

30-18276

DEC 15 1993

Mr. Erwin J. Odeal
Executive Director
Northeast Ohio Regional Sewer District
3826 Euclid Avenue
Cleveland, Ohio 44115-2504

Dear Mr. Odeal:

SUBJECT: NORTHEAST OHIO REGIONAL SEWER DISTRICT/SOUTHERLY WASTEWATER
TREATMENT PLANT - SITE CHARACTERIZATION PLAN

I am responding to the Site Characterization Plan, (SCP), Revision 0, dated April 21, 1993, prepared by Dames & Moore, in connection with the remediation program at the Northeast Ohio Regional Sewer District's Southerly Wastewater Treatment Plant (NEORSD/SWTP). Enclosed are our comments on the plan, which also reflect the results of the reviews performed by the Ohio Department of Health, Oak Ridge Institute for Science and Education, and Cuyahoga County Board of Health.

A copy of this correspondence is also being sent to Mr. T. G. Adams of B. Koh & Associates. If you have any questions, please contact Sam Nalluswami of my staff on (301) 504-2502.

Original Signed By

John H. Austin, Chief
Decommissioning and Regulatory
Issues Branch
Division of Low-Level Waste Management
and Decommissioning
Office of Nuclear Material Safety
and Safeguards

cc: T. Adams, B. Koh & Assoc.
H. Brugger, ODOH
E. Ball, Cuyahoga County
Board of Health
J. Berger, ORISE
D. Schregardus, Ohio EPA

Enclosure: As stated

TICKET: D-930072

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COMMENTS ON SITE CHARACTERIZATION PLAN, SOUTHERLY WASTEWATER TREATMENT PLANT,
NORTHEAST OHIO REGIONAL SEWER DISTRICT, REVISION 0, APRIL 1993, CUYAHOGA
HEIGHTS, OHIO

GENERAL COMMENTS

English and metric units are intermixed throughout this SCP; it is suggested that such technical documents utilize metric units along with English units in parentheses.

The confidence level with regard to identifying "hot spots" should be addressed. Based on this confidence level, an estimate of the amount of activity that might miss detection and the associated radiological consequences of that amount of activity should then be determined. This is particularly applicable to those portions of the facility, where there is a heterogeneous distribution of Co-60.

Describe the survey meter calibration methods you plan to use.

SPECIFIC COMMENTS

1. Page 1-1, Section 1.0

The scope of the characterization should also include those other site areas that were exposed to the Co-60 contaminated sludge, including process areas and other contaminated site areas identified by ORISE. These additional areas should include areas where sludge or ash were deposited from treatment operations that took place. In identifying potentially contaminated areas, it may be useful to propose to us the areas that will be treated as "unaffected areas" and "affected areas" as described in NUREG/CR-5849.

2. Page 1-2, Section 1.1.2

Data Quality Objectives (DQO's) typically address aspects of precision, accuracy, representativeness, comparability, and completeness. The DQO's as presented in this SCP do not appear to satisfy the guidance presented in the EPA publication, QAMS-005/80, "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans." The quality level of the field and laboratory data should also be specified.

3. Page 1-3, Section 1.2

Are the MWQIS and/or designee assignments similar to that of the RSO?

4. Page 1-4, Section 1.2

Para 2: Define what "major" and "field changes" in greater detail. Regarding "field changes," what level of supervisory or staff can initiate such a change(s)?

5. Page 1-4, Section 1.2

Para 3: You state that changes to plan will be maintained at the District. Copies of the revisions should be sent to the NRC for approval.

Please provide an outline (organizational chart) of the management structure regarding the SCP oversight.

6. Page 1-5, Section 1.3

Line 1: Should the reference be Section 11 instead of Section 12?

Line 2: Should the reference be Section 12 instead of Section 13?

7. Section 2.0, General

The other contaminated areas, identified by ORISE, other than the North and South Fill Areas, should also be discussed in this section.

8. Page 3-1, Section 3.1

The delineation of the 100-year flood plain is not clear (Figure 2). Please provide a figure clearly showing the limits of the 100-year flood plain.

9. Page 3-3, Section 3.2.1

The major categories of soils underlying the SWTP should be illustrated with figures showing cross-sectional views.

10. Page 3-4, Section 3.2.2

Para 1: It appears that the phrase in the last sentence, ".....to the north and east", should be "..... to the north and west.....".

11. Page 5-1, Section 5.0

General Comments: Please describe the methods and procedures for cleaning or decontaminating sampling tools between samples.

Do the areas, designated for sampling, in the North and South Fill Areas, include all known locations where ash or sludge fill operations took place?

12. Page 5-3, Section 5.1.6

Specifications for radiation exposure measurements should be at 1 meter above ground surface.

13. Page 5-3, Section 5.2

General: Will all subsurface boreholes be drilled into native soil or to depths in the native soil where Co-60 activity is clearly shown to be less than the unrestricted use limits?

14. Page 5-3, Section 5.2

What is the predetermined level of confidence and allowable error based on?

15. Page 5-5, Section 5.2.1

Para 1: Please define "elevated areas of radiation".

16. Page 5-5, Section 5.2.2

General: What is the rationale for not using a systematic sampling protocol in the northern portion of the South Fill Area? Have ash fill operations taken place in this location? If so, why isn't a systematic sampling protocol being used?

What is the rationale for selecting sample locations on a 30 meter or 20 meter centers?

17. Page 5-6, Section 5.2.2

Para 1: What is the rationale for expanding sampling from 20m x 20m centers to 30m x 30m centers in the northern and southern areas of the South Fill area?

18. Page 5-6, Section 5.2.2

Paras 3 and 4: What is the basis for using the criteria that 50 percent of the grids are less than 1.5 times or more than 1.5 times the ambient background?

Para 4: Please define the term "ambient background". We assume that the background measurements you are referring to will be determined as stated in Section 6.1.

19. Page 5-7, Section 5.2.2

Last Para: Describe the conditions under which the Project Health Physicist will decide whether subsurface samples are necessary, if elevated radiation levels are found.

20. Page 5-8, Section 5.3

You should state that you will comply with state and local government requirements for the abandonment of test pits, partially completed wells, and boreholes.

21. Page 5-10, Section 5.5

Regarding data logging and maintenance of logs and reports, please clarify who is responsible for completing reports? What QA controls (by who and frequency) will be applied?

22. Page 6-2, Section 6.3

Will you use split samples for the 10 percent QA sampling program?

23. Page 6-5, Section 6.4.1

Para 1: Please describe the methods to be used to avoid cross-contamination of samples.

What is the basis for not installing monitoring wells around Lagoons A, B, and C?

24. Page 6-8, Section 6.4.1.2

Para 1: Please provide the methods and procedures to be used to dispose of radiologically contaminated water; also see Page 6-10, Section 6.5.2, para 2.

25. Page 6-12, Section 6.8

Will you use split samples for the 10 percent vegetative QA sampling program?

26. Page 6-13, Section 6.9

How will area conditions (wind direction, wind speed, humidity, etc.) be considered when selecting samples for QA verification?

27. Page 6-13, Section 6.10

Para 1: The response of scintillation detectors is dependent on the energy of the photons measured. Will the exposure rate results from the scintillation detectors be correlated to the results from a pressurized ionization chamber (PIC), which is not energy dependent?

Para 2: You have proposed a single gamma rate measurement per 900 square meters for the North and South Fill Areas to characterize this site. Please provide the statistical basis for this approach.

28. Page 7-4, Section 7.4.1

Please describe testing to be performed on the air samples.

29. Page 7-5, Section 7.5.1

It is suggested that a minimum of one gamma exposure rate measurement be taken per soil sample location.

30. Page 9-1, Section 9.0

Please indicate that the NEORSD/SP will use the new 10 CFR Part 20 requirements in the Radiological Control Plan.

31. Page 13-2, Section 13.0

The NUREG/CR-5849 is still in "draft" form; the published date is June 1992 rather than May 1992.