LOOW RAB

Meeting Agenda

Dec. 4, 2013

Introductions

Approval of Minutes

Radiological Program

- NFSS – IWCS Leakage

Chemical Program

- LOOW Management Action Plan:

  2009 annual update produced in 2013

  2,300+pages. No communication from Corps

Administrative:

- Website maintenance - annual fees

LOOW RAB

LOOW Site

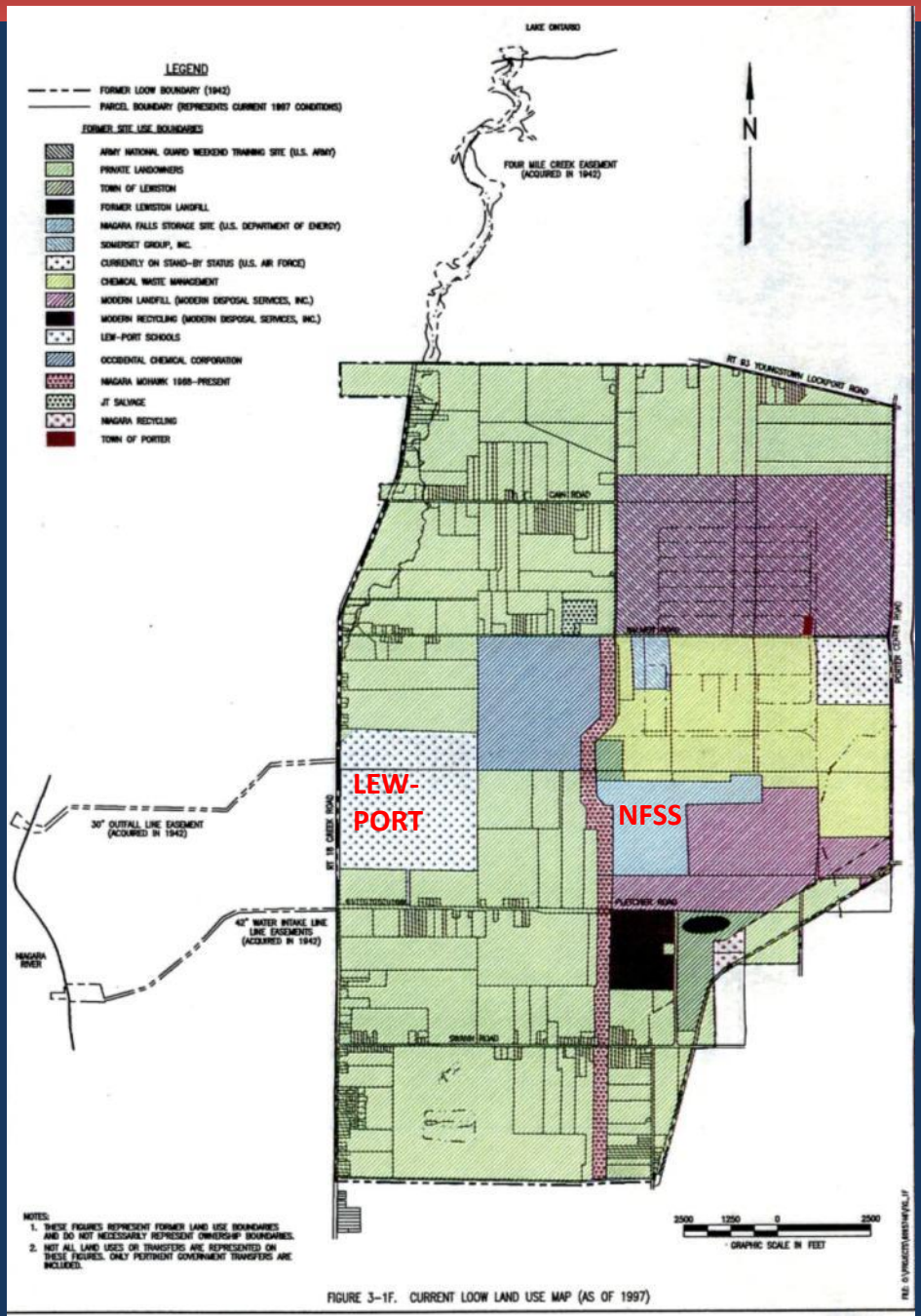


FIGURE 3-1F. CURRENT LOOW LAND USE MAP (AS OF 1997)

LOOW RAB

LOOW Site Looking West

LOOW RAB

NFSS Looking Northeast

Further Evidence of Leakage from the Interim Waste Containment Structure

at the Niagara Falls Storage Site

Ann Roberts, December 2013

What is the Interim Waste Containment Structure?

The IWCS is a 10 acre containment area for radioactive residues and wastes.

Radioactive materials are stored in the basements of previously existing WWII-era water treatment plant buildings

The IWCS was constructed between 1982 and 1986 as a temporary storage facility. Basement drains and pipelines were cut and sealed and cracks repaired.

Clay dikes were constructed around the area and a clay cap added to retard radon emissions from radioactive material inside.

The IWCS

The first sign of IWCS leakage into the subsurface would be steadily increasing levels of uranium in groundwater around the IWCS

Ur Levels in Groundwater South and East of the IWCS in 2003

(NFSS Remedial Investigation)

OW-11B

248ug/L

MH06

1,210ug/L

TWP 833

958ug/L

Uranium levels measured in ug/L

USACE Explanation of Ur Groundwater Plumes around the IWCS in 2011

1. USACE said the Ur groundwater contamination south and east of the IWCS must have been caused by historical activities. i.e., that Uranium was already in the groundwater when the IWCS was constructed.

2. Since uranium levels in the soils south and east of the IWCS are low, soil cannot cause increasing levels of uranium in groundwater.

In 2013 USACE Contradicts its 2011 EXPLANATION

But in 2013, the Corps tries to infer that soil could after all explain increases in Ur groundwater contamination, (when, in fact, it cannot.)

USACE's recent (Balance of Plant) Investigation found Ur levels in groundwater south and east of the IWCS are continuing to increase.

IWCS Leakage Explains the Increasing Uranium Levels South and East of the IWCS

The IWCS is the Only Possible Source of Increasing Uranium in Groundwater South and East of the IWCS.

TWP 833/M W 951 :

2003: 958 ug/L

2012: 1,740 ug/L

Sanitary Sewer line

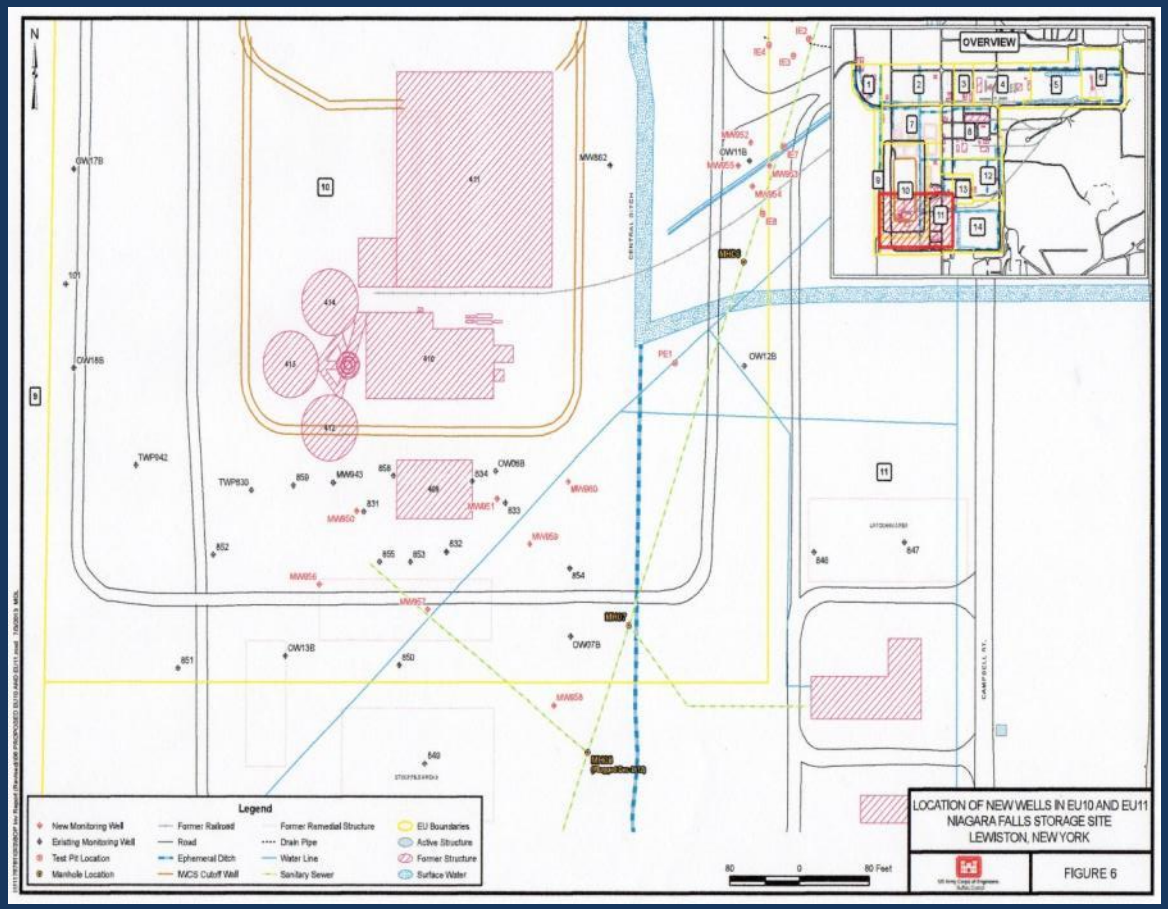
2003: 1,210 ug/L

2012: 7,080 ug/L

OW-11B /MW 953

2003: 248 ug/L

2012: 1,760 ug/L



What the Corps' recent Public Summary did not say about its own Report:

While the Corps said its BOP Investigation found no groundwater contamination migration in the 10" waterline, the Corps neglected to mention that the Investigation found contamination migrating along the OUTSIDE of the sanitary sewer line.

Groundwater monitoring wells adjacent to the sanitary sewer, south and east of the IWCS, show extremely high levels of Ur contamination:

- MW957 south of the IWCS 2,680 ug/L
- MW953 east of the IWCS 1,760 ug/L

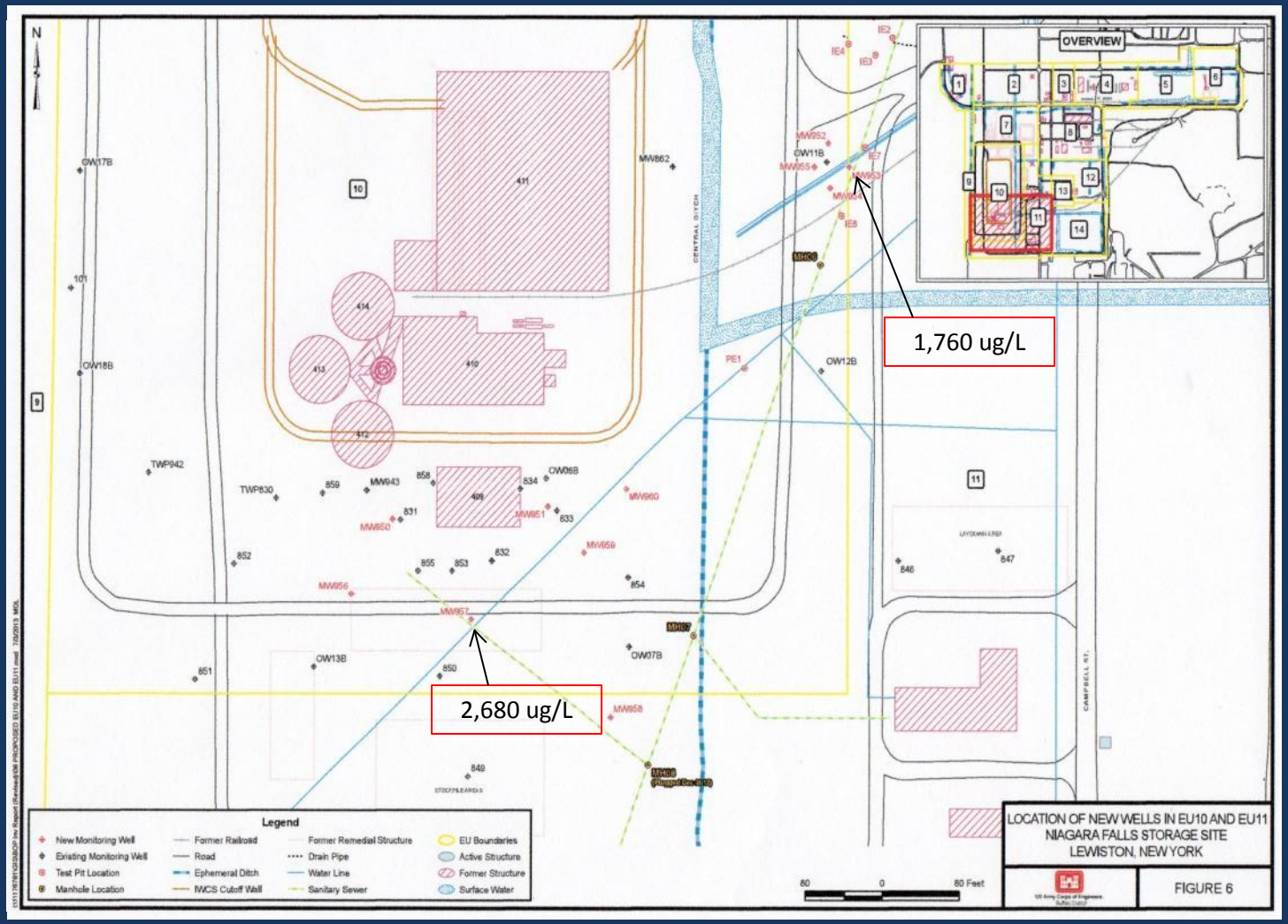
Naturally occurring = 5 ug/L±

Drinking water = < 30 ug/L

Underground utility lines around the SE corner of the IWCS

The Sanitary Sewer line acts as a preferential pathway

(see green dotted line for sanitary sewer located near SE corner of IWCS)



Why IWCS Leakage Identification is Important

1. Failure to recognize leakage results in the false assumption that the IWCS is safely containing the radioactive residues and wastes

2. The false assumption of subsurface integrity of the IWCS invites the selection of a “leave in place”

   It is important to identify and quantify IWCS leakage BEFORE completing the IWCS feasibility study and deciding the future of the IWCS