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STATE OF COLORADO

00920 RF 03

CORRESPONDENCE

Bill Owens, Governor
Douglas H. Benevento, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

DUE DATE
ACTION

4300 Cherry Creek Dr. S. Laboratory and Radiation Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
TDD Line (303) 691-7700 (303) 692-3090
Located in Glendale, Colorado



Colorado Department
of Public Health
and Environment

<http://www.cdph.state.co.us>

September 30, 2003

Mr. Joseph Legare
Assistant Manager for Environment and Stewardship
U.S. Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, Colorado 80403-8200

RE: Conditional Approval, No Further Accelerated Action, IHSS Group 900-3 (904 Pad).

Dear Mr. Legare:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division) hereby grants conditional approval for No Further Accelerated Action (NFAA) in respect to activities resulting from operation of the 904 Pad. Sampling of earthen materials below the asphalt pad, now considered by Division and RFETS contractor personnel to be emplaced road base, indicate that isolated occurrences of arsenic and lead are not sufficiently elevated to warrant accelerated soil removal.

The sampling of the "road base", instead of native material exclusively, has raised concerns on the sampling adequacy of native materials. Consequently, Division staff located data from 1987 which supported IASAP and HRR reports that soil had been placed on top of radiologically contaminated soils. Subsequently, part or all of that soil was removed followed by confirmation sampling of the excavated/original surface.

The soil confirmation sampling from 1987 indicated that Pu-239 was systematically distributed and found to exceed 50 pCi/g in the northeastern portion of what eventually became the 904 Pad. To illustrate the Division's concerns, Figure 8 from the *Interim Status Closure Plan, Solid Waste Management Unit 15 (Storage Pad 904)*, dated 30 September 1989 as prepared by Rockwell International, is attached. Please note the sampling depth of 12 to 18 inches shown in the map legend. (Data posting errors from Table 3 of the report, also attached, have been corrected for two locations.) The Pu-239 isopleths, despite some inherent uncertainty on data quality, indicate a connection to the wind blown release of radionuclides from the 903 Pad, located a short distance to the east.

As a condition of NFAA approval, the facility must collect soil samples from the affected portion of the 904 Pad site at a depth consistent with the affected surface. This work may be incorporated into 903 Lip Area activities (IHSS Group 900-11). As it is imperative that soil samples be collected from the wind-affected surface to the extent practicable, the consultative process must be utilized in the field on a real-time basis to ensure agreement that sampling is properly conducted. Please arrange the sampling event to accommodate the presence of Division staff.

In the event that plutonium contamination exceeding the action level is encountered in the northeastern portion of the 904 Pad, and even if this area of contamination appears to be isolated from the 903 Pad Lip Area contamination, the Division will make a determination of whether a removal action is warranted.

DIST.	LTR	ENC
BERARDINI, J. H.	X	X
BOGNAR, E. S.	X	X
BROOKS, L.	X	X
BUTLER, L.	X	X
CROCKETT, G. A.	X	X
DECK, C. A.	X	X
DEGENHART, K. R.	X	X
DIETER, T. J.	X	X
DIETERLE, S. E.	X	X
FERRERA, D. W.	X	X
GIACOMINI, J. J.	X	X
HIETT, S. B.	X	X
ISOM, J. H.	X	X
LINDSAY, D. C.	X	X
LONG, J. W.	X	X
LYLE, J. L.	X	X
MARTINEZ, L. A.	X	X
NAGEL, R. E.	X	X
NORTH, K.	X	X
PARKER, A. M.	X	X
RODGERS, A. D.	X	X
SHELTON, D. C.	X	X
SPEARS, M. S.	X	X
TRICE, K. D.	X	X
TUOR, N. R.	X	X
WILLIAMS, J. L.	X	X
Zahn, C.	X	X

COR. CONTROL	X	X
ADMN. RECORD	X	X
PATS/130		

Reviewed for Addressee
Corres. Control RFP

10/6/03 *LC*
Date By

Ref. Ltr. #

DOE ORDER #

5400.1

HRFETS900-3 (904 Pad) Cond App NFAA.doc

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
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ADMIN RECORD

IA-A-001668

Mr. Joseph Legare
September 30, 2003
Page 2

I am also including the Division's original comments, as previously discussed with contractor personnel, to ensure that the final version of the Data Summary Report, dated August 2003, is properly revised. For example, the revised report must reflect that much of the sampling from 0.0 to 0.5 feet consisted of "road base" materials. The Division, based on its subsequent review of boring logs, believes that some samples did include native material. Accordingly, the facility should attempt to distinguish which samples actually included native material as a prelude to determining, or to minimize, the number of required samples. The final report should reflect such effort as well as any uncertainty.

We look forward to the sampling event, reviewing the revised final report and a determination of the extent, if any, of accelerated soil removal beneath the 904 Pad.

If you have any questions regarding this correspondence, please contact me at (303) 692-3367 or Harlen Ainscough at 303-692-3337.

Sincerely,



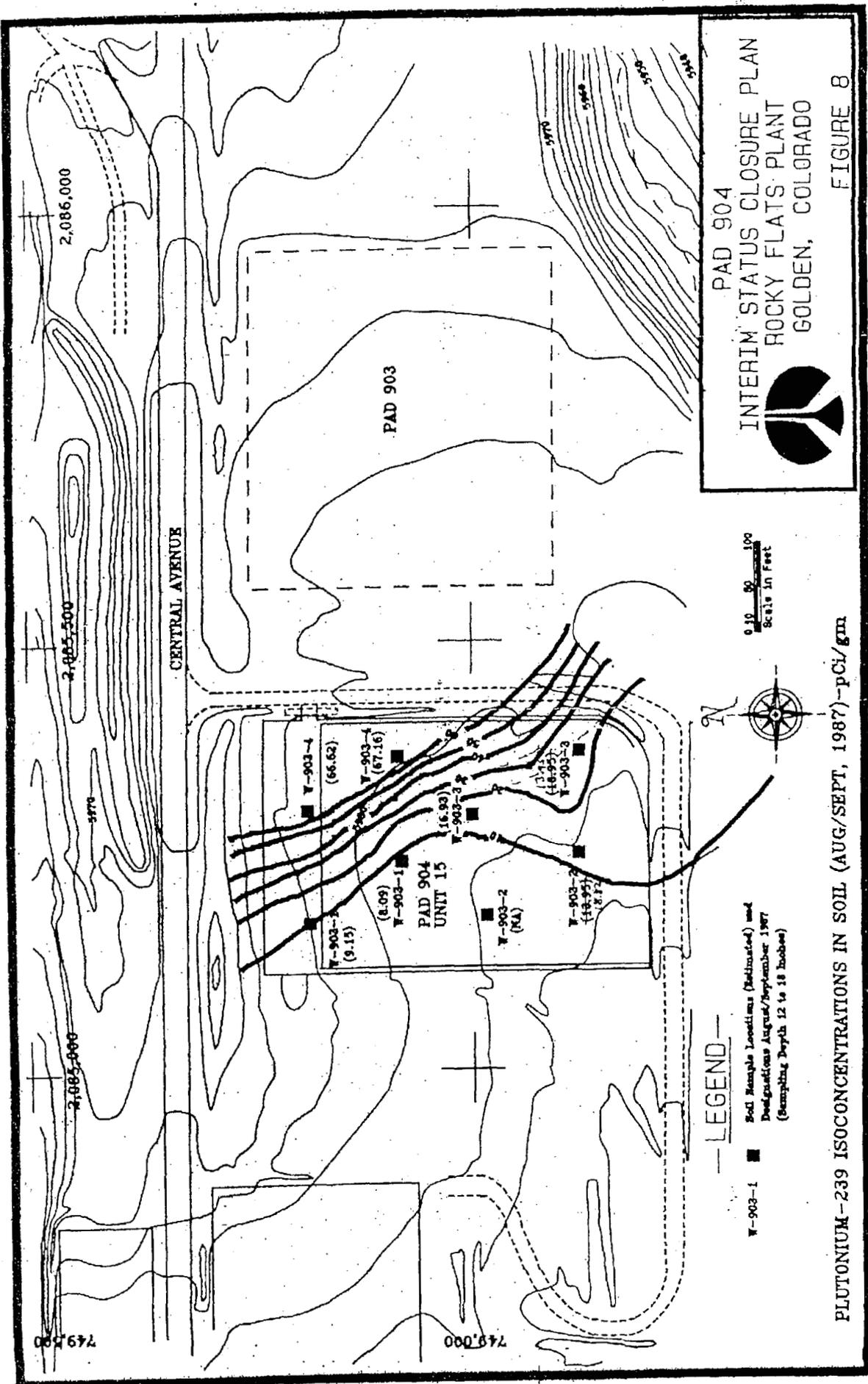
Steven H. Gunderson
RFCA Project Coordinator

Attachments (3)

cc: Tim Rehder, EPA
Norma Castaneda, DOE
~~Lane Butler, KH~~

Mark Sattelberg, U.S.F&W
Dave Shelton, KH
Administrative Records Building T130G


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 PAD 904
 INTERIM STATUS CLOSURE PLAN
 ROCKY FLATS PLANT
 GOLDEN, COLORADO
 FIGURE 8

0 10 20 100
 Feet
 Scale in Feet



--LEGEND--
 ■ W-903-1 (9.15) Soil Sample Locations (Marketed) and Designations August/September 1987 (Sampling Depth 12 to 18 inches)

PLUTONIUM-239 ISOCONCENTRATIONS IN SOIL (AUG/SEPT, 1987)-pCi/gm

TABLE 3

SUMMARY OF SOIL CHEMICAL DATA AT AND NEAR 904 POND/CONCRETE STORAGE AREA

SAMPLE DATE	SAMPLE DESIGNATION 1) Am-241 (pci/gm)	PU-239 (pci/gm)	PU (Total) (pci/gm)	U (Total) (pci/gm)	U-234 (pci/gm)	U-238 (pci/gm)	NO3-N (ppm)
April 7, 1987	87-903NW	0.03	--	--	--	--	--
	87-903NE	1.8	--	--	--	--	--
	87-903SW	0.12	--	--	--	--	--
	87-903SE	4.2	--	--	--	--	--
Aug./Sept. 1987	W-903-1	W-903	--	--	--	--	--
	W-903-1	9.15+/-0.88	1	--	--	--	--
	W-903-2	8.09+/-0.66	1	--	--	--	--
	W-903-2	Data Not Valid	3	--	--	--	--
	W-903-3	18.82+/-1.75	2	--	--	--	--
	W-903-3	13.95+/-1.22	3	--	--	--	--
	W-903-4	16.93+/-1.51	3	--	--	--	--
	W-903-4	67.16+/-8.08	4	--	--	--	--
May 26, 1988	1	66.62+/-5.38	4	--	--	--	--
	2	0.24+/-0.0028	--	--	0.95+/-0.10	0.98+/-0.10	14
	3	2.28+/-0.22	--	--	1.12+/-0.12	1.08+/-0.12	850
	4	--	--	--	--	--	7
	5	--	--	--	--	--	14
	6	0.23+/-0.022	--	--	0.72+/-0.08	0.67+/-0.07	8
October 24, 1988	1	0.26+/-0.026	--	--	1.11+/-0.18	1.01+/-0.11	140
	2	0.14+/-0.01	3)	3.7+/-0.2	--	--	--
	3	1.49+/-0.08	--	2.8+/-0.2	--	--	--
	4	23.9+/-1.03	--	0.3+/-0.1	--	--	--
	5	3.63+/-0.15	--	0.2+/-0.1	--	--	--
	6	0.23+/-0.01	--	16+/-1	3.7	--	--
	7	0.35+/-0.02	--	34+/-1	3.1	--	--
	8	Reagent Blank	0.23+/-0.03	4.0+/-0.2	3.4	--	--
			3.3+/-0.1	4.0	--	--	

1) Estimated Sample Locations Shown on Figure

2) -- No Analyses For Indicated Variable

3) Counting Error (+/-) at 95% Confidence Interval Shown When Reported by Laboratory

No Page 30
in the Report

Colorado Department of Public Health and Environment

Hazardous Materials & Waste Management Division

Comments

Data Summary Report

IHSS Groups 900-3

August 2003

General Comments:

1. A number of soil samples were collected beginning, variously, at .25, .3 and .5 feet and reflect the occurrence of artificial fill stratigraphically between the asphalt of the 904 Pad and native soil. The Division encouraged this approach; however, there is uncertainty whether contamination from the operation of the 903 Pad may have been released to this fill material. Working from Table 4, the Division plotted these specific locations, which shows them to be clustered in the northern and western portion of the pad site. Either this layer needs to be sampled and analyzed to support the NFAA, since it was apparently not analyzed in respect to the closure of the RCRA unit, or be treated as "white space" and sampled later as needed. The practicality for physical sampling may depend on whether the fill material is fine-grained soil or gravel.

Specific Comments:

2. Section 1.0: Please also identify the site as the 904 Pad.
3. Section 2.0: 1st bullet. – In addition, state that arsenic exceeds the ERAL value of 21.6 mg/kg.
4. page 2, 2nd paragraph, 2nd sentence: Delete! The statement suggests, incorrectly, that a value two orders of magnitude less than the WRW is of overriding significance in respect to its exceedance of the ERAL. Please refrain from trivializing the potential impact to ecological resources.
5. Figure 2: The actual locations of the borings need to be shown on this, or an additional figure, to allow the deviations, shown in Table 5, to be compared to approved locations. Alternatively, or additionally, the "Comment" column of Table 5 could be upgraded to state the direction and distance of the lateral offsets.
6. Table 2: The title of the table specifies that only exceedances of Reporting Limits (or background values) are included. The Division's experience is that Reporting Limits are generally set at 3-5 times Detection Limits. Since the table contains a Detection Limit column, versus a Reporting Limit column, it is unclear, whether Naphthlene on page 12 should have been include in the table. Certainly, the result is less than the specified Detection Limit. The inclusion of other constituents, i.e., Xylene and Acetone, page 13; Acetone and Naphthlene, page 14; Naphthlene, page 15; Acetone and Naphthlene, page 16; Acetone, page 17, Xylene, page 18; Acetone, page 19; 2-Butanone and Acetone, page 20 and page 23; Acetone, page 21 and page 22; 2-Butanone, Acetone and Naphthlene, page 24 and 25; Xylene, page 26; Naphthlene, page 28; Xylene, page 29; 2-Butanone, page 30; and Xylene, page 31, some in multiples, are equally questionable. Please address.
7. Section 4.1.4: page 48, 2nd para. - The statement is made that all real samples with results exceeding 17 mg/kg were qualified. It appears that only the one sample, at 56.6 mg/kg lead as noted in Section 2.0, exceeded the 17 mg/kg threshold. Since it exceeds the ERAL 25.6 mg/kg, the statement in Section 2.0 should be modified to reflect the possible low bias of the 56.6 mg/kg lead value. In turn, it may be appropriate to consider whether this should be evaluated as a potential hot spot, or simply be removed. Please also provide some detail on the derivation of the 17 mg/kg threshold, i.e. $25.6/1.52=16.8 > 17$.
8. page 50, 2nd paragraph - The statements, Table 13, and the potential lead hot spot, raise the question on whether it is appropriate to consider a request for NFAA at this time. Please be prepared to discuss during comment resolution.