

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 1 PAGE

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License number	SMB-933
Docket or Reference number	040-07708
Amendment No.	05

Union Carbide Corporation  
Mining and Metals Division  
P.O. Box 1029  
Grand Junction, CO 81502

In accordance with letter dated March 10, 1983, License Number SMB-933 is hereby terminated.



8508020225 850708  
REG 3 LIC 30  
SMB-0933 PDR

For the U.S. Nuclear Regulatory Commission

Date July 6, 1985

Original Signed  
By Jack Hind  
Materials Licensing Section, Region III

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