

2873

**RESPONSES TO U.S. EPA & OEPA COMMENTS
ON THE INTEGRATED ENVIRONMENTAL
MONITORING STATUS REPORT FOR
THIRD QUARTER 1999**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO**

MARCH 2000

U.S. DEPARTMENT OF ENERGY

|

status reports to ensure that it is the best product possible. DOE will also add subsection numbers and headings in order to better facilitate the agencies ability to comment on the report.

Action: DOE will carefully check the report to ensure that all links are in working order and that format irregularities are resolved. DOE will also add subsection numbers and headings in order to better facilitate the agencies ability to comment on the report.

SPECIFIC COMMENTS

3. Commenting Organization: U.S. EPA Commentor: OFFO
Figures #: 4-1 and 4-2 Page #: NA
Original Specific Comment #: 1 Line #: NA
Comment: Figures 4-1 and 4-2 should be combined to show air sampling activities covered in both the current and the next quarterly report.
Response: DOE agrees with the comment.
Action: For the Integrated Environmental Monitoring Status Report for Fourth Quarter 1999, Figures 4-1 and 4-2 have been combined in order to present air sampling activities covered in both the current and next IEMP quarterly status report. In this report, Figures 4-1 and 4-2 are still individually called out in the text; however, the link for these individual call-outs take the reviewer to the combined figure. This process is being used in order to facilitate the transition of presenting the information on one figure instead of two. For consistency, similar information pertaining to activities covered in this report and the next are presented in the same manner in all other media sections. Beginning with the next IEMP quarterly status report (to be submitted in June), there will be one figure call out in the text instead of two that will link to the one figure.

4. Commenting Organization: U.S. EPA Commentor: Saric
Section #: "Total Uranium, Total Particulate, and Thorium,"
Paragraphs 5 and 6
Original Specific Comment #: 2
Comment: Paragraphs 5 and 6 discuss airborne thorium concentrations at the waste pit monitors (WPTH-1 and WPTH-2) and thorium contamination in the on-site laboratory, respectively. Paragraph 6 states that thorium results from monitors WPTH-1 and WPTH-2 "were determined to be affected" by the on-site laboratory contamination but does not clearly describe the magnitude of the effect. The report should provide a more quantitative description of how much the thorium results from monitors WPTH-1 and WPTH-2 were affected by the on-site laboratory contamination. If the results discussed in Paragraph 5 were corrected to account for laboratory contamination, this fact should be stated in the text.
Response: The results associated with the third quarter were not corrected; the samples were re-analyzed. When the laboratory sample data indicated contamination was occurring, additional sample processing was placed on hold until the source of contamination could be addressed. After the contamination concern was addressed, there was sufficient sample volume remaining for re-analysis of the affected third quarter samples. There was no need to correct the WPTH-1 and WPTH-2 results in order to account for laboratory contamination. The concentrations shown in Figures 4-22 and 4-23 of the Integrated Environmental Monitoring Status Report for Third Quarter 1999 reflect the results obtained by re-analysis of the samples.

It should be noted that thorium contamination also affected the fourth quarter WPTH-1 and WPTH-2 results for samples collected on October 5, 1999. As with the third quarter samples, it was possible to re-analyze all samples with the exception of a sample

collected from WPTH-1. This sample could not be re-analyzed because there was insufficient sample volume. The original result from October 5 from WPTH-1 was considered invalid and was not plotted on Figure 4-22 of the Integrated Environmental Monitoring Status Report for Fourth Quarter 1999.

Action: No action required.

5. Commenting Organization: U.S. EPA Commentor: Saric
 Section #: "Total Uranium, Total Particulate, and Thorium,"
 Paragraph 6

Original Specific Comment #: 3

Comment: The last sentence of this paragraph states that thorium contamination in the on-site laboratory did "not affect the quarterly composite thorium analyses from the 18 air monitors used for determining compliance with NESHAP, Subpart H limits." It is not obvious why results from these monitors were not affected, and the report should provide a more detailed explanation of the matter.

Response: DOE recognizes that additional information is needed in order to support the statement that the quarterly composite samples were not affected by thorium contamination at the on-site laboratory. The following information is provided as support for that statement.

The quarterly composite samples used for determining compliance with National Emissions Standards for Hazardous Air Pollutants (NESHAP), Subpart H limits are not stored or analyzed at the on-site laboratory in which thorium contamination occurred. They are prepared and stored in a separate laboratory (and building) that was surveyed and found to be free of the thorium contamination which affected the WPTH-1 and WPTH-2 samples. In addition to being prepared and stored in a separate on-site laboratory, the quarterly composites are shipped off site for analysis at a contract environmental laboratory. Because the quarterly composite samples are prepared, stored, and analyzed in laboratories which were not affected by thorium contamination, DOE is confident that the thorium analyses of the composite samples will not be affected by the same thorium contamination found in the WPTH-1 and WPTH-2 samples.

Action: No action required.

6. Commenting Organization: U.S. EPA Commentor: Saric
 Table #: 4-3 Page #: NA
Line #: NA
 Original Specific Comment #: 4

Comment: Several values in the "Ratio Totals" and "Dose (mrem)" columns of this table are listed as "0.000." The table should be revised to include more decimal places or to present results in exponential notation so that non-zero results do not appear to be zero.

Response: In order to correct the inconsistencies in the presentation of data, DOE will present NESHAP tracking results in exponential notation. DOE notes that the use of exponential notation may detract from the "readability" of the tables.

Action: DOE will edit NESHAP compliance tracking tables per the comment response.

Response: The approved work plan methodology for selecting the screen interval for the on-site disposal facility monitoring wells is as follows: The 15-foot long screen is set based on the average seasonal low water table, with five feet of the screen to be above this elevation and 10 feet to be below. Water levels in site monitoring wells are evaluated to determine the average seasonal low water table in the vicinity of the on-site disposal facility. For Monitoring Well 22205 (the subject of the comment), water level records from 1993 through 1999 in four wells (2424, 2417, 2430, and 2446) were evaluated with the resulting average seasonal low water table determined to be about 518 feet amsl. The screened interval of Monitoring Well 22205 was set across an interval from an elevation of 523.24 to 507.68 feet amsl.

The text that is the subject of this comment may imply that the well could not be developed, as indicated by the commentor. In fact an attempt to develop the well could have been made, but there were reasons why DOE chose not to develop the well last fall. These reasons include:

1. Due to the low water level in the well, it was estimated that it would take much more time (and therefore be more costly) to develop the well with low water levels than if we were to wait until the water levels came back up in the spring.
2. The viability of the development process (which includes airlifting) was determined to be questionable when the water levels were low.
3. Sufficient time was available to delay the development of the well and still collect a year's worth of pre-waste placement baseline data, given that the schedule for waste placement in Cell 4 indicated that the cell would not become operational until at least late 2001.

Regarding the commentors question about whether the well could have been set at a slightly deeper depth, DOE suggests that if the wells are to be set deeper, that should be accomplished by increasing the length of the screen. As noted above, the current specifications call for a 15-foot screen. If these wells were set any deeper using a 15-foot screen, then the well would likely be set too deep to function as a water table well during the periods of the year when the water table is at its seasonal high. An alternate way of addressing future low water table conditions would be to extend the screen length to 20 or more feet while maintaining the current top of screen placement strategy. This could be accomplished with future wells assuming that: 1) OEPA and the U.S. Environmental Protection Agency are in agreement and 2) reasonable methods are available for changing the dedicated sampling pump intake depth with the varying water levels.

Regarding the commentors question of whether the well could be sampled during similar drought conditions:

In the vicinity of the on-site disposal facility, the water table reached a low of about 513 feet amsl in December 1999. This is one to two feet lower than the previous recorded low in that area which was experienced in early 1989. Even at this low level, more than five feet of water column would have been present in Monitoring Well 22205. Therefore, DOE believes that there is sufficient water present in the well to sample it during the current drought and similar future droughts. However, if future droughts are

much more severe than that experienced over the past year, then the usability of the current on-site disposal facility Great Miami Aquifer monitoring network may be questionable.

Action: DOE will discuss the need for lengthening the screens of the on-site disposal facility Great Miami Aquifer monitoring wells during one of the upcoming weekly update conference calls.

12. Commenting Organization: OEPA Commentor: OFFO
Section #: General Comment/OSDF Pg. #: na Line #: na Code: C
Original Comment #: 4

Comment: The Internet version of the IEMP Status Report is nice however, it has a few drawbacks. One issue is the Internet version of the report cannot be optimized through Netscape. Internet Explorer is needed to access data tables and figures. Another problem is the highlighting used to amplify the data tables in both the Internet version and hard copy. In the Internet version of the IEMP, the colors chosen for the highlighting are uncomfortable to the eye and with the hard copy, the grey highlighting makes it difficult to read the tables. Lastly, in order to review the tables and figures easily on the Internet a large monitor is needed. Most monitors used by the regulators and the public for that matter, are too small to comfortably review the larger sections i.e., data tables, etc.

It is obvious that several "bugs" still need to be worked out with the Internet version of the IEMP. Until DOE gets things worked out with the Internet version of the IEMP, Ohio EPA still requires hard copies for review. In any event, Ohio EPA will always require one hard copy for the file.

Response: OEPA has identified four issues in the above comment:

1. Netscape browser
2. Highlighting of tables and color choice
3. Size of text and tables
4. Hard copy of reports

The below provides a response on each of these issues:

1. As identified in Comment Response #8, DOE will make every effort to resolve the compatibility of the IEMP quarterly status report information with other browsers.
2. It is thought that the reviewer is specifically referring to the on-site disposal facility tables. Beginning with the Integrated Environmental Monitoring Status Report for Fourth Quarter 1999, the highlighting will be removed from these tables. Italicized and bolded text will be used to differentiate the information provided in these tables (refer to Tables 2-1 through 2-3).

In general, pertaining to the color issue, every attempt was made to pick colors that would be aesthetically pleasing to the eye and best convey and differentiate the information on both the figures and tables. It should be noted that there are specific settings on individual's computers that can alter the colors. By going under Settings, Control Panel, Display, Settings (Colors, pick High Color [16 bit]), the reviewer will be able to adjust the colors display.

3. The reviewers may also adjust the size of the information displayed by going under Settings, Control Panel, Display, Settings (Screen Area, pick 640 by 480 pixels) for easy of reviewing.
4. DOE will continue to send hard copies of the reports to OEPA to facilitate the review process and in order for OEPA to have the ability to use these reports as reference material.

Action: DOE will continue to investigate and make improvements in displaying the IEMP quarterly status report information on the Internet in order to facilitate the review process.

13. Commenting Organization: OEPA Commentor: DSW
 Section #: Surface Water and Treated Effluent Pg. #: NA Line #: NA Code: C
 Original Comment #: 5

Comment: The activities of the WPRAP could have potentially impacted SWD-03. Ohio EPA gave approval for the loading of the contaminated soil pile termed Mt. Di adjacent to the WRPAP based on historical sampling data and the IEMP schedule of sampling SWD-03. We were never informed that no sampling would take place because of accessibility issues. What were these issues, and more important, since our approval of loading of the soil pile was based on this sampling, why weren't we informed that any sampling would take place?

Response: DOE agrees that the Waste Pits Remedial Action Project (WPRAP) activities could potentially impact SWD-03. As for the monitoring of SWD-03 during the second quarter, the Integrated Environmental Monitoring Status Report for Third Quarter 1999 provided a discussion of the surveillance monitoring for second quarter sampling (April, May, and June). This report identified that SWD-03 was inaccessible during the second quarter. Sample location SWD-03 was in fact sampled on May 27, 1999, and June 16, 1999, and this data were provided on the CD-ROM accompanying the report. The only sample not collected at this location during the second quarter was the monthly total uranium sample for April. The accessibility issue mentioned related to the construction of the silo infrastructure road. Given the close proximity of the construction activity to the sample location during April, it was not possible to collect a sample at SWD-03.

DOE regrets the misleading language in the Integrated Environmental Monitoring Status Report for Third Quarter 1999 and is committed to improving the communication of sampling issues as they occur.

Action: The fact that SWD-03 can be impacted by WPRAP activities will be identified in future IEMP reports. In addition, DOE is committed to improving the communication of sampling issues as they occur.

14. Commenting Organization: OEPA Commentor: OFFO
 Section #: Air Monitoring Pg. #: na Line #: na Code:
 Original Comment #: 6

Comment: Ensure that stack emissions from the WPRAP dryer are included in the next IEMP report. This should include NESHAP compliance data, as well as radon emissions.

Response: The WPRAP dryer started operations in late December. DOE will begin providing a summary of WPRAP dryer operations and reporting data on particulate and radon emissions from the dryer stack beginning with the Integrated Environmental Monitoring Status Report for Fourth Quarter 1999.

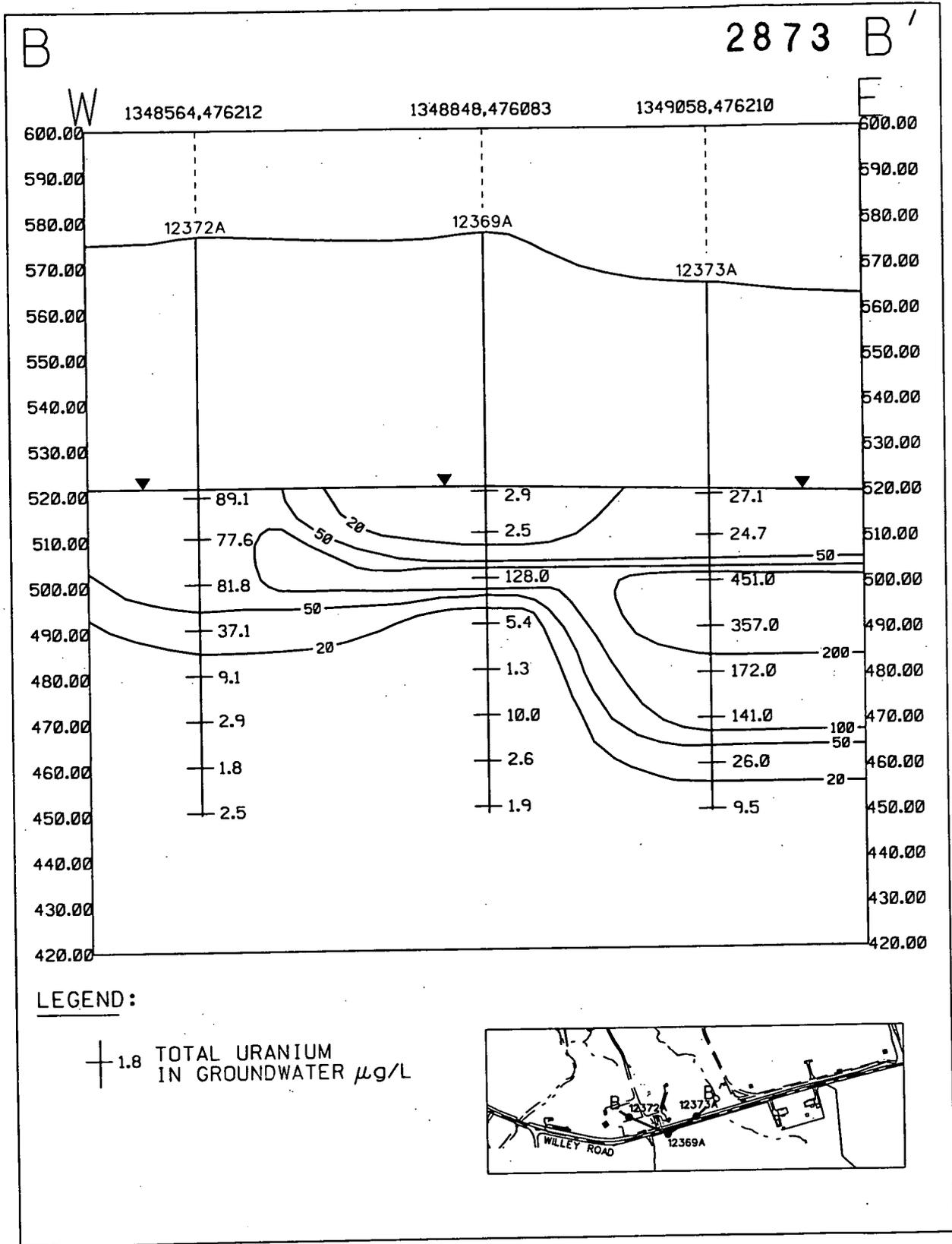
Action: DOE will provide a summary of WPRAP dryer operations and stack emissions in future IEMP quarterly status reports.

15. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: NA Pg. #: NA Line #: NA Code: G
Additional Original Comment #: 1
Comment: The entire document including all figures and tables should be made available in a single portable document file (PDF) that can be downloaded. It is important that reviewers have the ability to download the complete document for achieving purposes. The archived quarterly monitoring reports are frequently referenced during document review.
Response: As identified in Comment Responses #1 and #12, DOE will continue to send hard copies of the reports to OEPA to facilitate the review process and in order for OEPA to have the ability to use these reports as reference material and archiving purposes.
Action: DOE will continue to send hard copies of the reports.
16. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: NA Pg. #: NA Line #: N/A Code: E
Additional Original Comment #: 2
Comment: Figures and tables often overlap one another in the internet document. For example, Table 1-1 overlaps with Figure 1-6 and Figures 1-7 and 1-6 overlap. The overlap can compromise the ability to clearly interpret the respective figure or table.
Response: It is thought that the reviewer has an older version of Internet Explorer. A CD-ROM was sent to HSI GeoTrans in the beginning of January with the latest version of Internet Explorer to facilitate the review process. At this time, it is necessary for the reviewer to use this browser. As identified in Comment Responses #8 and #12, DOE will make every effort to ensure that the IEMP quarterly status report information is compatible with other browsers.
Action: No action required.
17. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: NA Pg. #: NA Line #: NA Code: E
Additional Original Comment #: 3
Comment: The row headings on many of the tables in the internet document do not align accurately with the information in presented in the table. Tables 1-1, 1-2, and 2-2 are examples.
Response: Again, it is thought that the reviewer has an older version of Internet Explorer and this could impact the viewability of the report on the Internet. As identified in Comment Responses #8 and #12, DOE will make every effort to ensure that the IEMP quarterly status report information is compatible with other browsers.
Action: No action required.

V:\SCR2\OSW\KEN_B\KEN0017.DGN

STATE PLANNING COORDINATE SYSTEM 1983

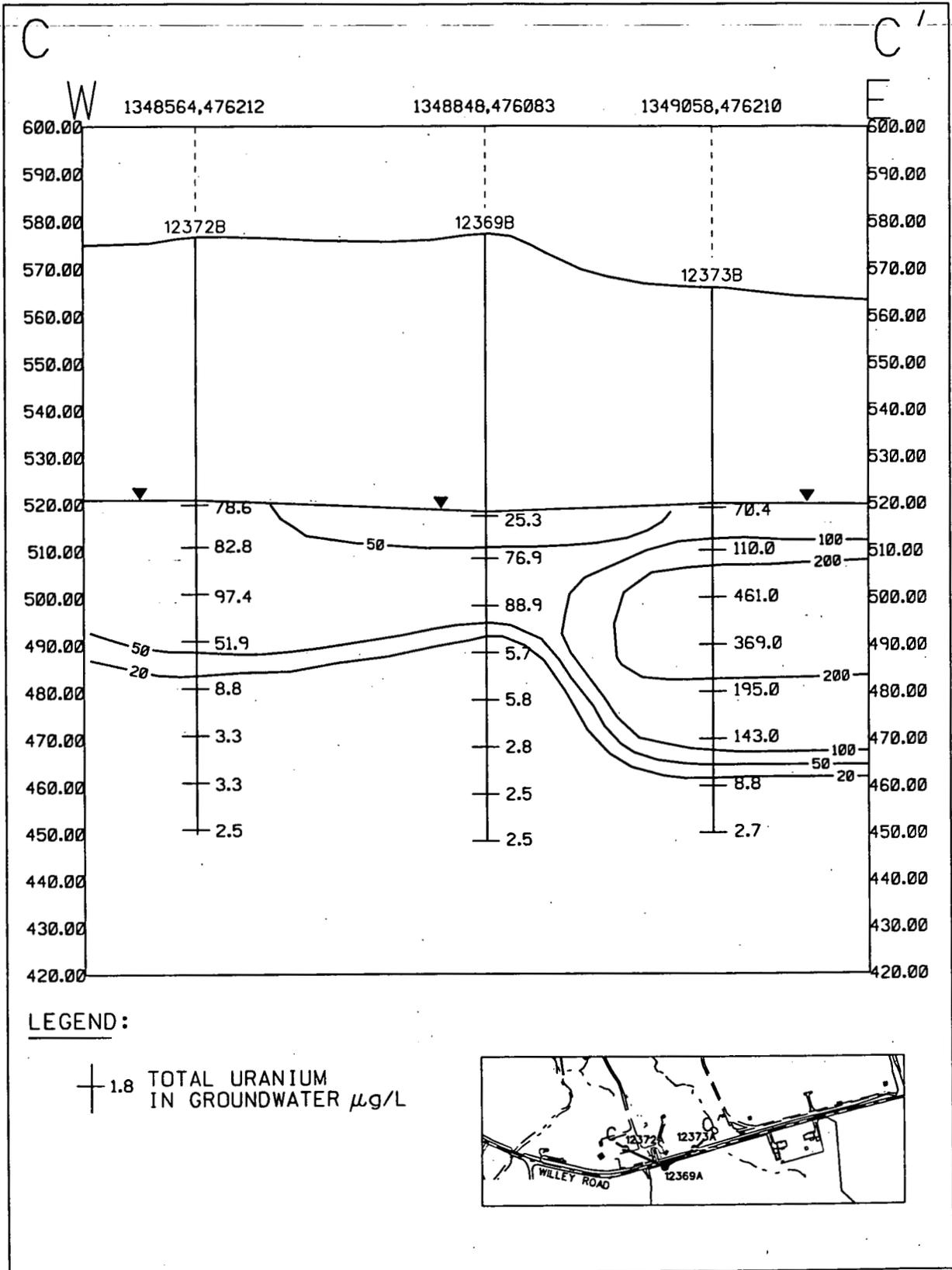
24-FEB-2000



DRAFT

FIGURE F-2. TOTAL URANIUM IN GROUNDWATER ROUND-A, (JUNE 1998) NEXT TO AND SOUTH OF IW-10

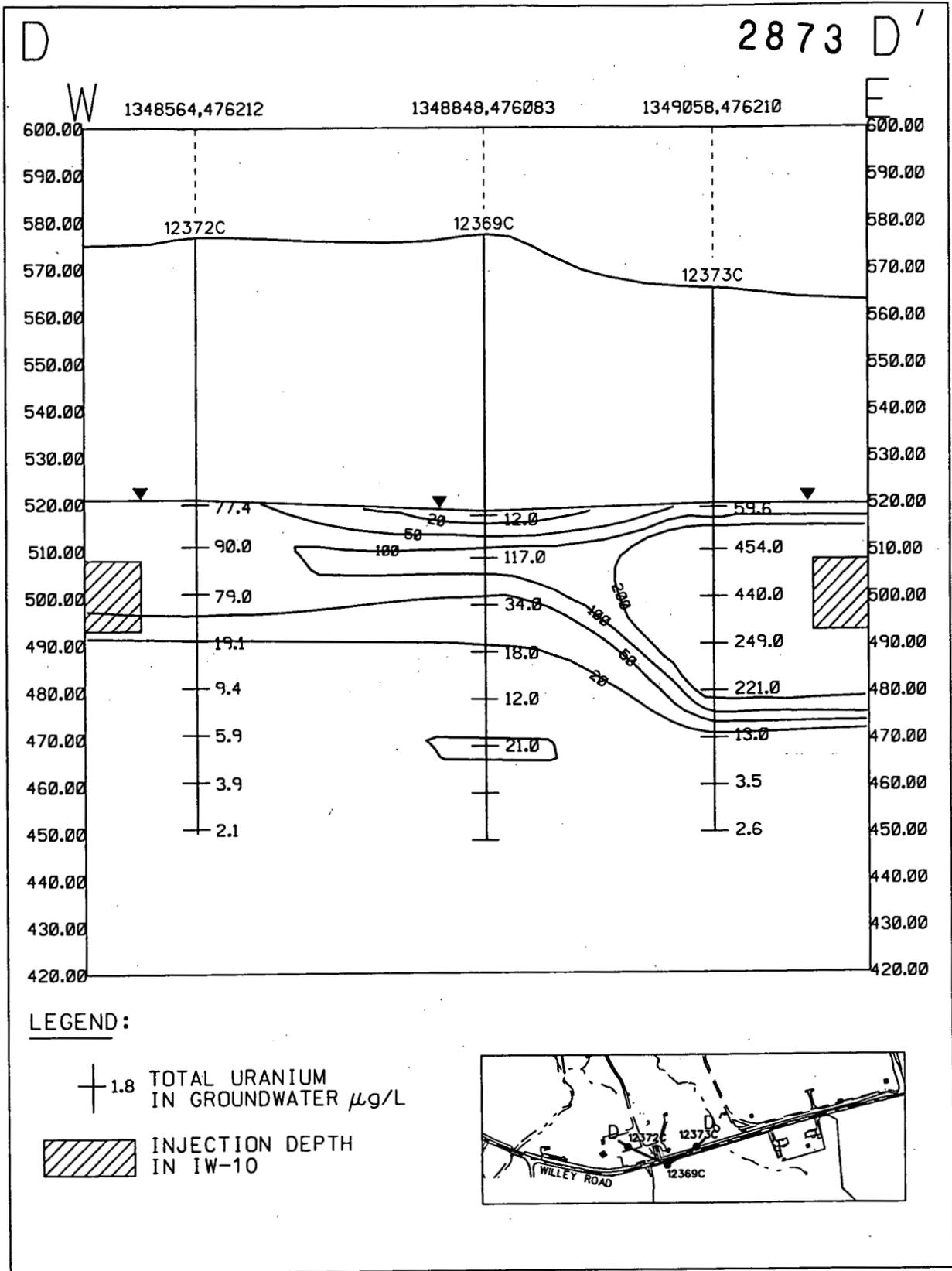
11



DRAFT

12

FIGURE F-3. TOTAL URANIUM IN GROUNDWATER ROUND - B, (JULY 1998) NEXT TO AND SOUTH OF IW-10



DRAFT

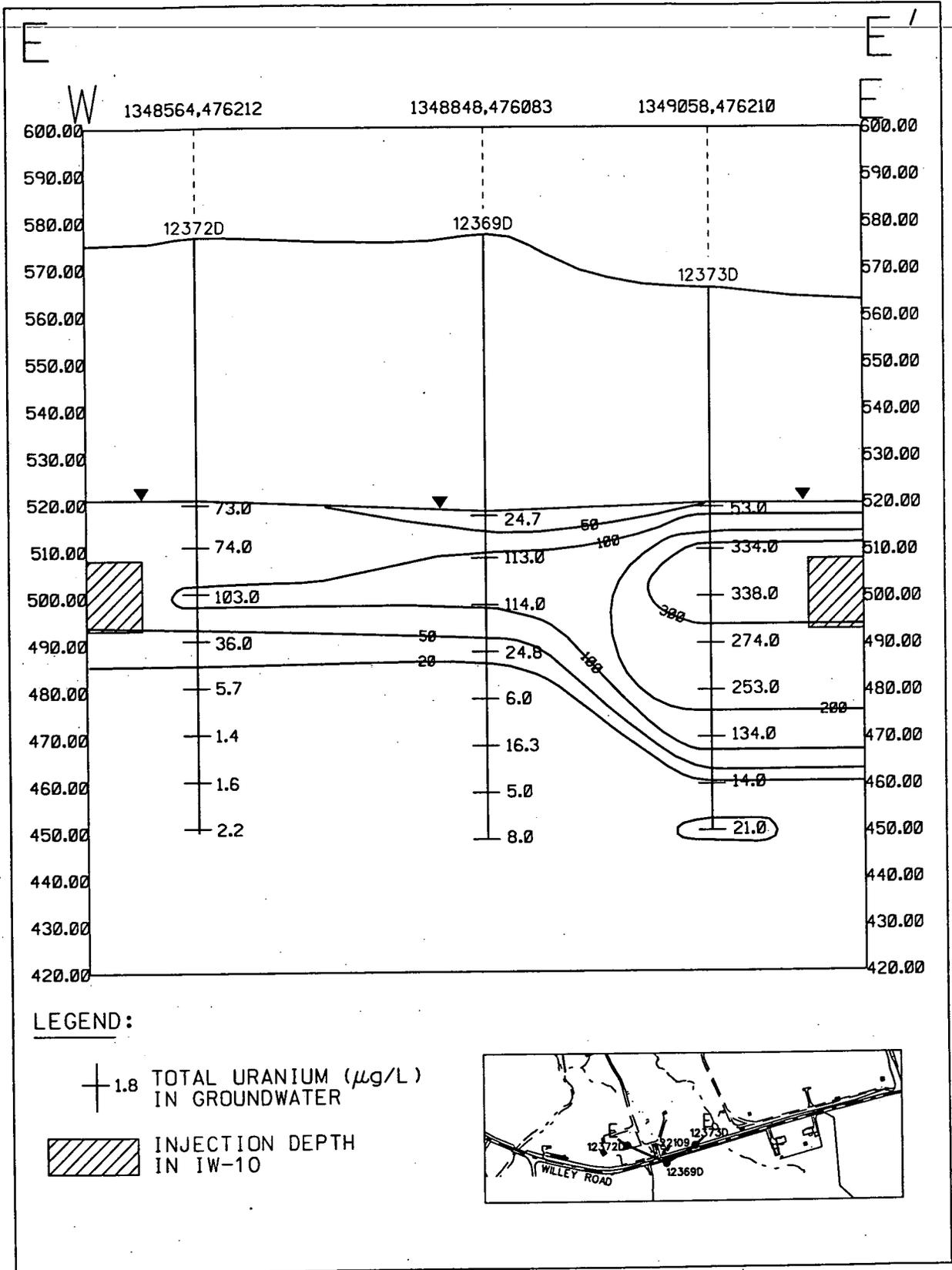
13

FIGURE F-4. TOTAL URANIUM IN GROUNDWATER ROUND - C (DECEMBER 1998 TO JANUARY 1999) NEXT AND SOUTH OF IW-10

V:\5\FGR1\OGN\990TR2\99012019.0GN

STATE PLANAR COORDINATE SYSTEM 1983

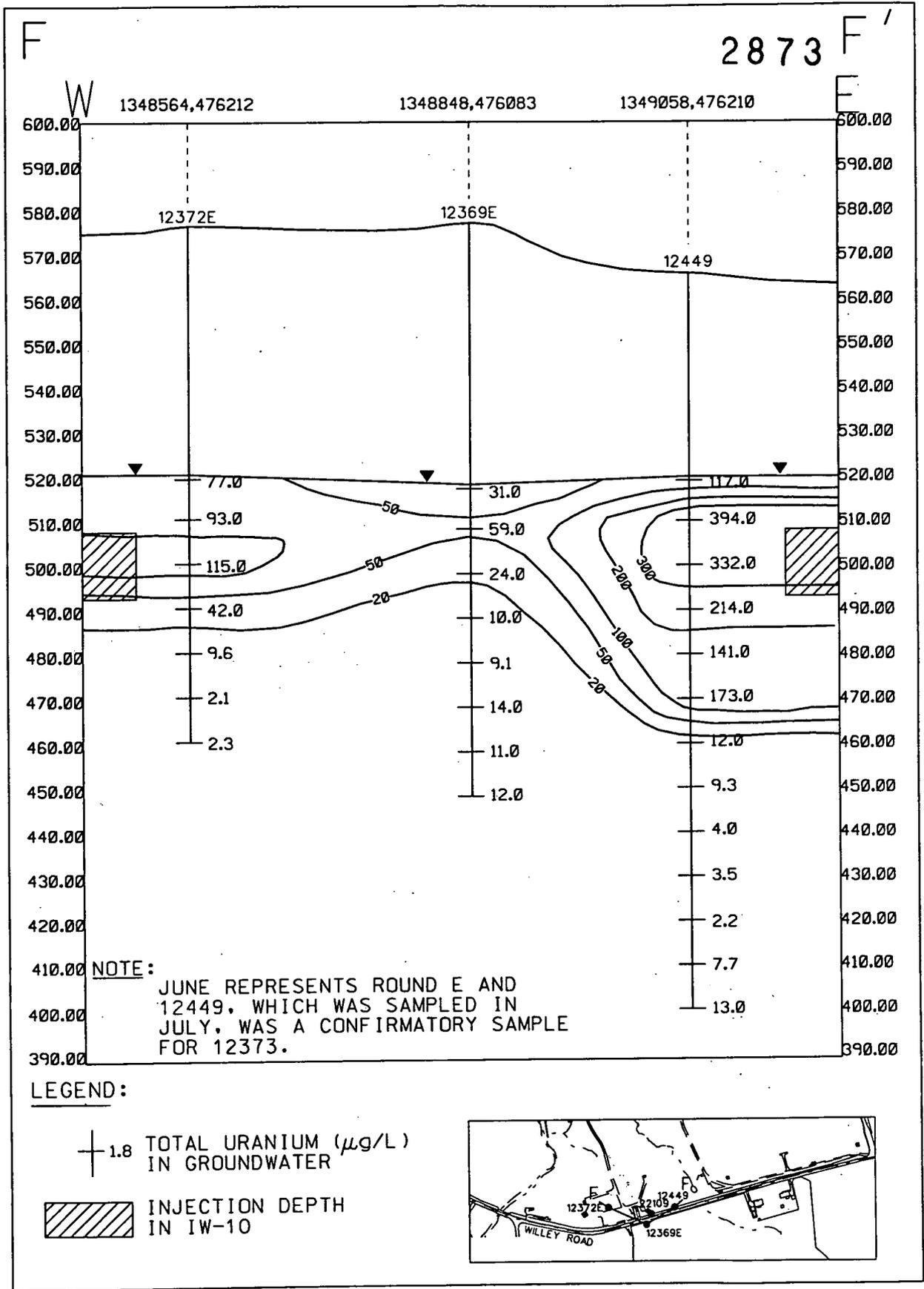
24-FEB-2000



FINAL

14

FIGURE F-5. TOTAL URANIUM IN GROUNDWATER ROUND - D, (MARCH 1999) NEXT TO AND SOUTH OF IW-10



FINAL

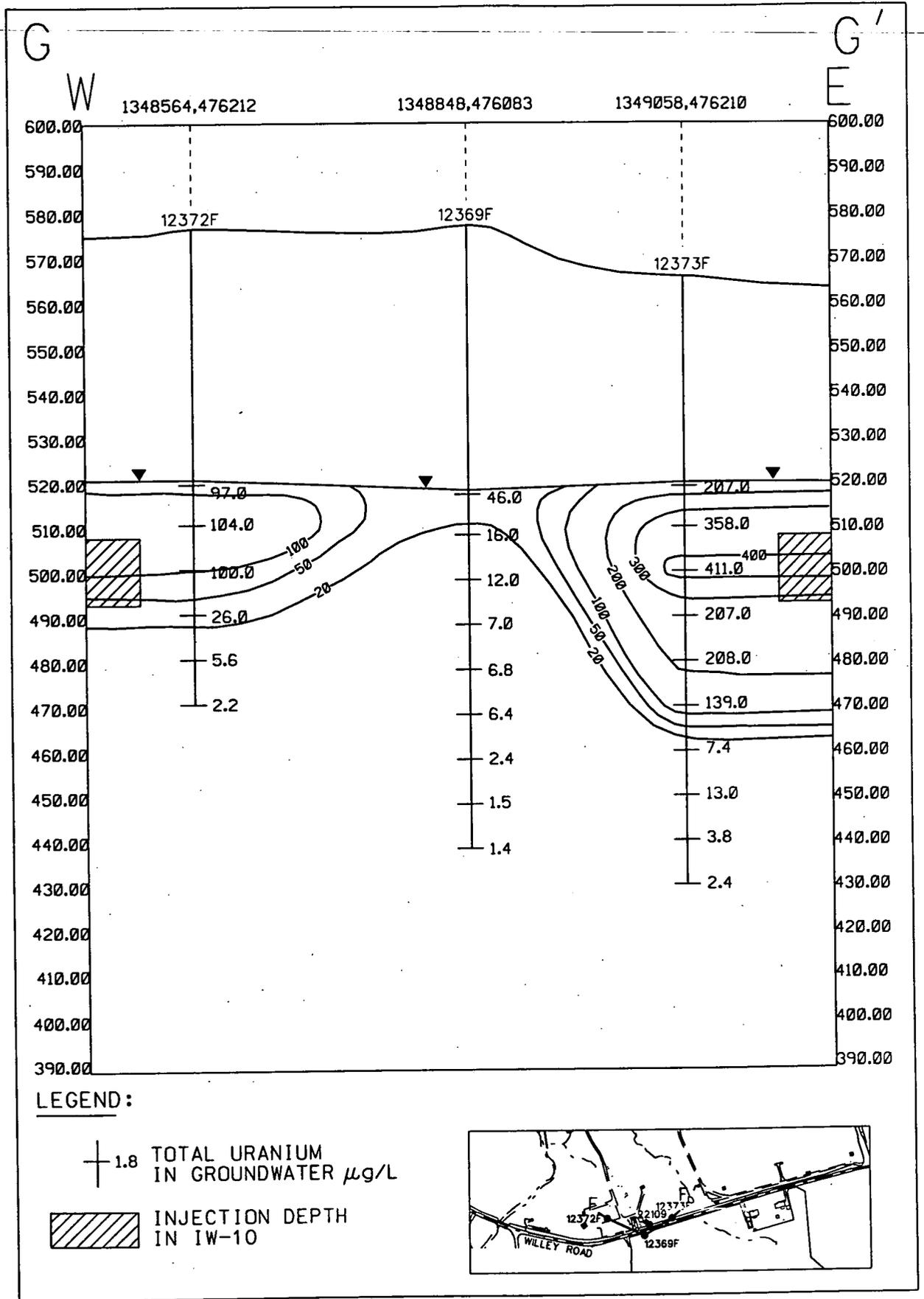
15

FIGURE F-6. TOTAL URANIUM IN GROUNDWATER ROUND - E, (JUNE THRU JULY 1999) NEXT TO AND SOUTH OF IW-10

V:\SCHM2\OGN\KEN_B\KEND0042.0GN

STATE PLANAR COORDINATE SYSTEM 1983

24-FEB-2000



DRAFT

FIGURE F-7. TOTAL URANIUM IN GROUNDWATER ROUND - F, (SEPTEMBER THRU NOVEMBER 1999) NEXT TO AND SOUTH OF IW-10