

892

**REMOVAL SITE EVALUATION RI/FS DRUMMED
WELL AND BORING CUTTINGS
JULY 17, 1990**

07/17/90

DOE-FMPC/WMCO

6

RSE

OU3

REMOVAL SITE EVALUATION

**RI/FS Drummed
Well and Boring
Cuttings**

FEED MATERIALS PRODUCTION CENTER

U. S. DEPARTMENT OF ENERGY

July 17, 1990

Introduction

On July 18, 1986, a Federal Facility Compliance Agreement (FFCA) was jointly signed by DOE and the USEPA pertaining to environmental impacts associated with the FMPC. In particular, the FFCA is intended to ensure that environmental impacts associated with past and present activities at the FMPC are thoroughly and adequately investigated so that appropriate remedial response actions can be formulated, assessed and implemented.

In response, a sitewide Remedial Investigation and Feasibility Study is underway. The purpose of the Remedial Investigation is to determine the nature and extent of any release, or threat of release, of hazardous or radioactive substances, pollutants, or contaminants, and to gather all necessary data to support the Feasibility Study. One of the specific objectives of the remedial investigation is the hydrogeological field program which focuses on determining the effect that the operations and waste disposal practices at the FMPC have had on groundwater. This program is focusing on identifying sources of groundwater contamination, pathways for contaminant transport, and receptors or potential receptors of the contaminants.

This Removal Site Evaluation (RSE) has been completed by the DOE under authorities delegated by Executive Order 12580 under Section 104 of CERCLA and is consistent with Section 300.410 of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). This RSE addresses RI/FS drummed well and boring cuttings and has been completed to support the decision as to whether the project conditions warrant a removal action.

Source Term

A combination of over 300 wells and borings are being installed on and off the FMPC during the RI/FS. Four different water bearing zones will be intercepted by the proposed wells and borings. The borings and 1000 series wells are being completed primarily in the till and will screen either the water table aquifer or isolated perched water. The 2000 series wells are being installed to screen the upper portion of the upper sand and gravel aquifer. The 3000 series wells will screen the lower portion of the upper sand and gravel aquifer, and the 4000 series wells will screen the lower sand and gravel aquifer. As the wells and borings are drilled and set, drums of drill cuttings plus development and purge waters are generated. The present inventory of drummed cuttings from previous drilling efforts are located adjacent to the ASI trailers (Northwest of the waste pit area), and at a staging area directly west of the soil pile north of third street.

Evaluation of the Magnitude of the Potential Threat

The potential threat posed by the drilling operations comes from the improper storage and/or disposal of the drill cuttings and the resultant release of contamination into the soils. The analyses of the inventoried drill cuttings are contained in the ASI-RI/FS data base. Other than several drums that were characterized as RCRA, the analyses show uranium to be the contaminant of concern, ranging in concentration from 2 ppm to 36,000 ppm.

Assessment of the Need for Removal Action

Consistent with section 40 CFR 300.410 of the National Contingency Plan, the lead agency (DOE) shall determine the appropriateness of a removal action. The factors to be considered in this determination are listed in 40 CFR 300.415 (b) (2). Of the eight factors listed, the following one applies to the drill cuttings and purge and development water.

40 CFR 300.415 (b) (2) (iii)

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

The requirements for a 90-day storage area (see attached flow charts), and the intent of the draft WMCO standard operating procedure for "Packaging of ASI generated waste for ninety-day storage area", the RCRA regulations (as applicable to the cuttings exhibiting RCRA characteristics), plus the controls specified in FMPC-720 shall address the threat of release. The attached flow charts not only deal with the disposition of the inventoried drums, but also the drums of cuttings from the current drilling operations and the associated development and purge waters.

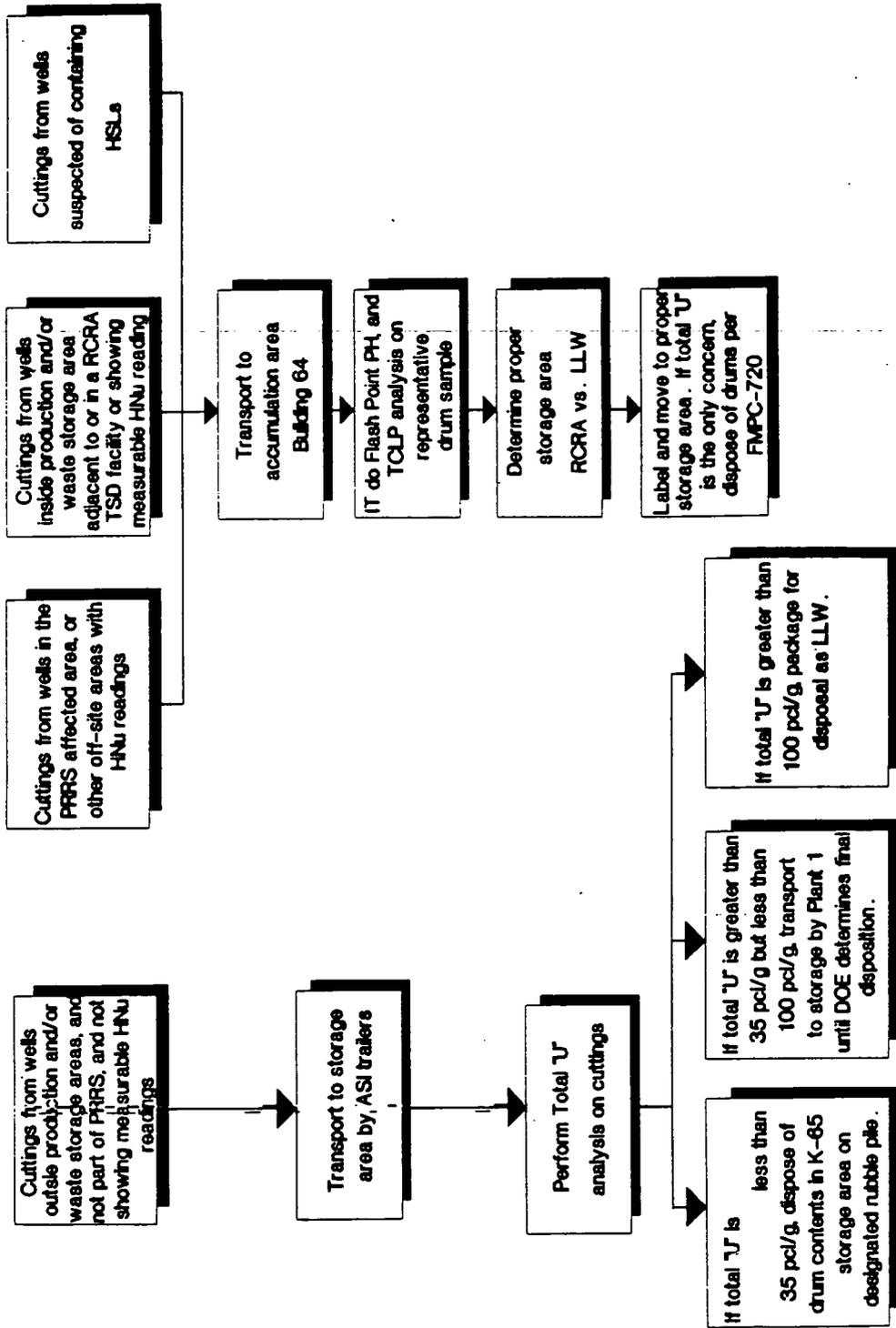
Appropriateness of a Response

If it is determined that a response action, is appropriate, due to the levels of contamination found in the drill cuttings and the potential threat associated with the drilling effort, a removal action may be required to address the existing situation.

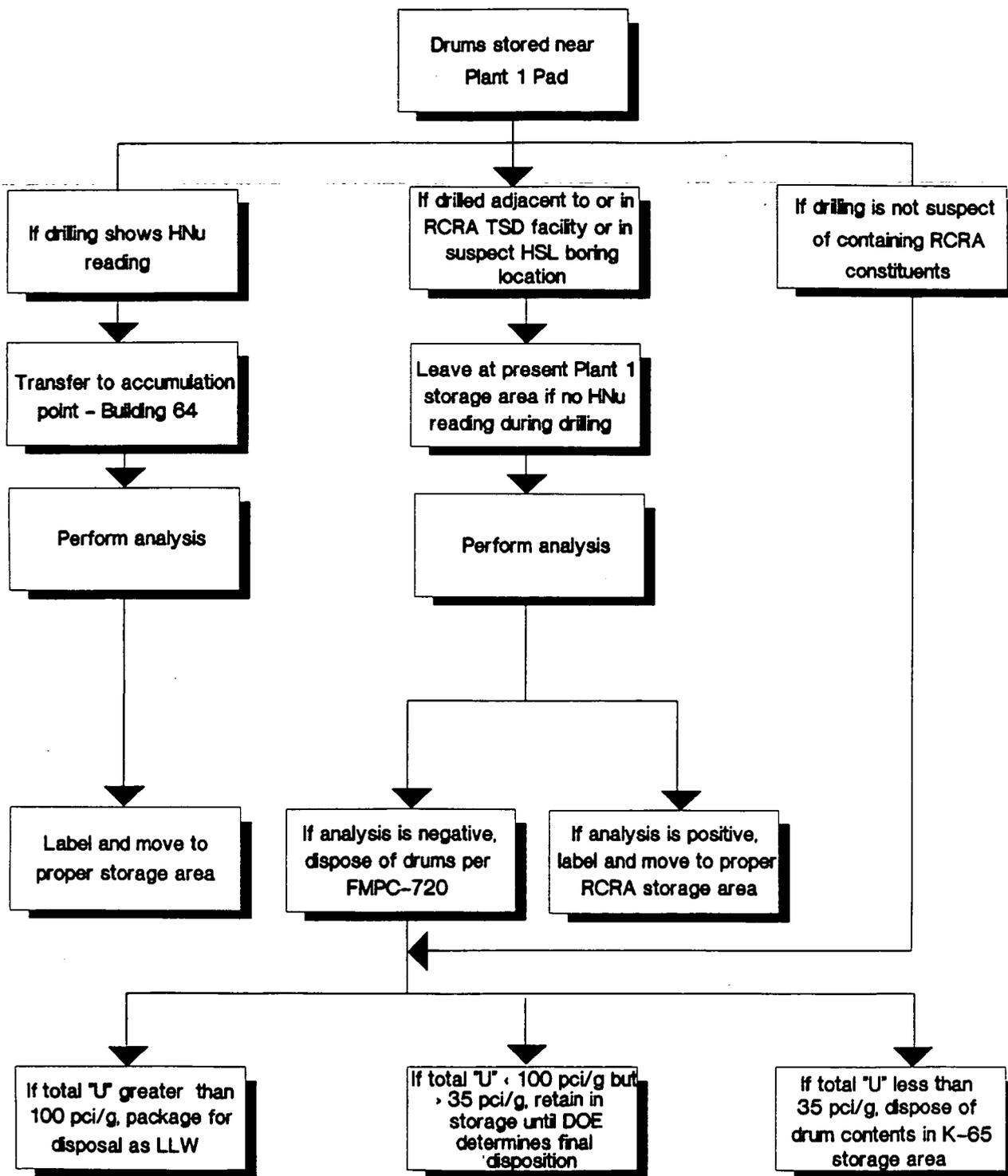
If a planning period of less than six months exists prior to initiation of a response action, DOE will issue an Action Memorandum. The Action Memorandum will describe the selected response and provide supporting documentation for the decision.

If it is determined that there is a planning period greater than six months before a response is initiated, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of public health and the environment and to evaluate viable alternative response actions. It will also serve as a decision document to be included in the Administration Record.

Currently Generated Cuttings



Inventoried Cuttings



WATER

Water - currently
generated Decon, Develop.
and purge water



Transport to
FMPC general sump
for treatment