



FACTSHEET: MONITORING

04/15/89

WMCO/PUBLIC

2

FACTSHEET

FACTSHEET

Monitoring

The Feed Materials Production Center (FMPC) has manufactured uranium metal forms for the U.S. Department of Energy defense programs for over 35 years. As in most manufacturing processes, waste is produced in gas, liquid, and solid forms.

Strict emission controls collect waste for subsequent treatment or removal, keeping it from the environment. To keep emissions as low as reasonably achievable (ALARA), the air, water, soil, and vegetation around the plant are monitored and sampled on a monthly, weekly, and, in some cases, daily schedule. Many types of monitoring techniques and instruments are used to sample the 1,050-acre plant site and a 5-mile radius around the site for uranium, radioactivity, dissolved chemicals, and other pollutants.



Uranium oxide dust, generated in the production facilities at the Feed Materials Production Center, is controlled by a collection system and monitored continuously. Stack emissions are checked on site, at the property line, and at selected sites beyond the plant boundary.

New Technology

One of the newest instruments in the FMPC monitoring system is an environmental monitoring vehicle equipped with a mobile laboratory. This "lab on wheels" allows FMPC scientists to collect and analyze environmental samples on and off the plant site for immediate and more efficient evaluation.

About 50 new monitoring sites have been added since 1987, bringing the total to over 150 stations. Environmental sampling includes monitoring of

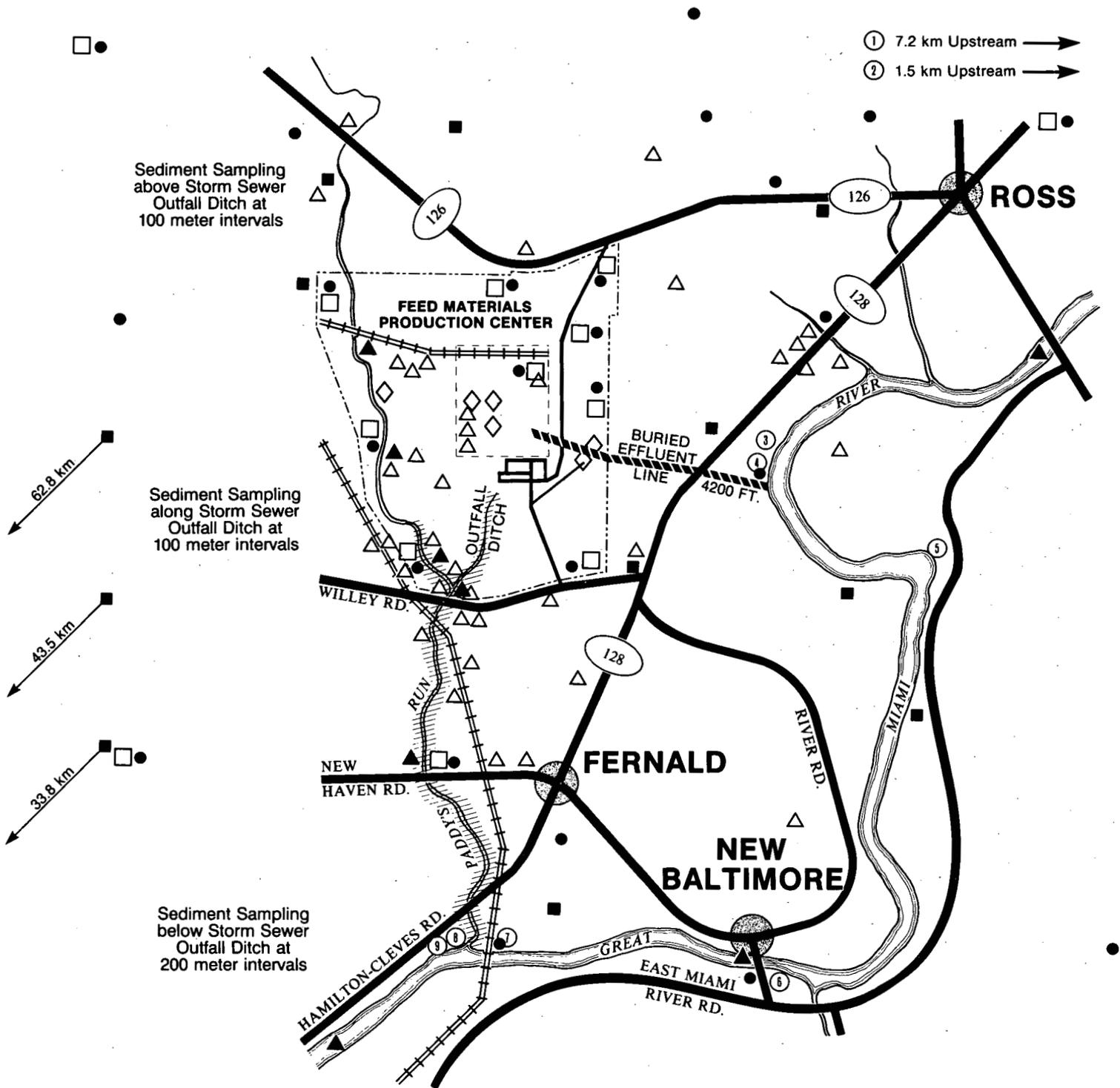
- ground water
- river and stream water
- process water
- stormwater retention basin
- air emissions
- air emission filters
- radioactivity from storage sites
- milk
- fish and wildlife
- river and stream sediments
- grass and vegetables
- soil

Results from Lab Work

Laboratory technicians and scientists use state-of-the-art equipment to record and analyze air, water, soil, and vegetation samples. They make monthly and yearly reports of their findings, which are available to the public. These reports show that the amount of uranium in air emissions from the plant has been greatly reduced since 1984. Similar improvements have been made in water emissions, using a new technique that removes 96 percent of the nitrates from waste water. Samples from ground water, local streams, and the Great Miami River have detected no significant contamination.

FMPC recognizes the necessity to protect the environment by keeping emissions as low as reasonably achievable. The U.S. Department of Energy and Westinghouse are committed to meet and exceed Federal and State environmental control regulations at FMPC.

Environmental Monitoring Points



① 7.2 km Upstream →
 ② 1.5 km Upstream →

Sediment Sampling
 above Storm Sewer
 Outfall Ditch at
 100 meter intervals

Sediment Sampling
 along Storm Sewer
 Outfall Ditch at
 100 meter intervals

Sediment Sampling
 below Storm Sewer
 Outfall Ditch at
 200 meter intervals

62.8 km

43.5 km

33.8 km

△ GROUNDWATER SAMPLING	● PARALLEL SOIL/VEGETATION SAMPLING	— PAVED ROAD
□ AIR SAMPLING	■ FARM & GARDEN PRODUCE SAMPLING	≡ RAILROAD
▲ SURFACE WATER SAMPLING	≡ CROSS SECTION SAMPLING	- - - PLANT PERIMETER
◇ EFFLUENT SAMPLING	① SINGLE SAMPLING	

A top priority for the U.S. Department of Energy and its contractor, Westinghouse Materials Company of Ohio, is to eliminate the potential for contaminating the local water, air, soil, and vegetation. An environmental monitoring system at more than 150 locations was developed to assure the quality of FMPC's waste treatment procedures. This map shows the locations of the environmental monitoring points.

