



E. I. du Pont de Nemours and Company
Washington Works
Mail: P.O. Box 1217
Washington, WV 26181-1217

April 16, 2004

Allyn G. Turner, Director
Division of Water and Waste Management
414 Summers Street
Charleston, WV 25301

Dear Director Turner,

In connection with recent discussions between representatives of the West Virginia Department of Environmental Protection ("DEP") and representatives of E.I. du Pont de Nemours and Company ("DuPont") regarding the recommendations contained in the report titled "Ammonium Perfluorooctanoate (C-8) Groundwater Investigation Steering Team Report," dated August 2003 (the "Final GIST Report"), DuPont submits the attached proposal. The attached proposal addresses recommendations in the Final GIST Report that cannot be incorporated as conditions in environmental permits issued to DuPont by the DEP and is intended to reflect our discussions with DEP representatives.

It is DuPont's intention to implement the attached proposal or the proposal with such modifications as are deemed necessary to carry out the recommendations in the Final GIST Report upon receipt of your approval. At that time, a more formal Work Plan will be submitted reflecting actual sampling locations, sample collection methodology, analytical procedures, and a schedule for implementation. In the meantime, if you have any questions concerning this proposal please contact Andrew Hartten at 302-992-6820.

Sincerely,

Paul J. Bossert, Jr.
Plant Manager
DuPont - Washington Works

PJB/djp
Attachment

cc: M. A. Bradley - Spilman, Thomas & Battle
bcc: A. V. Malinowski - DuPont Legal - Wilmington
D. W. Booth - DuPont - Wilmington
A. S. Hartten - DuPont - Wilmington
R. L. Ritchey - DuPont - Washington Works

EXP000377

PLAN FOR IMPLEMENTATION OF GIST RECOMMENDATIONS

Submitted by E.I. du Pont de Nemours and Company
April 16, 2004

In response to the recommendations of the Groundwater Investigation Steering Team ("GIST") as set forth in the report titled "Ammonium Perfluorooctanoate (C-8) Groundwater Investigation Steering Team Report," dated August 2003 (the "Final GIST Report"), E.I. du Pont de Nemours and Company ("DuPont") will perform the following tasks upon the terms and conditions indicated:¹

1. To implement recommendations of the Final GIST Report with regard to West Virginia public water supply systems, subject to obtaining the consent of the system owners, DuPont will:

a. Beginning in the second quarter of 2004 and ending with the first quarter of 2006, sample quarterly the Lubeck Public Service District, DuPont Washington Works and General Electric public water systems at the locations identified on Attachment 1.

b. Once in calendar year 2004 and once in calendar year 2005,² sample the production wells indicated on Attachment 1 at the Blennerhassett Island State Park, Mason County Public Service District and Racine Lock and Dam Public Water System.

c. Beginning in the second quarter of 2004, DuPont will implement a limited field investigation of C-8 in soil at the Lubeck Public Service District as reflected in Attachment 2, and will report the results of such investigation during fourth quarter of 2004.

2. To implement the recommendations of the Final GIST Report with regard to Ohio public water supply systems, subject to obtaining consent of the property owners, DuPont will:

a. Beginning in the second quarter of 2004 and ending with the first quarter of 2006, sample quarterly the Little Hocking Water Association public water system at the locations indicated on Attachment 1.

¹ This plan does not address those recommendations of the GIST that relate to sampling at DuPont facilities that are covered by environmental permits issued by the DEP. Such permits have been or will be issued or modified to include those recommendations of the GIST applicable to these facilities.

² Annual samples taken under this plan will be taken at least 12 months apart.

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b. Once in calendar year 2004 and once in calendar year 2005, sample the Tupper Plains-Chester Water District public water system at the locations indicated on Attachment 1.

3. To implement the recommendations of the Final GIST Report with regard to additional sampling of private water supplies, DuPont will, subject to obtaining the consent of property owners:

a. Collect additional samples from private water sources at locations near the Washington Works facility and the Local Landfill by sampling ten locations within the five categories listed below on a quarterly basis for one year, beginning in the second quarter of 2004, with at least one of the sample locations being from each of the five categories listed below:

- (1) Drinking water wells with detected levels of C-8;
- (2) Drinking water springs with detected levels of C-8;
- (3) Non-drinking water wells with detected levels of C-8;
- (4) Springs and cisterns with detected levels of C-8;
- (5) One well or spring used for cattle where prior sampling has detected C-8 concentrations above 5 ug/L.

b. Collect one sample during each calendar year 2004 and 2005 from each of the GERLACHIBA and BRINKERA private water supply sources near the Letart Landfill.

c. Collect additional samples from private water supplies at locations near the Dry Run Landfill by sampling ten locations within the three categories listed below on a quarterly basis for one year, beginning in the second quarter of 2004, with at least one of the sample locations being from each of the three categories listed below:

- (1) Drinking water wells with detectable levels of C-8;
- (2) Drinking water springs with detectable levels of C-8;
- (3) Springs and cisterns with detectable levels of C-8.

d. Collect additional samples from private water supplies in Ohio by sampling ten locations within the four categories listed below on a quarterly basis for one year, beginning with the second quarter of 2004, with at least one of the sample locations being from each of the four categories listed below:

- (1) Drinking water wells with detectable levels of C-8;
- (2) Drinking water springs with detectable levels of C-8;
- (3) Non-drinking water wells with detectable levels of C-8;
- (4) Springs and cisterns with detected levels of C-8.

In addition, DuPont has agreed to sample an eleventh location, for the same time period, chosen with input from Ohio EPA.

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4. Upon completion of the sampling described herein DuPont and the DEP will confer with the GIST to determine what, if any, additional sampling is necessary to evaluate trends of C-8 concentrations or to otherwise implement the recommendations of the Final GIST Report.

5. Within 30 days of receipt of the validated data for samples collected in the preceding calendar quarter, DuPont will submit to DEP a written report of the results of such sampling.

6. Written reports of any sampling to be performed described in this plan or any other communication related to this plan will be directed as follows:

For WVDEP:

[Insert designated contact person or position and mailing address]

For WVDHHR:

For DuPont:

Andrew S. Hartten
E. I. DU PONT DE NEMOURS AND COMPANY
P. O. Box 80027
Wilmington DE 19880-0027

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Attachment 1

1) Little Hocking Water Association

Wells designated as LHPSD1, LHPSD2, LHPSD3, LHPSD5, LHPSEDP001, and Finished Water

2) Lubeck Public Service District

Wells designated as LPSD Well A, LPSD Well B, LPSD Well C, LPSD Well D, LPSD Well E, LPSD Well F, and Finished Waters (LPSDAT)

3) DuPont Washington Works

Wells designated as AM07-PW01, AO08-PW01, AX13-PW01, K16-PW01, L04-PW01, and V05-PW01

4) General Electric

Well designated as GE Well 3

5) Blennerhasset Island State Park

Well designated as BLENISEPS1

6) Mason County PSD

Wells designated as MASONCPSD1, MASONCPSD2, MASONCPSD3

7) Racine Lock and Dam PSD

Well designated as RACINELD

8) Tupper's Plains-Chester

Wells designated as TPPSDW1, TPPSDW2, TPPSDW3, TPPSDW4, TPPSDW5, TPPSDW6, and Finished water (TPPSDAT)

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Attachment 2

PROPOSED SOIL INVESTIGATION AT THE LUBECK PSD, LUBECK, WEST VIRGINIA

DuPont proposes implementing a limited field investigation to sample for C-8 in soil at the Lubeck Public Service District (PSD) well field to comply with the recommendations of the Final Groundwater Investigation Steering Team (GIST) Report (GIST, 2003) for West Virginia. The objective of this field investigation is to determine if air emissions of C-8 from the DuPont Washington Works facility are deposited on the Lubeck well field surface soils and are a possible secondary source of C-8 in groundwater. As determined by the GIST, the primary source of C-8 in groundwater at the Lubeck PSD is Ohio River surface water that contains low concentrations (i.e., around 1 ug/L) of C-8 recharging the alluvial aquifer at/near the Lubeck PSD.

For the field investigation of soil at the Lubeck PSD, DuPont proposes conducting two soil sampling events in the late spring 2004, one following a "wet" period and one following a "dry" period. The "wet" period will be defined using the United States Environmental Protection Agency (USEPA) stormwater sampling requirements (40CFR122.21(g)(7)). A "wet" period or acceptable storm to collect surface water samples is defined by the USEPA as a 72 hour period with less than 0.1 inches of rain fall followed by a rainfall event that is forecasted not to vary more than 50 percent of the average or median event for the sampling area. For the Lubeck PSD, which is located in the Northeast Rain Zone (USEPA July 1992, exhibit 2.8), the representative storm or "wet" event will range from 5.6 to 16.8 hours in duration and will include between 0.25 and 0.75 inches of rainfall. Soil samples will be collected within 24 hours of the acceptable storm event. The "dry" sampling event will be defined in this investigation as greater than 72 hours with less than 0.1 inches of rainfall. Soil samples will be collected within 48 hours of the acceptable "dry" period.

For the proposed field investigation of soil at the Lubeck PSD, DuPont will sample surface soil from three locations within the well field. Sample locations will be selected based on field conditions. The three sample locations will be selected that most closely resemble each other (similar vegetation type, topography, etc). At each location, two soil samples will be collected immediately adjacent to each other during each sampling event. Both samples will consist of the growing vegetation, the litter layer (the layer of decomposing yet still identifiable organic matter), and the first six inches of organic material and mineral matter immediately under the litter layer.

The first soil samples will be collected using a soil punch (a six inch long punch or thin walled steel tube) or equivalent to extract six inch cores from the soil. The sample will be divided in the field based on visual observation into two portions, an organic-rich portion (vegetation, litter layer and root zone) and a mineral matter-rich portion (material below the root zone). Both portions of the soil sample, the organic-rich and the mineral

matter-rich will be sent to a contract laboratory for analysis of TOC and C-8 using appropriate analytical methods. Prior to analysis for C-8, an attempt will be made to separate any liquid (water) from the soil (organic-rich and mineral matter-rich) samples for independent analysis. Alternatively, soil (organic-rich and mineral matter-rich) samples may be washed with deionized water to determine adsorbed or "external" C-8, prior to processing the soil samples for analysis. Note that DuPont is not currently aware of a validated analytical method for determining C-8 concentrations in organic matter. Analysis of the organic rich samples will not take place until completion of method validation. Sample handling and storage will follow the protocol outlined in the QAPP (to be revised prior to sample collection).

The second soil sample will be collected immediately adjacent to the first soil sample and will be collected using a ring sampler (a seamless steel ring six inches in diameter) or equivalent that is driven into the soil to a depth of six inches. This larger volume sample will be used to determine the soil classification at the location. Soil classification will be determined at the URS Corporation Geotechnical Laboratory, Totowa, NJ according to ASTM D2487 and will consist of determining the following soil characteristics:

Grain Size, ASTM D422
Atterburg Limits, ASTM D4318

Additional soil tests which are not part of the soil classification determination but which may be determined are:

Specific Gravity, ASTM D854
Organic Content, ASTM D2974
Water Content, ASTM D2216

Following sample collection at each location, the sampling location will be surveyed and marked using flagging so that the second sampling event can be conducted at a location immediately adjacent to where the first set of samples were collected.

DuPont will issue a report documenting the field investigation and presenting the results after both rounds of sampling have been conducted and the analytical and soil classification results have been received.

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