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TO: Recipients of PNL-8682

CHANGES IN THE HANFORD SITE ENVIRONMENTAL REPORT FOR CALENDAR YEAR 1992

Enclosed are a number of corrections to the *Hanford Site Environmental Report for Calendar Year 1992* (PNL-8682). Some of the corrections are being provided to you on self-adhesive paper so that the new information can be cut out and pasted in the report at the appropriate locations. The corrections that are not on self-adhesive paper can be written in the report with a pen or pencil. A copy of these corrections will be printed in the appendix of the *1993 Hanford Site Environmental Report*.

Please note that all 1992 Hanford calculated doses remain unaffected by these changes.

We apologize for any inconvenience.

Sincerely,

Richard E. Jaquish, Manager
Public Safety and Resource Protection Program
OFFICE OF HEALTH AND ENVIRONMENT

REJ:ba

Enclosure



The following corrections can be penciled or inked into your reports in the appropriate locations:

Page 137, Table 5.10. Change the number of samples from Horn Rapids from 3 to 6.

Page 203, Figure 6.1. Change *Advanced Technology Group Corporation* to *Allied Technology Group Corporation*

Page 206, FFTF Visitors Center Drinking Water, line 10. Change (<1 qt) to (~1 qt)

Page 209, Figure 6.4, figure key. The key box for Consumer Products and Medical, 65 mrem, should be blue with lines, as on figure. The lines can be hand-drawn on the page.

Page D.6, Table D.5, Meteorological conditions. Delete the words [*see Table D-5, Bisping and Woodruff (1993)*].

Page D.6, Table D.5, \bar{X}/Q' . The sentence should read $3.9 \times 10^{-9} \text{ s/m}^3$ at 53 km SSE;

Page D.7, Table D.6, Releases. Sentence should read *See Table 3.4*

Page D.8, Table D.7, Meteorological conditions. Delete the words [*see Table D-6, Bisping and Woodruff (1993)*]

Page D.8, Table D.7, \bar{X}/Q' . The sentence should read $1.1 \times 10^{-8} \text{ s/m}^3$ at 43 km SE;

Page D.8, Table D.7, Doses calculated. Delete the words (*whole-body*) from the sentence.

Page D.9, Table D.8, Meteorological conditions. Delete the words [*see Table D-7, Bisping and Woodruff (1993)*]

Page D.9, Table D.8, \bar{X}/Q' . The sentence should read $8.9 \times 10^{-8} \text{ s/m}^3$ at 13 km SSE;

Page D.9, Table D.8, Doses calculated. Delete the words (*whole-body*) from the sentence.

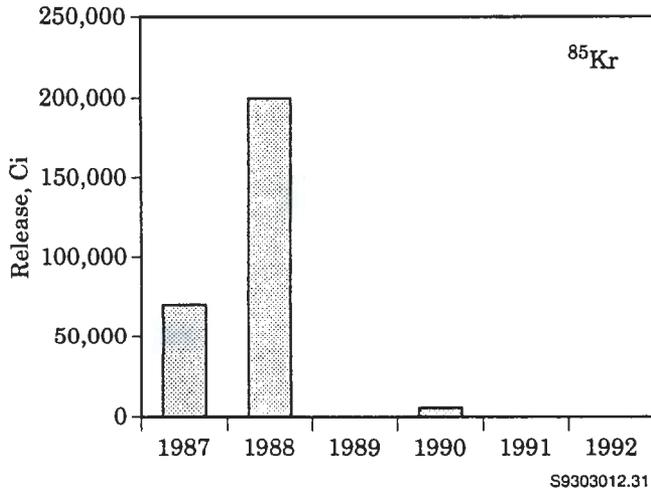
Page D.10, Table D.9, Meteorological conditions. Delete the words [*see Table D-8, Bisping and Woodruff (1993)*]

Page D.10, Table D.9, \bar{X}/Q' . The sentence should read $4.2 \times 10^{-8} \text{ s/m}^3$ at 22 km SSE;

Page D.10, Table D.9, Doses calculated. Delete the words (*whole-body*) from the sentence.

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On page 52 in Section 3.1, Figure 3.1, upper right graph (⁸⁵Kr), replace with the following:

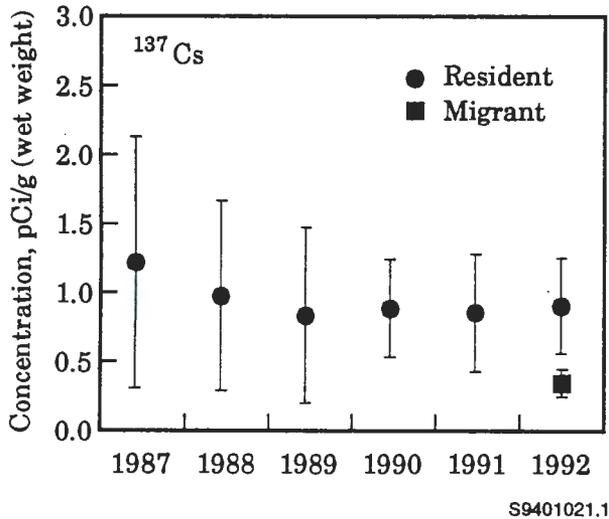


On page 56 in Section 3.1, 3rd table, bottom right hand corner, replace with the following table:

Table 3.5. Nonradioactive Liquid Effluents Discharged to Ground Disposal Facilities, 1992

Constituent	Release, kg		
	200 Areas	300 Area	400 Area
Total organic carbon	5.0 x 10 ³		
Nitrates	1.4 x 10 ³		5.1 x 10 ⁴
Nitrites		3.3 x 10 ²	2.2 x 10 ¹
Sulfates		1.1 x 10 ⁴	2.9 x 10 ³
Fluorine		1.8 x 10 ²	3.1 x 10 ¹
Copper		12	5.5 x 10 ⁻¹
Chromium		13	8.4 x 10 ⁻¹
Lead		3.5	2.6 x 10 ⁻¹
Cadmium		3.2	1.9 x 10 ⁻¹
Silver		6.8	
Chlorine		1.1 x 10 ⁴	9.3 x 10 ³

On page 143 in Section 5.5, Figure 5.31, replace with the following:



On page 79 in Section 4.1, 2nd column, 1st paragraph under "Results of 1992 Monitoring," replace with the following paragraph:

The weather in 1992 was much warmer and wetter than normal. In fact, 1992 was the warmest year on record and the seventh consecutive year with an above-normal annual average temperature. The average temperature for 1992 was 13.6°C (56.4°F), 1.7°C (3.1°F) above-normal [11.9°C (53.3°F)]. Ten months during 1992 were warmer than normal, with nine months at least 0.6°C (1.1°F) above normal, and five months more than 2.0°C (3.6°F) above normal. Only two months were colder than normal, and both by less than 1.0°C (1.8°F). June (a record warm month) had the largest positive departure, 3.9°C (7.0°F) above normal; while December, at 0.8°C (1.4°F) below normal, had the largest negative departure.

On page 110 in Section 5.2, Table 5.4 on top of page, last column in table, replace with the following column:

AALG^(b)

NA^(d)

NA

0.1

0.022

NA

36,400

0.096

0.053

NA

NA

1400

57

290

On page 52 in Section 3.1, Figure 3.1, replace figure caption with the following:

Figure 3.1. Radioactive Emissions to the Atmosphere (Krypton-85, Iodine-129, and Plutonium-239, 240), and Liquid Effluent Releases of Tritium to Ground Disposal Facilities, and Strontium-90 to the Columbia River, 1987 through 1992. Releases of some radionuclides have been very low over the last few years and appear to be zero (no bar) on the graphs.

On page A.11, Table A.10, replace with the following:

Table A.10. Annual Average (± 2 SEM) Concentration of Strontium-90 (^{90}Sr) in Alfalfa, 1982 to 1992 (pCi/g dry weight)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Benton City	0.097 \pm 10%	0.052 \pm 46%	0.053 \pm 38%	0.076 \pm 11%	0.209 \pm 18%	0.043 \pm 37%	0.151 \pm 7%	0.150 \pm 4%	0.041 \pm 10%	NS ^(a)	0.119 \pm 57%
Horn Rapids/Richland	NS	0.116 \pm 2%	NS	0.201 \pm 30% ^(b)							
Moses Lake	0.032 \pm 31%	0.040 \pm 35%	0.223 \pm 13%	0.191 \pm 2%	0.193 \pm 29%	0.161 \pm 4%	0.202 \pm 18%	0.087 \pm 44%	0.067 \pm 45%	NS	0.051 \pm 4%
Riverview	0.090 \pm 11%	0.061 \pm 16%	0.125 \pm 5%	0.111 \pm 41%	0.154 \pm 45%	0.034 \pm 6%	0.245 \pm 11%	0.240 \pm 23%	0.155 \pm 12%	0.075 \pm 19%	0.113 \pm 28%
North Riverview	NS	0.033 \pm 91%									
Sagemoor	0.117 \pm 32%	0.020 \pm 30%	0.135 \pm 19%	0.085 \pm 12%	0.192 \pm 35%	0.112 \pm 5%	0.174 \pm 25%	0.081 \pm 5%	0.036 \pm 11%	0.030 \pm 7%	0.057 \pm 39% ^(b)
Sunnyside	0.029 \pm 14%	0.072 \pm 67%	0.091 \pm 33%	0.095 \pm 25%	0.118 \pm 36%	0.071 \pm 14%	0.076 \pm 8%	0.114 \pm 33%	NS	NS	0.068 \pm 91%
Wahluke	0.009 \pm 67%	0.066 \pm 73%	0.062 \pm 39%	0.110 \pm 13%	0.219 \pm 19%	0.023 \pm 9%	0.153 \pm 8%	0.095 \pm 21%	0.036 \pm 11%	NS	0.050 \pm 80%

(a) NS = no sample.

(b) Mean is for samples collected as part of routine sampling and part of a special study (n=6).

On page xi in Summary section, 1st paragraph under "Potential Radiation Doses from 1992 Hanford Operations" replace with the following paragraph:

In 1992, potential public doses resulting from exposure to Hanford liquid and gaseous effluents were evaluated to determine compliance with pertinent regulations and limits. These doses were calculated from reported effluent releases and environmental surveillance data using Version 1.485 of the GENII code (Napier et al. 1988a, 1988b, 1988c) and Hanford Site-specific parameters. Specific information on sample collection and analyses and the sample results used in these calculations are briefly discussed in the summary sections discussing effluent monitoring and environmental surveillance.

On page xi in Summary section, 2nd column, 3rd paragraph, replace with the following paragraph:

In addition to the doses estimated from monitored stack releases, the potential radiation dose to the MEI from diffuse and unmonitored sources was estimated using 1992 data to be about 0.09 mrem/yr (9×10^{-4} mSv/yr).

On page 22 in Section 2.2, 2nd column, 5th paragraph, replace with the following paragraph:

6. In November 1992, Ecology issued a noncompliance letter to WHC on alleged violations at the single shell tank 241-T-101. The violations were associated with the leak detection capabilities of the tank. With the letter, Ecology initiated a Tri-Party Agreement change request to add new milestones to the Tri-Party Agreement. New milestones have been approved by DOE, EPA, and Ecology, and are being completed on schedule.

On page 37 in Section 2.3, 1st column, last paragraph, replace with the following paragraph:

In September 1992, the liquid level in single-shell tank 241-T-101 was noted to have dropped 6.6 cm (2.6 in.) from a previously established liquid level of 112.3 cm (44.2 in.). The level decrease was discovered following maintenance on the liquid level indicating transmitter,

On page 37 in Section 2.3, 2nd column, 1st paragraph, replace with the following:

which had been operating sporadically since December 1991. A review of the level history was initiated to identify any trends. The in-tank photographs were reviewed as were the drywell monitoring and surface level history data. The level decrease was confirmed by alternate level measurements and corresponded to a 28,388-L (7,500-gal) liquid loss in the tank. In October, this tank was declared an assumed leaker based on liquid level measurements. Similar investigations are under way for tanks 241-SX-103 and 241-SX-105.

On page 47 in Section 2.5, 1st column, 1st paragraph under "Hanford Site Waste Safety Issues," replace with the following paragraph:

At various times in the past 10 months, surface-level monitoring instrumentation on single-shell tank 241-T-101 has shown unexpected fluctuations in waste surface levels. Extensive investigations have been conducted to determine the cause of the problem. Similar investigations are under way for single-shell tanks 241-SX-103 and 241-SX-105.