United States Department of Agriculture
Agricultural Research Service
Beltsville Area Director's Office
Beltsville, Maryland 20705

January 4, 1990

Ms. Pamela D. Marks
Assistant Attorney General
Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

Dear Ms. Marks:

In accordance with Paragraph D.(2) of the Consent Judgment, effective December 8, 1989, enclosed is our Closure Plan describing final closure activities to be undertaken for Buildings 312, 157, and 306. As required, this plan incorporates supplementation to the initial closure plan of August 18, 1989. The supplementation was previously supplied in a letter to James J. Pittman, III, Administrator, Enforcement Program, dated November 6, 1989.

Also enclosed, in accordance with Paragraph F.(2), is the Hazardous Waste Management Report describing the type, quanity, and location of any hazardous wastes generated by Beltsville and any other Agency within USDA that is a tenant of Beltsville.

The provisions of Paragraph G, Transportation of Hazardous Waste, have been complied with for more than a year and we will continue to do so. Finally, the provisions of Paragraph H.(1), Training (of the Manager and his assistant[s]) have been met, as described in our letter to James Pittman III dated December 14, 1989.

Sincerely,

Boyett, Area Admin Officer

E. E. FINNEY, JR.
For Acting Director

Enclosures

cc:
T. Fox
D. Kaplan
T. Roark
T. Clark
W. Horner
J. Boyett
D. Prevar
✓C. Jamieson (EPA)

TELEX 89491

Enclosure

RESOURCE CONSERVATION AND RECOVERY ACT CLOSURE PLAN
BUILDINGS 157, 306, AND 312
BELTSVILLE AGRICULTURAL RESEARCH CENTER
BELTSVILLE, MARYLAND

January 2, 1990

SUMMARY OF THE CLOSURE PLAN GOALS AND STRATEGY

The overall goal of this project is to attain and certify "clean closure" of the portions of Buildings 312, 306, and 157 previously used in the management of hazardous waste at the Beltsville Agricultural Research Center (BARC). This action will be carried out under the provisions of 40 Code of Federal Regulations, Part 265 (40 CFR 265), Subpart G and COMAR 26.13.05.07.

The strategy for attaining this clean closure is to:

1. Identify, remove and dispose of all containerized hazardous wastes to Resource Conservation and Recovery Act (RCRA) permitted facilities.

2. Inspect the previously-active areas of the buildings for evidence of residual contamination.

3. Sample and analyze suspect areas for contamination.

4. Perform spot and general washdowns/cleanups to remove contamination.

5. Re-inspect for evidence of residual contamination. Spot clean again if necessary.

6. Perform rinse washdown.

7. Analyze washdown/cleanup/rinse wastes for RCRA Appendix VIII constituents.

8. Dispose washdown/cleanup/rinse wastes as required by their regulatory status.

9. Fully document all closure activities.

A successful clean closure is expected, and it will:

- Eliminate the need for further maintenance,

- Eliminate post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface waters, or the atmosphere, thus protecting human health and the environment, and

- Comply with the general requirements of 40 CFR 265.111 and COMAR 26.13.05.07 B.

Closure activities will be completed within one hundred-eighty (180) days after Maryland Department of the Environment (MDE) approval of the closure plan.

SCHEDULE FOR FINAL CLOSURE

Closure and post-closure activities will be carried out on the following "expected-case" schedule:

Day	Activity
0	MDE approval of closure plan. Finalize Statement of Work.
30	Closure plan activated. Contract out for bid.
61	Opening of bids.
75	Contractor selected.
89	Project plans finalized.
	Site safety plan established.
	Hazardous waste will have been removed to permitted treatment, storage, or disposal facilities by this time.
96	Work begins on site.
	(SEE SECTION "GENERAL DESCRIPTION OF ACTIONS TO BE TAKEN DURING CLOSURE.")
	Presurvey and sampling of obviously contaminated or likely contaminated areas (e.g. staining is present).
	(See "SPECIFIC ACTIONS TO BE TAKEN IN ACCORDANCE WITH COMMUNICATIONS BETWEEN MDE, AUGUST 18, 1989, AND BARC NOVEMBER 6, 1989.")
124	General washdown and cleanup until established levels of decontamination are achieved.
172	Closure certification made by professional engineer.

If site conditions or other factors force a change in the closure schedule or objective, the Agricultural Research Service (ARS) will notify MDE immediately, and a plan amendment in accordance with 40 CFR 265.118 and COMAR 26.13.05.07 C(3) will be prepared and submitted for approval.

GENERAL DESCRIPTION OF ACTIONS TO BE TAKEN DURING CLOSURE

Prior to any closure activities, site safety requirements and equipment needs will be identified by an individual who has successfully completed the health and safety training required under 29 CFR 1910.120. This individual will identify these needs in a detailed site safety plan and ensure the plan is rigorously adhered to during closure activities.

At the beginning of the closure, a visual inspection will be conducted throughout the areas of each building where hazardous waste activities had previously been conducted to identify apparent contamination (i.e., broken bottles, piles of uncontained chemicals, standing liquids, staining or discoloration of soils or surfaces, etc.). A pre-survey will identify suspect areas. Material from each suspect area will be collected and analyzed for ignitability (ASTM Standards D-93-79, D-93-80, and/or D-3278-78), corrosivity (EPA Method 5.2 and/or NACE Standard TM-01-69), reactivity, EP toxicity (40 CFR 261, Appendix II), and chemical compatibility, using EPA-approved methods. In addition, five (5) samples (plus QA/QC samples, blanks, etc.) of the soil on the floor of the active area of Building 306 will be collected and analyzed for the parameters listed above plus volatile organic compounds, semivolatiles, and organochlorine and organophosporous pesticides. The location of each sampling point will be accurately mapped on a floor-plan diagram of these buildings, and photographic documentation will be prepared.

After the above analyses are completed, appropriate "spot" cleanups will be performed to remove any apparent contamination. This may entail wet or dry vacuuming, chemical reaction (reduction, oxidation, bleaching, etc.), and/or other small-scale methods. The products of these spot cleanups will be containerized and properly managed for offsite disposal in accordance with EPA and MDE requirements.

In Buildings 157, and 312 (vaults 1, 2, 4, 6, 16, 18, 19, 20), and the old chemical stock room of Building 306, the next step will be a general steam cleaning (preferred alternative) and/or water/detergent (biodegradable, non-phosphate) washdown of the areas previously used for hazardous waste activities, followed by a thorough wet-vacuum cleanup of the produced condensate/washwater into compatible drums. Prior to the steaming/washdown, dikes, plugs, and/or berms will be established to contain the washwater within the work areas. The volume of steam/water to be used during this process will be the minimum needed to effect adequate contaminate removal. See the "SPECIFIC ACTIONS ..." section that follows for scenario to achieve decontamination.

After the cleaning, all cleaned areas will be subjected to a thorough visual inspection. The washing/steaming step will be repeated, or a solvent wash may be used, in areas where visible evidence of contamination remains. The product of this step will be added to the washwater generated as a result of the step described in the previous paragraph. (Solvents will be kept separate.)

Finally, the washing/steaming step above will be repeated as a rinse. The resulting condensate/washwater will be collected separately into clean containers. Analysis of the product of this second wash will be used to determine whether the endpoint of the closure has been reached. This surrogate measure of the success of the cleanup will be necessary because only clean surfaces (i.e., walls, floors, etc.) will remain after the washdowns.

Each phase (liquid and/or solid) in each container of washwater/waste will be representatively sampled and analyzed for RCRA Appendix VIII constituents to determine whether it must be managed as a hazardous waste

and/or to assess the success of the cleanup. If the desired endpoint (clean closure) is not attained, ARS, in consultation with MDE, will decide whether to repeat the washing/steaming or to utilize other methods.

Reusable equipment will be decontaminated by washing followed by a distilled water rinse. This wastewater will be pooled with that resulting from the general wash. Disposable equipment and supplies will be containerized and properly disposed offsite.

SAMPLING PROGRAM

1. Goals. The sampling program has the following goals:

   1. Where contamination is suspected from visible evidence or historical information, to verify whether contamination is present and to allow a hazard and compatibility classification of the material(s) present.

   2. For materials resulting from the spot cleanups and first washdown, to determine whether they must be managed as hazardous wastes.

   3. For materials resulting from the second washdown, to determine whether the project endpoint has been reached.

   4. While closure activities are underway, to monitor levels of volatile compounds in the work environment.

   5. As applicable, to ensure that samples collected are representatives of "worst case" concentrations and/or actual conditions.

2. Parameters. Samples collected in support of the visual-inspection portion of the closure are intended to provide a characterization of spot contamination adequate for determining cleanup measures and chemical compatibility. Samples collected from the various containers of waste, condensate, washwater, and/or rinsewater are intended to be accurately representative of the contents of each container. Where more than one phase is present in a container, representative samples of each will be collected. If the material to be sampled is not homogeneous, multiple samples will be collected.

SPECIFIC ACTIONS TO BE TAKEN IN ACCORDANCE WITH COMMUNICATIONS BETWEEN MDE AUGUST 18, 1989, AND BARC NOVEMBER 6, 1989.

1. General washdown. As discussed, a general washdown should not be performed as a first step for safety and waste minimization reasons. As described below, we will provide in our closure plan for a visual inspection to identify and address any specific contaminated areas followed by the general washdown you desire (see step 6 below). However, as discussed in our previous conversation and in item 8 below, a general washdown would not be appropriate for Building 306 due to the dirt that has infiltrated the foundation.

2. Visual inspection. This inspection shall be used only as a first step to identify any likely contaminated areas which would then be treated in accordance with steps below. Performing spot washdowns/cleanups will minimize the volume of potential hazardous waste compared to the volume possibly produced by a general washdown. It also would enable us to select an appropriate decontamination method that would be implemented prior to a general washdown (i.e., it should be determined if any discovered contaminants are water reactive).

3. Contaminants of concern. These will be identified in Step 2.

4. Spot and general washdowns and cleanups. Given the sequence above, we would perform spot and general washdowns/cleanups to remove any contamination after a visual inspection. We will re-inspect, spot clean, re-inspect until established level of decontamination is achieved. Spot cleanups minimize the volume of potential hazardous waste collected compared to that of a general washdown.

5. Criteria. Samples collected from areas identified in the visual inspection will be analyzed for ignitability (ASTM Standards D-93-79, D-93-80, and/or D-3278-78), corrosivity (EPA Method 5.2 and/or NACE Standard TM-01-69), reactivity, EP Toxicity 40 CFR 261, Appendix II, and chemical compatibility, using EPA-approved methods. We will also analyze for volatile compounds, semivolatiles, and organochlorine and organophosphorous pesticides. Sequence in Step 4 will be followed until decomination is achieved as defined by MCL's (maximum contaminant levels) where available. As discussed on September 13, we would use method detection limits based on what we find in the field samples.

6. General washdown followup. Washing/steaming will be conducted, washwater/rinsate collected, and collected material tested for RCRA Appendix VIII constituents to determine if collected rinsate must be managed as hazardous waste.

7. Evidence of staining. These areas will be targeted in Items 2-4 above.

8. Equipment and methods. This is dictated by the nature of the areas to be sampled. These areas include container storage on metal and wood shelves in rooms with concrete and tile floors. Where bulk samples cannot be obtained, we will use the swabbing procedure. Therefore, sampling will usually consist of wiping or swabbing the potentially contaminated surfaces. In the case of dirt infiltration (Building 306) soil will be scooped in a grid fashion augmented by the visual inspection. Samples will be collected in appropriate containers for transport to an analytical laboratory. Samples will be analyzed as described in Item 5 above, and removal of contaminated material as in Item 4. Methods used will be chosen in consultation with the contractor (whose selection will be based in part on their experience and familiarity with sampling and analytical procedures). For example, in some cases it may be appropirate to use an ASTM Standard such as ASTM D420-69 for soil-like material. Choice of SW-846 chemical analysis test method could be determined by knowledge of

previously stored waste in the sampled area (e.g., inorganic vs. organic, perhaps specifically test method 8080 for organochlorine pesticides and PCBs).

We agree that analytical methods will be those that appear in EPA document SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Sampling methods will be consistent with the Compendium of Superfund Field Methods.

9. QA/QC. We agree that a quality assurance/quality control (QA/QC) plan is required for sampling and analysis. Contract Laboratory Program Practices (CLP's) will be followed. The plan must address, at a minimum, the collection of samples with appropriate controls (e.g., controls for background levels), analytical laboratory controls, preservation of samples, chain of custody procedures, duplicate/triplicate field blanks, and other standard QA/QC measures to ensure the accurancy and precision of results. Full chain of custody procedures will be used.

FINANCIAL ASSURANCE

Sufficient funding to complete closure activities necessary at this site will be made available by the ARS.

SITE LOCATION

The Beltsville Agricultural Research Center (BARC) is located in Beltsville, in Prince George's County. It is a 7,000 acre-plus research facility devoted to agricultural research. It is east and north of Interstate 95. Locations of the buildings are described below.

SITE HISTORY

Three buildings at the BARC, Beltsville, MD, are being closed to the storage of hazardous waste. Two new buildings designed for hazardous waste marshalling have been installed.

Building 312 contains 20 vaults of reinforced concrete construction, each having double doors and explosion-proof lights, switches, and exhaust fans (the building was designed for nitrocellulose film storage). Only certain vaults were used as a hazardous waste marshalling facility, the others being used for active laboratory chemical inventories and still others being used for radiologicals. Building 312 was not a permitted storage facility. Vaults 1, 2, and 4 were used for marshalling, 6 was used for the hazardous waste contractor's supplies, and 18, 19, and 20 contained assorted chemicals, requiring segregation and packing out, as room was needed for sorting. Closure of Building 312 refers only to Vaults 1, 2, 4, 6, 16, 18, 19, and 20.

Building 157 has been used as a temporary hazardous waste marshalling facility since May 1988. It is otherwise unoccupied. Chemicals are kept in chemically resistant trays and the floor drains are plugged. Several laboratory rooms are utilized for segregating and packing chemical containers.

Building 306 is a large laboratory and office building having three floors and a basement. The basement on the north side is of unfinished construction (it has a concrete floor) and contained a large stock of previously inventoried solid chemicals. Three refrigerators containing assorted chemicals were located outside the chemical stock room. This area was never used purposely as a hazardous waste marshalling facility, but due to the age of the chemical stock room and refrigerators it has been decided to include this, and a steam tunnel area of Building 306 in the closure plans. Closure of Building 306 refers only to the north side of the basement as described above.

CLOSURE OBJECTIVE

The objectives of this RCRA closure are to achieve and demonstrate "clean closure" of Buildings 157, 306 and 312 in accordance with Subpart G of 40 CFR 265 and COMAR 26.13.05.07. In support of the project objective, work will be undertaken to assess the existence of contamination and to remove any that is found.

If the stated objectives cannot be achieved as presented, the closure plan will be modified in coordination with MDE.

August 2, 1989

By Telefax and U.S. Mail

Pamela Marks
Assistant Attorney General
Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21224

Dear Pamela:

Enclosed please find our preliminary Closure Plan to be implemented upon approval, pursuant to the present negotiations.

Sincerely,

David A. Prevar

David A. Prevar
Beltsville Area Safety and Health Manager
Beltsville Agricultural Research Center
Building 186, BARC-East
Beltsville, MD 20705

August 1, 1989

BELTSVILLE AGRICULTURAL RESEARCH CENTER

AGRICULTURAL RESEARCH SERVICE, USDA

CLOSURE PLAN
FOR
BUILDINGS 312, 157, 306

I. Introduction

Three buildings at the Beltsville Agricultural Research Center, Beltsville, MD, are being closed to the storage of hazardous waste. Two new buildings designed for hazardous waste marshalling have been installed.

Building 312 contains twenty vaults of reinforced concrete construction, each having double doors and explosion-proof lights, switches, and exhaust fans (the building was designed for nitrocellulose film storage). Only certain vaults were used as a hazardous waste marshalling facility, the others being used for active lab chemical inventories and still others being used for radiologicals. Building 312 was not a permitted storage facility. Vaults 1, 2, 4 were used for marshalling, 6 was used for the hazardous waste contractor's supplies, and 18, 19, 20 contained assorted chemicals, requiring segregation and packing out, as room was needed for sorting. Closure of Building 312 refers only to Vaults 1, 2, 4, 6, 16, 18, 19, and 20.

Building 157 has been used as a temporary hazardous waste marshalling facility since May 1988. It is otherwise unoccupied. Chemicals are kept in chemically resistant trays and the floor drains are plugged. Several laboratory rooms are utilized for segregating and packing chemical containers.

Building 306 is a large laboratory and office building having three floors and a basement. The basement on the north side is of unfinished construction (it has a concrete floor) and contained a large stock of previously inventoried solid chemicals. Three refrigerators containing assorted chemicals were located outside of the chemical stock room. This area was never used purposely as a hazardous waste marshalling facility, but due to the age of the chemical stock room and refrigerators it has been decided to include this steam tunnel area of Building 306 in the closure plans. Closure of Building 306 refers only to the north side of the basement, in the chemical stock room.

II. Schedule For Final Closure.

Final closure of the three buildings is expected to occur according to the following schedule--dates are tentative, subject to accomodation of contracting regulations (anticipated schedule to be provided):

III. Description of actions to be taken during closure:

A. Building 312

1. Estimate of maximum inventory.

Type of Waste	Amount (lbs)
D003 Solid poison B	5590
F001 Liquid poison B	5970
D002 Corrosive solid	510
D002 Corrosive liquid	4885
D001 Flammable liquid	6390
D001 Flammable solid	360
D003 Oxidizer	1210
F002 Hazardous waste liquid	2430
F027 Hazardous waste solid	4040
D003 Metal	180
Non-regulated (non-hazardous)	1260

2. Transfer of wastes:

All wastes will have been removed pursuant to the ongoing hazardous waste pickup and removal activities prior to implementation of closure steps below. Wastes will be identified according to all applicable regulations.

3. Inspection of facility:

Visual inspection will be made for evidence of leaks, spills; samples will be taken where indicated and analysis obtained; any residues detected will be safely removed followed by resampling and analysis until decontamination is assured; cleanup materials will be disposed of in accordance with applicable regulations and established procedures.

4. Environmental contamination:

Detection of environmental contamination will necessitate a specific action plan to be developed for remediation if it is needed.

5. Certify closure:

An independent professional contractor will review steps and findings, and certify completion of closure.

Upon completion of these steps, no further maintenance of this facility related to its use as a marshalling facility for hazardous waste will be required. Upon completion of these steps, protection of human health and the environment from hazardous wastes will be ensured because no hazardous wastes will be present to represent a contamination threat.

6. Notification of closure:

Notification of closure of Buildings 312, 157, and 306 is hereby provided. Closure will take place according to the schedule that will be provided in Section II of the closure plan.

B. Building 157 (repeat steps 2-6).

1. Estimate of maximum inventory.

Type of Waste	Amount
D003 Solid poison B	6186
F001 Liquid poison B	9260
D002 Corrosive solid	1745
D002 Corrosive liquid	8115
D001 Flammable liquid	26650
D001 Flammable solid	665
D003 Oxidizer	1145
F001 Hazardous waste liquid	5010
F027 Hazardous waste solid	5280
D003 Metal	128
Non-regulated (non-hazardous)	9415

C. Building 306 (repeat steps 2-6).

1. Estimate of maximum inventory.

Type of Waste	Amount (lbs)
D003 Solid poison B	2460
F001 Liquid poison B	1700
D002 Corrosive solid	620
D002 Corrosive liquid	560
D001 Flammable liquid	1890
D001 Flammable solid	180
D003 Oxidizer	260
F002 Hazardous waste liquid	120
F027 Hazardous waste solid	20
D003 Metal	
Non-regulated (non-hazardous)	160