

# RADIOACTIVE WASTES

v1.04.1

Logic game for HP Prime

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## Introduction

It is the near future. Widespread use of nuclear energy has led to the accumulation of a massive amount of radioactive waste over the past decade. As far back as the end of the previous century, the problem of disposing of this waste had been a major concern for many scientists and environmentalists. Despite tremendous technological advancements, an effective and safe method for eliminating these wastes from an already heavily contaminated environment had not been discovered. However, a glimmer of hope has emerged. A group of scientists has developed an efficient method using a force field within which nuclear explosions can be safely conducted without harming the surrounding environment. So the process of disposing of waste stored in old bunkers located on military grounds began. The area was surrounded by a force field, and remotely controlled bulldozers entered the bunkers' interiors.

## Rules

On the game board, you can encounter the following types of fields:



### Empty field

An empty area where you can move the bulldozer



### Box

A field containing box that you can push



### Wall

A wall that you cannot push



**Cold waste** - A barrel of cold waste; when pushed, it will roll until it hits a barrier



**Warm waste** - It is formed by combining two wastes that are not in a critical mass; you cannot move it



**Critical mass waste** (animated electrons) - It turns other wastes into critical mass when they are in close proximity; you cannot move it

Your task in the game is to arrange all radioactive waste in such a way that there is at least one critical mass waste in the immediate vicinity of

each of them. When all waste becomes critical mass waste, you will advance to the next level of the game.

If a cold waste stops next to a warm waste, it will turn into a warm waste and cannot be moved anymore. A similar situation will occur when two cold wastes stand next to each other.

On some levels, there will be boxes available to help you control the movement of the cold wastes. There may also be levels where there is more than one critical mass waste at the beginning; in that case, it doesn't matter which one the remaining waste is pushed to, the important thing is that all of them become critical mass wastes.

You move the bulldozer using the arrow keys or touchscreen. Touch the target field to move the bulldozer and drag to push (using a stylus is recommended due to the small size of the fields). When you find yourself in a situation with no way out, press ESC (restart) to try again. Press APPS (exit) to save the current game state for later continuation and exit the game.

The game contains 30 levels.

Good luck!

## Version history:

### **1.00 (2015-09-30)**

- initial release

### **1.01 (2015-10-01)**

- bug fixes, small performance optimization

### **1.02 (2015-10-03)**

- additional performance optimizations.

### **1.03 (2023-08-07)**

- adjustments to work on firmware 2.1.14730
- displaying numerical values in a format independent of system settings
- improving the smoothness of the animation by delaying it (if needed) instead of dropping frames
- minor graphical fixes

### **1.04 (2023-11-18)**

- added touchscreen controls for bulldozer movement (using shortest path method)
- removed the lives limit
- added the option to select a level (from the unlocked ones) on the title screen
- saving the current game state along with the current level layout for later resume (resource)
- major performance optimizations - rewritten game logic code
- increased frame rate from 15 to 25 fps
- 3 new levels added
- a smoother level transition effect

#### **1.04.1 (2023-11-20)**

- fixed a bug causing the saved board layout not to load when resuming the game