



**Davenport Water Pollution Control Plant
Industrial Pretreatment Radiation Disposal Monthly
Report Form
Instruction Manual**

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Introduction

This manual will provide instructions on filling out the monthly radiation disposal reporting form for dischargers to the Davenport, Bettendorf, Riverdale, and Panorama Park sanitary sewer system. This manual is subject to revision. Current versions can be downloaded from <http://www.ci.davenport.ia.us/publicworks/waterpollution/industrial.htm> or can be obtained by writing: Davenport Water Pollution Control, Pretreatment Office, PO Box 3606, Davenport, Iowa, 52808.

Monthly Radioactivity Disposal Form

Heading

The heading of this form requires industry specific information to be entered. The responsible party at the industry in question is required to complete each section as follows:

- Site Name:** Name of the facility holding the radioactivity license.
- Site Address:** Address of the facility.
- Date:** Reporting month.

Main Body

The main body of the form is shown below. Each column has a heading in the top row. The radionuclide information will be found in IAC 641 Appendix B Table 3 and the specific limits and calculation formulas for monthly total discharge to the sanitary sewer can be found in IAC 641-40.72 and 641-40.88. To complete this part of the form you will need to enter data from your monthly radionuclide discharge to the sewer, from your monthly sewer discharge volumes from your monthly sewer bills or water meter readings and from calculations you will perform from your monthly sewer discharge volumes from your monthly sewer bills or water meter readings and monthly radionuclide discharge to the sewer.

Sealed Source	Atomic Radionuclide Number	Class	Total Amount Discharged to Sewer (uCi)	Monthly Flow (gallons)	Concentration Discharged to Sewer (uCi/ml)	Fraction of the Allowed Discharge

Column 1: Sealed Source

- Place an X in this column if the source is a sealed source.

Note: If the source is sealed, then only the next two columns need to be completed.

Column 2: Atomic Radionuclide Number

- Report the Atomic Radionuclide number as listed in IAC 641 Appendix B Table 3.

Column 3: Class

- Report the Class as listed in IAC 641 Appendix B Table 3.

Note: If the source is sealed, then after completion of this column, sign and date the report.

Column 4: Total Amount Discharged to the Sewer (uCi)

- Report the amount discharged in μCi for the radionuclide for the entire reporting month.

Column 5: Monthly Flow

- Enter the total flow to the sanitary sewer for the reporting month. This number can be obtained from the monthly water bill or from the sewer bill.

Column 6: Concentration Discharged to the Sewer (uCi/ml)

- Calculate the concentration as per IAC 641-40.72

$$\text{Gallons (monthly total)} \times 8.34 \frac{\text{pounds}}{\text{gallon}} \times 454 \frac{\text{ml}}{\text{pound}} = \text{ml (monthly total)}$$

$$\frac{\text{Radionuclide } (\mu\text{Ci}) \text{ (monthly total)}}{\text{ml (monthly total)}} = \text{Concentration } \frac{\mu\text{Ci}}{\text{ml}}$$

Column 7 Fraction of Allowed Discharge

- Calculate the fraction allowed as per IAC 641-40.72. Use the values in Table 3 and the calculated concentrations in Column 6.

$$\left[\frac{\left(\frac{\text{Radionuclide } (\mu\text{Ci}) \text{ (monthly total)}}{\text{ml (monthly total)}} \right)}{\text{Radionuclide Concentration from Table 3}} \right] = \text{Fraction of Allowed Discharge}$$

Column 7 Sum of Fractions

- Calculate the sum of all fraction allowed as per IAC 641-40.72. Use the values calculated in Column 7.

$$[\Sigma \text{ of Fractions in Column 7 Above}] = \text{Total of Allowed Fractions}$$

Footer

The footer of this form requires reporting personnel specific information to be entered. The responsible party at the industry in question is required to complete each section as follows:

Radiation Officer Name: Print name of facility personnel filling out the form.
Radiation Officer Signature: Facility personnel signature.
Date: Date report signed.