



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

May 5, 1997

DATE RECEIVED

5/13/97

ENVIRONMENTAL
OFFICE

In reply
Refer to: 3HW90

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

W.M. Stewart
Sr. Environmental Control Consultant
DuPont
Washington Works
P.O. Box 1217
Parkersburg, WV 26102-1217

Re: Notice of Deficiency
Verification Investigation Report
Washington Works
WVD 045 87 5291

Dear Mr. Stewart:

The Verification Investigation, E.I. du Pont de Nemours & Co., Washington Works (Report), dated April 1992 has been reviewed and, although the Environmental Protection Agency (EPA) finds deficiencies in the Report, sufficient information is included to warrant proceeding with the RCRA Facility Investigation (RFI). Therefore, a RFI work plan is due within 90 days of receipt of this letter.

GENERAL COMMENTS

Enclosed is a table identifying deficiencies in the Report. While the comments are written as though the Report is to be revised, EPA is not requiring that the Report be revised. It is considered more important to proceed with the RFI than expend resources revising the Report. However, the items (in the table) in bold do need a response. Please provide a response within 30 days of receipt of this letter.

It is difficult to locate the precise locations of sampling points using the Report's Figure 6. The Report contains a divider marked "Plates" but that section is empty. Please provide three copies of the plate locating the actual sampling points on the

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topographic map used in the Verification Investigation Plan, Page 4.

Permit Requirement

The Corrective Action Permit Attachment 1 required soil and groundwater analyses for inorganics, volatiles, and semivolatiles. The Verification Investigation Plan, Table 18 listed the EPA Constituent List but omitted chromium. EPA's September 30, 1991 conditional approval letter required surficial soil sampling and analysis at the DuPont Road Landfill and referred to parameters listed in the permit, which includes chromium. DuPont modified Table 18 but added chloride instead of chromium.

In addition, EPA's conditional approval, and DuPont's acceptance, specifically identified chromium as an analyte for the Polyacetal Product Incinerator. The Report failed to include chromium as required.

Therefore, the Report in deficient and additional sampling and analysis is required, see below.

Groundwater

Section 7.1 discusses the use of dissolved versus total metals when evaluating groundwater quality. The second paragraph incorrectly paraphrases the referenced EPA Directive submitted in Appendix F. The EPA Directive, upon which is based the justification for looking at dissolved metals concentrations only, states that, "if the historical information shows inconsistency between the filtered and unfiltered data, and high levels of aluminum are present in the unfiltered data, only filtered samples are needed." Neither historical information nor has aluminum analyses been included in previous or present sample analysis. In addition, the field sampling logs indicate that almost all wells are "muddy," "thick muddy," or have "medium to high turbidity."

Evaluating groundwater quality with respect to metals when the samples are turbid is difficult. The practice is tending to total metals, or unfiltered samples, often using low-flow sampling techniques. Redeveloping a groundwater monitoring well and sampling with low-flow techniques can reduce total metals from above the groundwater protection standard in 40 CFR 264.94 to non-detect levels.

Therefore, no metal may be eliminated from further consideration at this time.

Section 7.2 discusses that C-8 and TRITON*, found in wells at the Riverbank Landfill, the Anaerobic Digestion Ponds, and the Burning Grounds, are not 40 CFR Part 264, Appendix IX constituents

and PALs or MCLs assigned to them. Please provide known toxicological information.

PAL

The Report uses EPA proposed action levels (PALs) (July 27, 1990) for screening purposes, a more current list used by Region III is the Region III Risk-Based Concentrations: R.L. Smith (4/18/96) using the residential exposure scenario for soils. The significant difference between the Region III table and the Report Table 4 is arsenic. The value in Table 4 fails to consider arsenic as a carcinogen. As reported values for arsenic in the soil exceed the Region III number, it may be necessary to determine a site-specific soil arsenic background number.

Background Soil Samples

Determination of inorganic soil background levels becomes important when the inorganic constituents exceed the Region III Risk-Based Concentrations. Soil arsenic levels exceed the residential/industrial values for arsenic as a carcinogen of 0.43/3.8 mg/kg. A statistically valid determination for background levels of arsenic is needed. A one-sided tolerance levels is appropriate.

Seven samples were taken to represent background inorganic constituent conditions. Seven samples is less than the minimum number generally required (eight samples are generally necessary to calculate an upper tolerance level to represent background) but more importantly, the background samples need to be from the same soil series and horizon as the samples taken to evaluate releases from a solid waste management unit. In addition, background soil samples must be taken from areas unimpacted by facility operations

Enclosed is a copy of EPA's Engineering Forum Issue paper, *Determination of Background Concentrations of Inorganics in Soils and Sediments at Hazardous Waste Sites*, EPA/540/S-96/500, December 1995. The paper identified some of the concerns in determining inorganic soil background levels.

EVALUATION OF RECOMMENDATIONS

Polyacetal Waste Incinerator

The Work Plan specified soil analysis for cadmium, chromium, lead, selenium, m-Cresol, and phenol. The Report, Table 3, fails to provide results for chromium and m-Cresol. Provide the missing data.

Local Landfill

DuPont's "no further investigation" recommendation may be unacceptable given that the groundwater protection standard of 40 CFR § 264.94 is exceeded for arsenic, barium, and lead.

In 1995 DuPont notified EPA that the Local Landfill was being closed and one additional groundwater monitoring well was being installed, and in January 1997 DuPont notified EPA that the landfill surface impoundment is to be closed. Please provide the Local Landfill closure information and the schedule and plans regarding closure of the surface impoundment(s).

Riverbank Landfill

A RCRA Facility Investigation (RFI) needs to be performed while maintaining the pump-and-treat for the methylene chloride spill. The statement that groundwater contamination is limited to the western and central parts of the Riverbank Landfill is inaccurate as extreme eastern groundwater sampling point exceeded the groundwater protection standard of 40 CFR § 264.94 for arsenic and mercury. The RFI shall include the DuPont-Lubeck well field, the Ranney water production wells, and well 336. Wells 331 through 335 and 337 shall be included in the RFI with respect to groundwater elevations.

The Report contains insufficient data to evaluate the effectiveness of the pump-and-treat system. Although DuPont submits quarterly seepage reports, please submit a report, within 60 days of receipt of this letter, on the pump-and-treat system which includes a complete description of the system, a discussion of attempts to locate the source of the spring and to reduce its flow, a demonstration that the contaminated groundwater is intercepted, and a summary of treated seepage quality.

Anaerobic Digestion Ponds

The Anaerobic Digestion Ponds are essentially located within the Riverbank Landfill and shall therefore be included in the RFI. The Report states that DuPont has initiated a study to evaluate the use of electrochemical techniques for in-situ stabilization of the C-8 contaminated soils. Please submit a report on your investigation to date within 30 days of receipt of this letter.

Burning Grounds

The groundwater protection standard at 40 CFR § 264.94 is exceeded for arsenic, lead, and mercury, therefore, the burning grounds shall be included in the Riverbank Landfill RFI.

Excavation for a drainage ditch in March 1990 uncovered hazardous waste and DuPont's April 4, 1990 letter submitted soil

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analytical results for "excavated soil" and "Burning Ground Trench" soil. The Report, page 22, states that "(p)ost-excitation soil sample analytical results . . . demonstrate that the post-excitation levels of contaminants were significantly lower," however, DuPont's March 16, 1990 letter states that all of the hazardous waste encountered was not excavated. Therefore, soil contaminated to the "excavated soil" level are remaining at the Burning Ground and soil is a medium of concern for the RFI.

SUBMITTALS

Submittal of the RFI Work Plan

According to permit condition II.D.1., within 90 calendar days of receipt of this letter or August 11, 1997, whichever is later, submit to EPA and the West Virginia Department of Environmental Protection a work plan for the RCRA Facility Investigation for the Local Landfill, Riverbank Landfill including the Anaerobic Digestion Ponds and Burning Grounds, and the Polyacetal Waste Incinerator. EPA's portion of the RCRA permit for corrective action contains, in permit condition II.D., provisions (or requirements) for the RFI. As a supplement to the permit language, enclosed is a copy of EPA's current permit RFI requirements. Of particular importance are attachment conditions D.2.f and g regarding screening risk assessment and base-line risk assessment.

Within 30 days of receipt of this letter, for by June 11, 1997, whichever is later, submit to EPA and WVDEP information identified above or in the enclosed table.

Within 60 days of receipt of this letter, or by July 11, 1997, whichever is later, submit to EPA and WVDEP a report on the pump-and-treat system as identified above.

It is strongly suggested that prior to submitting the RFI Work Plan, that DuPont meets with EPA in the Regional office. Please call me at 215-566-3429 to set up a meeting.

Sincerely,

Mary F. Beck

Mary F. Beck
Remedial Project Manager
RCRA Operations Branch

encl.

cc: G.S. Atwal, WVDEP

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