REPORT

CLOSURE PLAN
LOWVILLE FACILITY

NEW YORK STATE
PESTICIDE STORAGE SITES PROJECT
CONTRACT NO. D001889

New York State
Department of Environmental Conservation

Albany, New York

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CLOSURE PLAN

NYSDEC PESTICIDE STORAGE SITES

LOWVILLE FACILITY

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
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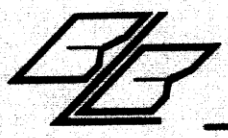

Introduction

SECTION 1 - INTRODUCTION

1.1 General

This report presents a Closure Plan for the New York State Department of Environmental Conservation (NYSDEC) Lowville Pesticide Storage Facility (the "facility") located west of the intersection of Route 26A and Ridge Road in the town of Lowville, Lewis County, New York (see Figure 1 - Site Location Map). The facility is an active RCRA Interim Status Hazardous Waste Storage Facility for which an acceptable closure plan must be developed, in accordance with the requirements of 6NYCRR 373-3.7, and 40 CFR 265 Subpart G.

This Closure Plan has been prepared pursuant to a Request for Proposals (RFP) issued by NYSDEC in January 1987, and Blasland & Bouck's Technical Proposal dated February 1987. In addition, information presented in a draft Closure Plan prepared by NYSDEC Bureau of Pesticides (March 1986) and comments on the draft by NYSDEC Regional Permit Section Personnel (April 1986) were reviewed during the preparation of this Closure Plan.

1.2 Background Information

The Lowville Pesticide Storage Facility was built in 1980 and used for the storage of waste pesticides; and legal exhibit samples and waste containers not yet released from official custody. In May 1983, all wastes except for those materials supporting legal cases underway at that time were removed from the facility for off-site disposal. A number of wastes still remain at the facility. The following subsections present a detailed

description of the facility and a list of those wastes currently in storage at the Lowville facility.

1.2.1 Facility Description

The Lowville facility is a 16- by 20-foot (320 square foot) cement block building located at the NYSDEC Lowville suboffice and maintenance center in the town of Lowville, Lewis County, New York (see Figures 1 and 2). Access to the building is through a pair of doors above a concrete loading dock on the east side of the building, and a man door on the west side of the building. A sealed concrete floor slopes to a center drain which is connected to a buried 275-gallon stainless steel tank via a 4-inch PVC underground pipe. The stainless steel tank was installed new in 1980. The building walls consist of a 2-foot high poured concrete base supporting concrete block walls, which support a metal roof structure.

The interior of the building is partitioned into a small 6 by 6-foot heated storage room and a 284-square foot L-shaped main area. The walls of the small storage room are constructed of fiberboard over lumber partition walls and the ceiling is panelled in fiberboard. The small storage room contains wooden shelves, a circuit breaker box, a freshwater supply pump (connected to a wellpoint driven under the building) and the majority of the stored wastes. The unheated main area contains a plastic sink which is reportedly connected to the floor drain discharge piping; an emergency shower; a glass crusher; and

miscellaneous waste containers and other pesticides handling equipment. Building air circulation is controlled in the main area through two fresh air ducts on the west side and an exhaust fan on the east side of the building.

A site plan of the facility is presented in Figure 2.

1.2.2 Waste Inventory

A listing of the wastes stored at the Lowville facility as of March 1986 was prepared by NYSDEC Bureau of Pesticides. This waste inventory was reviewed during a site visit in May 1988 and found to be complete. The waste inventory is included in Appendix A.

The facility contains a number of containers of pesticides and herbicides in the small storage room. Most of the chemicals are in their original commercial containers (liquids in cans or bottles, powders in boxes or bags).

The maximum potential inventory of waste that could be stored at the facility at any time has been estimated, based on storage of 55-gallon drums (stacked two-high) with adequate aisle space within the building. Although it is unlikely that the facility would ever be used for hazardous waste storage of this nature, a maximum inventory capacity of 26-55 gallon drums has been estimated.

1.3 Purpose and Scope

The purpose of this Closure Plan is to satisfy the regulatory requirements of 6NYCRR 373-3.7 and 40 CFR 265 Subpart G, governing closure plans for Interim Status TSDFs. It should be noted that the methods for closure presented in this Closure Plan are expected to result in "clean closure" (i.e., removal of all hazardous wastes and hazardous constituents) such that the

post-closure care requirements for disposal facilities (6 NYCRR 373-2(g) through (j) are not applicable.

As required under 6NYCRR 373-3.2(c)(1), this Closure Plan contains the following:

- a description of how and when the facility will be partially closed (Section 2) and finally closed (Section 3);
- an estimate of the maximum inventory of wastes in storage at anytime during the life of the facility (subsection 1.2);
- description of the steps needed to decontaminate facility equipment during closure (Sections 2 and 3); and
- an estimate of the expected year of closure and a schedule for final closure (Section 3).

Partial Closure Plan

SECTION 2 - PARTIAL CLOSURE PLAN

2.1 General

This section presents a plan for closure of the existing underground, 275-gallon, stainless steel storage tank and associated piping which are connected to the floor drain and sink in the facility. The plan addresses removal and disposal requirements for the tank and piping, and requirements for sampling and analysis of soils beneath the tank. The plan also presents closure cost and closure scheduling estimates as well verification and certification of closure for the tank, piping, and surrounding soils.

Closure of the ten-year old tank may be implemented prior to or in conjunction with closure of the remainder of the facility.

2.2 Partial Closure Plan

Partial closure of the facility will consist of removal and proper disposal of the underground tank and piping, testing of the soils beneath the tank, and removal and disposal of contaminated soil. In addition, if the facility is to continue being used for hazardous waste storage until its final closure, the underground tank and associated piping must be replaced with materials that meet the requirements of 6NYCRR 373-2.10. If final closure of the facility is to take place, sealing of the floor drain opening and all connections to the piping, in lieu of tank replacement, would be acceptable.

Tank and pipe removal will take place in a four step process, as follows:

1. Remove and dispose all liquids from the tank and piping. Liquids should be analyzed for the following parameters prior to

determination of proper disposal requirements in accordance with applicable regulations:

- o Organochlorine Pesticides
- o Organophosphorus Pesticides
- o Chlorinated Herbicides
- o Base-Neutral Compounds
- o EP Toxicity-metals, pesticides, herbicides

2. Excavate and remove the tank and piping. Spoil from the excavation should be stockpiled on polyethylene sheeting or equivalent and covered pending the results of analytical data. The tank and pipe should be cut into sections or crushed on site prior to transportation to the disposal site. Disposal requirements (i.e., disposal as a RCRA hazardous waste versus disposal as a non-hazardous industrial waste) will be determined based on the results of analysis of tank contents.

3. Collect soil samples for analysis from underneath the tank and piping as well as from the stockpiled spoil material. The soil sampling protocol presented in Appendix B will be followed. A minimum of two samples from under the tank (at a depth of 0 to 6 inches), two from under the piping (at a depth of 0 to 6 inches), and two from the stockpile should be collected. Analysis, with the shortest turn-around time possible, should be conducted for the following parameters:

   - o Organochlorine Pesticides
   - o Organophosphorus Pesticides
   - o Chlorinated Herbicides
   - o Base-Neutral Compounds

- EP Toxicity - Metals, Pesticides, and Herbicides

In addition, two soil samples from the background areas (at a depth of 0 to 6 inches) should be collected and analyzed for the same list of parameters, to serve as the basis of comparison for determination of the extent of soil contamination, if any.

If soil samples from beneath the tank or piping, or from the spoil stockpile, indicate concentrations of pesticide-related compounds above background (or in the case of EP Toxicity, above regulated MCLs), a minimum of one to two feet of soil from the sides and bottom of the excavated area should be removed for disposal as a hazardous waste with the stockpiled material. The bottom of the excavation should then be resampled with analysis for the same group of parameters, and the process repeated until all levels are below background, or in the case of EP Toxicity results, below MCLs.

As an alternative, if pesticide-related contaminants are found above background concentrations in the soil, a risk assessment based on reasonable exposure scenarios can be performed to determine if contaminant levels warrant soil removal and off-site disposal.

4. If full closure of the facility is to immediately follow partial closure, the final step in the tank removal process will consist of plugging or sealing the floor drain and sink drain connections and backfilling the excavation with clean fill (stockpiled spoil can be used for backfill, if test results indicate that the material is not contaminated). If the facility is to continue operation as a pesticide storage facility, replacement of the tank and piping with a system

meeting the requirements of 6NYCRR 373-210 will be required (an existing engineering design for a fiberglass tank within a concrete vault has been prepared by NYSDEC Division of Operations in April 1989; this should be reviewed for compliance with current regulations).

2.3 Certification of Partial Closure

Once partial closure activities have been completed, NYSDEC Bureau of Pesticides will submit certification to NYSDEC that the underground storage tank, underground piping, and the soils in the vicinity of the storage tank (if necessary) have been closed in accordance with the approved closure plan. This certification will be submitted jointly by NYSDEC Bureau of Pesticides (the owner/operator) and an independent registered professional engineer licensed in New York State.

2.4 Partial Closure Schedule and Costs

Figure 3 presents a partial closure schedule indicating the time allotted for partial closure completion. A cost estimate for closure of the tank, piping, and contiguous soils is presented in Table 1. The schedule and cost estimate are based on the following assumptions:

- Tank contents (50 gallons) require disposal as a hazardous waste;
- One foot of soil beneath the tank and piping, as well as stockpiled spoil, require disposal as a hazardous waste;
- The tank and piping will not be replaced, and the flood drain and all connections will be adequately plugged and sealed;
- Laboratory turn-around time is two weeks.


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SECTION 3 - CLOSURE PLAN

3.1 General

This section presents a Closure Plan for final closure of the Lowville facility, which addresses waste inventory removal of all pesticide wastes, sampling of building materials, soils, equipment; and cleaning/remedial methods. The Closure Plan also presents closure cost and closure scheduling estimates as well as requirements for verification and certification of closure of the Lowville facility.

Sampling and remediation activities discussed herein are presented assuming post-closure use of the Lowville facility for general storage only is planned.

3.2 Closure Plan

Prior to implementation of any sampling activities, all waste samples presently stored in the storage building will be packed and removed for off-site disposal as hazardous waste. Removal and disposal activities will be conducted in accordance with applicable regulations, and will be conducted by an EPA-authorized disposal contractor. Disposal of all wastes will take place at an EPA-permitted hazardous waste disposal facility.

All on-site activities associated with sampling and decontamination (if necessary) will be conducted in accordance with a site-specific Health and Safety Plan (HSP). A general outline for the HSP is presented in Section 4.

3.2.1 Building Material Sampling and Remediation

The Lowville storage building consists of poured concrete and concrete block walls, a poured concrete floor and loading dock, and

fiberboard ceilings. The walls of the interior storage area are also constructed of fiberboard. These materials will be sampled to determine the specific building areas which may be subject to remediation, if any.

Sampling - Five wipe samples will be taken from the concrete floor in the main area and one from the floor in the storage area. Additionally, one wipe sample will be taken from each of the four concrete walls in the main area at a distance of between 0 and 4 feet from the floor (contamination above the 4 foot level in the main area is not expected to exist). The wipe sample on the south wall will be taken above the height of the sink. Finally, one wipe sample will be taken from the concrete loading dock. Locations of proposed wipe samples are generally shown on Figure 2.

Wipe samples will be collected using 3" x 3" gauze pads and 100-cm^2 templates from select locations identified in the field by the sampling contractor. Wipe sampling activities will be conducted in accordance with the protocol presented in Appendix C.

The four fiberboard walls of the storage room will be core-sampled with one-inch diameter spade-type wood drill bits. Sampling activities will include one set of 1/4-inch deep fiberboard cores for each interior wall of the storage area, composited in the field to yield one sample for analysis. Actual sample locations will be determined in the field by the sampling contractor. Core sampling activities will be conducted in accordance with the protocol presented in Appendix D.

Additional building material samples may be collected, as necessary, if adequate physical evidence of spills or leaks of stored materials observed in a specific area of the building. All samples will be sent to a laboratory to be analyzed for the following parameter groups:

- Organochloride Pesticides
- Organophosphorus Pesticides
- Chlorinated Herbicides
- Base-Neutral Compounds
- EP Toxicity - Metals, Herbicides, Pesticides (not applicable to wipe samples)

Remediation - Based on the results of wipe and core-sample analysis, remediation of the building may be necessary prior to closure. Because of the porous nature of the soft fiberboard walls comprising the storage room, it is not likely that any form of cleaning and sealing alternatives will be effective in permanently immobilizing or removing pesticide-related compounds on the walls. Therefore, if necessary, the walls will be demolished and disposed of as off-site hazardous waste. The concrete floor and walls, as well as the concrete loading dock will be decontaminated, if necessary, according to the following two-step procedure:

- Step 1. Detergent wash the floor, walls, and dock using high pressure equipment followed by clean water rinse (all wash and rinse water would be collected for disposal at an off-site RCRA hazardous waste disposal facility). The floor drain should be plugged prior to this activity to contain all liquids within the building. Collect wipe samples (as described previously) from the surfaces for analysis for pesticide-related compounds. If analytical results indicate that the detergent wash method is ineffective in reducing the concentrations of

by the compounds on the surfaces, Step 2 (below) will be implemented.

- o Step 2. Seal the surfaces to immobilize the remaining contaminants and eliminate contact with the existing surfaces. This should be accomplished by pouring a new, 2-inch thick reinforced concrete cap over the existing floor, and sealing the existing walls with appropriate paint, urethane, or other appropriate material.

3.2.2 Soil Sampling and Remediation

The soil sampling program at the Lowville facility will provide an adequate number of sample locations in the likely vicinity of previous outdoor pesticide handling activities near the storage building to allow for a determination of whether spills or other releases of pesticide waste occurred. Based on the history of activities at the facility, it is unlikely that any releases outside the building have occurred in the past; therefore only a limited sampling effort is proposed.

Sampling - Background concentrations of pesticides and related compounds in the soils around the facility will be established by collecting composite soil samples from two 10-foot by 10-foot areas at locations removed from any likely areas of pesticide handling activities. Samples will be collected from four points within each 10-by 10-foot background area at a depth of 0-6 inches below root zone and will be composited to form one sample for each 10-by 10-foot area, yielding two composite background samples for analysis.

The area of highest potential soil contamination due to pesticide handling activities is the area adjacent to the concrete loading dock on the east side of the building. Composite samples will be collected in this area from two 100-square foot sample areas for analysis. Additionally, samples will be taken from one 100-square foot sample area outside the manway on the west side of the building to confirm that no contamination exists in this area. Soil samples will be collected from four points within each sample area at depth of 0-6 inches below the root zone yielding a total of three samples for analysis.

Proposed soil sample locations are presented in Figure 2. Exact sampling locations will be determined and documented in the field by the sampling contractor. Additional soil samples may be collected, as necessary, if adequate physical evidence of contamination is observed outside the proposed sample area.

Samples will be collected using a method best suited to reach the desired depths given the soil conditions on site. Three possible sampling methods include the split spoon method, the auger method, and the shovel method. Samples will be collected in accordance with the protocol presented in Appendix B and will be sent to a laboratory to be analyzed for the following:

- Organochloride Pesticides
- Organophosphorus Pesticides
- Chlorinated Herbicides
- Base-Neutral Compounds
- EP Toxicity - Metals, Herbicides, Pesticides

Remediation - Once analytical results for the soil samples have been received, a decision on required remedial action will be made. Three possible scenarios exist for soil cleanup:

1. If results indicate all values equal to or below background concentrations, no further action is necessary.
2. If results indicate that, near the building, the soil has concentration of pesticide-related compound above background levels, soil could be removed to a depth of one foot for off-site disposal with follow-up sampling and analysis to verify all contaminated soils were removed.
3. If results indicate that soil near the building has higher-than-background contaminant levels, a risk assessment could be performed to calculate cleanup levels for soil. Areas with concentrations of pesticide-related compounds higher than the risk-based cleanup levels would require removal and off-site disposal.

3.2.3 Equipment Sampling and Remediation

The equipment associated with pesticides storage and handling which still remains at the Lowville Facility includes a glass crusher and other assorted pesticides handling equipment. The glass crusher and handling equipment are assumed to be contaminated and will not be sampled. These items will be disposed of off-site as hazardous waste.

3.3 Certification of Closure

Once closure activities have been completed, NYSDEC Bureau of Pesticides will submit certification to NYSDEC that the Lowville Pesticide Storage Facility has been closed in accordance with the approved closure plan. This certification will be submitted jointly by NYSDEC Bureau of Pesticides (the owner/operator) and an independent registered professional engineer licensed in New York State.

3.4 Closure Schedule and Costs

Figure 4 presents a closure schedule, indicating the time allotted for closure completion. Closure completion will occur within the time limits set in 6NYCRR 373-3.7 (d). A cost estimate for closure of the facility is presented in Table 2.


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Figures

FIGURE 3

PROJECT SCHEDULE

NYSDEC PESTICIDE STORAGE SITES

LOWVILLE FACILITY PARTIAL CLOSURE PLAN

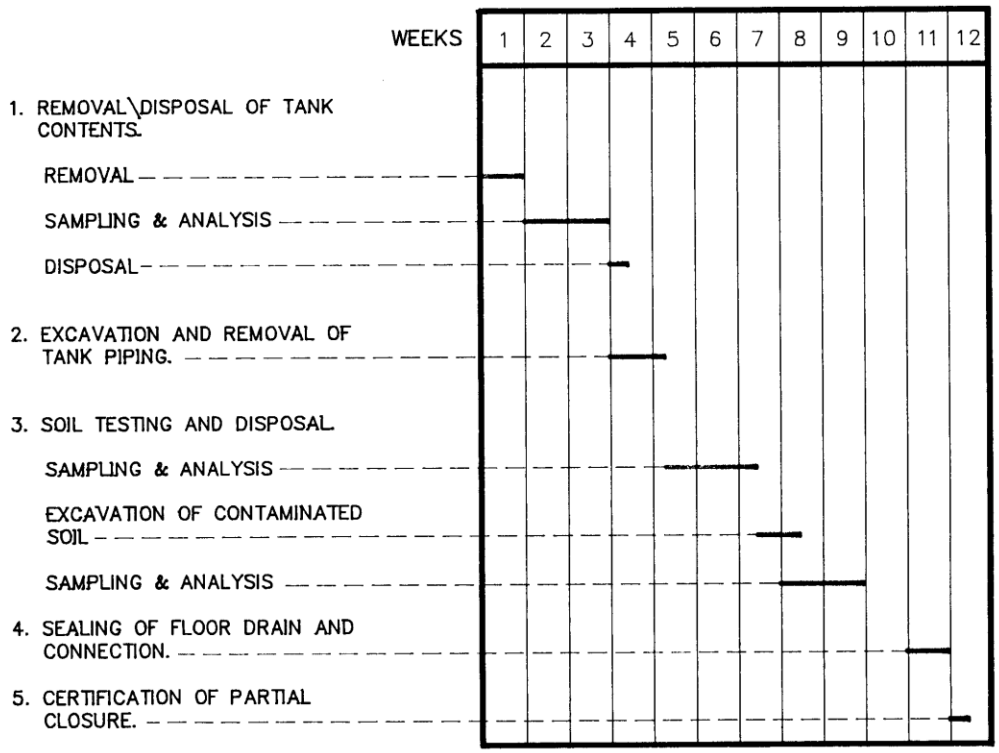

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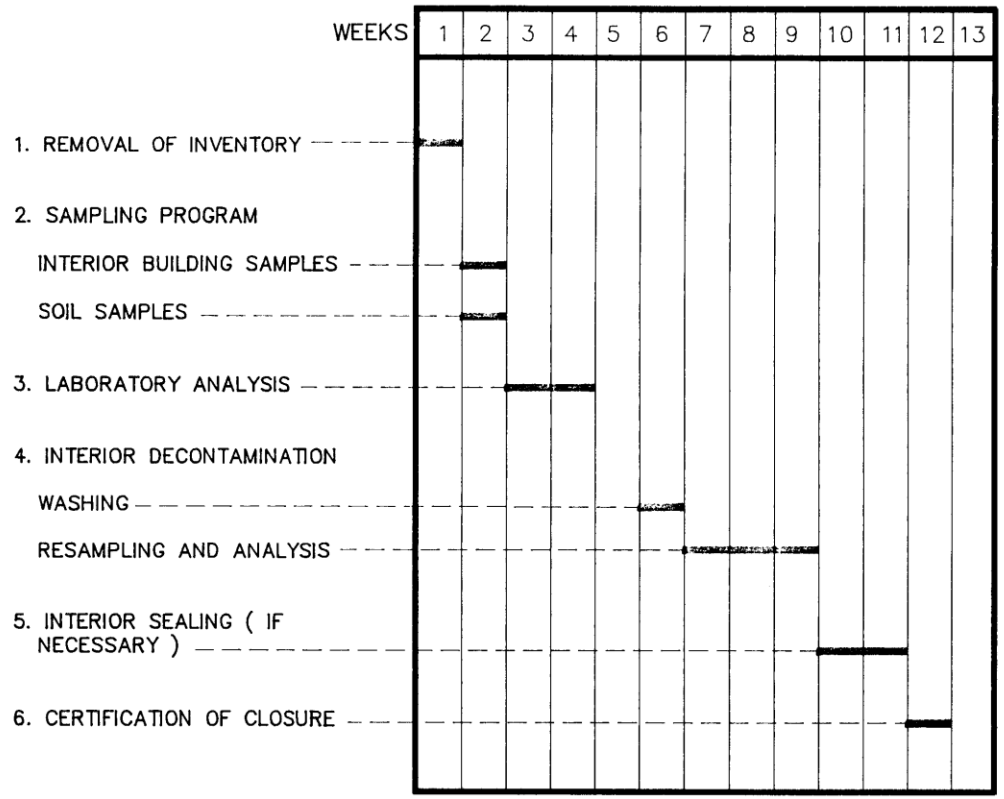
FIGURE 4

PROJECT SCHEDULE

NYSDEC PESTICIDE STORAGE SITES

LOWVILLE FACILITY CLOSURE PLAN



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Appendix A

APPENDIX A

NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY
INVENTORY OF PRESENT ON-SITE WASTES

APPENDIX A

NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY
INVENTORY OF PRESENT ON-SITE WASTES

The following list is an inventory of contents of the present on-site pesticide waste at the Lowville facility.

1-1# Can Fruit Spray Captan 12.0%, Methoxclor 12.5%, Malathion 6.25%, Trichloroethanol 1.73%, Inert ingredients 67.02%
1-5# Coffee can (1/2 full) 36% sevin
1-4# Paper bag (1/2 full) chlordane
1-1# Container 5% chlordane dust (Agway)
6-1# Container 5% chlordane dust (Ortho)
2-1# Coffee cans (ea. 1/2 full) malathion old wetable powder
3-5# Paper bags (full) wetable malathion powder
1-3# Paper bag (2/3 full) 76% Ferban (Ferric dimethyldithiocarbonate)
3-1# Paper bags (full) Captan 50%, inert ingredient 50%
1-3.5 oz. Container (full) Bonide Poison Peanuts - Arsenictroxide 1.5%
1-4 oz. Container Paris Green - Copper Acetoarsenite 90%
1-1# Paper bag (1/2 full) Arsenate of lead - Metallic Arsenic 19.5%, Arsenic Pentoxide 30%, Trioxide 25%; Total Lead - Metallic Lead 58%;
Arsenic in water soluble - Metallic Arsenic 0.25%, Arsenic Pentoxide 0.38%; Total Arsenic Trioxide 0.30%
27-4 oz. Containers Black Leaf Poison Peanuts 0.3% stricknan
1-1# Can (1/2 full) Watkins DDT Powder 10% DDT
1-1# Can (2/3 full) Pratt's DDT Bulb Powder 5% DDT
6-1 Pint containers Ortho-klor 72; 72% chlodane
3-1 Quart containers Ortho-klor 44; 44% chlordane
4-1 Pint containers Ortho-klor 44; 44% chlordane
1-1/2 Pint container Ortho-klor 44; 44% chlordane
3-8 oz. containers d-con roach pruf 2% chlordane
1-1 Pint container (1/2 full) gulf spray 0.12% Pyrethrines, 0.06% Piperonyl Butoxide, 0.5% Methoxychlor
1-1/2 Pint container (full) carboryl 5%, methasystox - R 5%, kalthane 2%
1-1 Quart container Jaygol Diazianon no percentages listed
2-4 Quart containers Blackleaf 40 40% nicotene alkyloid
1-8 oz. container Blackleaf 40 40% nicotene alkyloid
5-1 Pint containers Pet-tox 100% DDT
1-1 Quart container Fly Jinx 5% DDT
7-1 Pint containers Watkins 5% DDT Spray
1-1 Quart container Watkins Fly & Moth Spray 90% Petro distill, Pyrethrins, Piperonyl Butoxide
2-1 Quart containers Watkins Roost Paint 93.5% Petro. distill., 5% Cyclohexanone, 1.5% Lindane
1-1 Quart container Ortho Triox 52.5% Sodium Arsenite
1-1 Quart container Ortho Triox 1.86% Triazene, 0.86% Pentachlorophenol, 0.8% other chlorinated phenols
1-1 3/4 Quart container Ortho Triox 1.86% Triazene, 0.68% Pentachlorophenol, 0.08% other chlorinated phenols
1-1 Pint container Ortho Weed B Gon 17.8% 2,4D; 8.4% Silvex

APPENDIX A

NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY
INVENTORY OF PRESENT ON-SITE WASTES
(Cont'd.)

1-1 3/4 Pint container Ortho Weed B Gon 17.8% 2,4D; 8.4% Silvex
1-1 1/2 Pint container Bonide (controls lawn weeds) 2,4D 33%
2-1/2 Pint containers Weedone Brush killer 32 2,4D 33%, 2,4,5T 10.8%, 2,4D 22.6%
1-1 Gallon can (2/3 full) insect fogger fuel DDT 5%, chlordane 3%, mineral seed oil 92%
1-1 Gallon container (full) logan iodine 18%, phosphoric acid 16%
1-1 Gallon glass container (1/3 full) lindane 20%
1-1 Gallon container GC-Thirty sodium metasilicate 3%, a-Benzyllammonium chloride 1.5%
2-1 Gallon container Watkins Insecticide, Dip and Disinfectant ingredients: coal tar neutral oils, soap and phenols
1-5 Gallon container (22 gallon) mixture of malathion and methoxychlor (25%)
1-1 Gallon container Dinoxol 2,4D 31.6%, 2,4,5-T 30.3%
1-1 Gallon container Weedone industrial brush killer 2,4,5-T 29.6%, 2,4D 30.9%
1-1 Gallon container Weedone brush killer 32 2,4,5-T 10.8%, 2,4D 22.6%
6-1 Gallon containers Weedone 2,4,5-T 59.1%
1 Old pressurized container 3% DDT
1-2# Paper bag (1 1/2# remaining) DDT Powders
1-4# Paper bag Bordeaux Mixture 27.5% copper content
1-20 Gallon container (1/2 full) overpacked from Bog River 2,4,D/2,4,5T Mixture (1% LT)

Aerosols

1-10 oz. container Ortho Household insect bomb Malathion 1%, Terperepolychlornate 1%, thiocyanoacetate .82%
4-7 oz. spray cans Black Jack spray disinfectant alcohol, several phenols

Probably DDTs

7-6 oz. glass containers Fly ded
1 unknown sample container
2-1 Quart Peterman's discover
1-1 Quart container (1/2 full) amber liquid (probable DDT)
1-2 oz. container stay away insect repellant
Stanley crow repellent (refined coal tar 94%)

11 empty containers
2-5 Gallon malathion containers
1-1 Gallon weedone 2,4,5-T containers
6-5 Gallon containers

Appendix B

APPENDIX B

SOIL SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

APPENDIX B

SOIL SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

General

This protocol describes the procedure to be followed during the collection of soil samples for closure activities at the Lowville Pesticide Storage Facility.

As a general guidance, background samples will be collected prior to any other soil samples. All soil samples at the same depth within a composite area will be collected before equipment decontamination. Sampling will be completed at one composite area prior to sampling the next composite area. Compositing will be done by weight in the field.

Soil samples will be collected by using a method best suited to reach the desired depths given site soil conditions. Three sampling methods, the split spoon sampling method (ASTM D-1586) which entails the use of a manually operated split spoon soil sampling kit, the spade and scoop method which entails the use of a shovel and spade, or the power auger method which entails the use of a generator-driven motor to turn a soil auger in order to reach the desired depth may be used at this site. The split-spoon method will be the preferred method of soil sample collection. If the split-spoon method cannot be used because of soil conditions at the site, the auger or shovel method will be used.

Procedure

1. Note sample number and sample location in field notebook.
2. Record ties to the building structure.
3. Prepare sample bottle(s) for receiving sample(s).

4. Wearing a new pair of disposable gloves, sample soil at the desired depth and place in sample jar. Sample the reminder of locations at the desired depth for the composite area and place the same amount of soil (by weight) in the same jar from each location.

5. Note sample times in the field notebook.

6. After soil samples have been collected at one depth for one composite area, decontaminate all equipment that has come into contact with samples in accordance with the decontamination procedures described below.

7. Complete chain-of-custody form.

8. Move to next depth in the same composite area, or surface depth in next composite area and repeat steps 1-6.

9. Backfill all holes with soil removed from each hole.

Equipment Decontamination Procedures

All equipment and associated tools that may have come in contact with contaminated materials during sampling activities will be decontaminated as follows:

- a soapy water wash;
- a rinse with distilled water or tap water; and
- a thorough rinse with hexane followed by a two-minute air-drying period; and
- a final distilled water rinse.

All liquids generated by the equipment decontamination procedure will be collected and disposed of properly.

Materials Required

- Safety glasses
- Disposable rubber gloves
- Clean glass sample containers
- Sample labels

- Field books
- Marker pen
- Chain-of-Custody forms
- Hexane
- Distilled H_2O
- Disposable wipes
- Spray bottles
- Polyethylene garbage bags
- Scrub brush
- Soap
- Stainless-steel or chrome-plated steel spatula
- Two 10-gallon plastic wash basins
- 6-foot rule (inches)
- Shipping containers (coolers)
- Appropriate sampling equipment depending upon method chosen

Appendix C

APPENDIX C

WIPE SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

APPENDIX C

WIPE SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

General

This protocol describes the procedure to be followed during the collection of building material wipe samples for closure activities at the Lowville Pesticide Storage Facility.

Procedure

1. Note sample number and sample location in field notebook.
2. Place plastic sheeting near sampling location to use as a clean work area.
3. Prepare sample bottle(s) for receiving sample(s).
4. Wearing a new pair of disposal gloves, remove a gauze pad from its individually wrapped package. Dip pad in hexane; completely saturate gauze pad. Completely wipe a single identified sample location by wiping left to right, then top to bottom (second wipe should be at a 90° angle to the first wipe and should provide a thorough wiping of the entire area). Upon completion of the wiping process, repeat the wipe effort a second time with the same gauze pad.
5. After wiping, fold the gauze pad over at least twice; being careful not to touch the contaminated side of the pad; place into the sample container.
6. Note sample time in the field notebook.
7. Discard gloves in designated location. Decontaminate all equipment that has come in contact with the sample as discussed below.
8. Repeat protocol twice more with hexane and once with acetone on three adjacent 100 square centimeter areas for each identified sample location.
9. Move to next sample location and repeat protocol.
10. Complete chain-of-custody form.

Equipment Decontamination Procedures

All equipment and associated tools that may have come in contact with contaminated materials during sampling activities will be decontaminated as follows:

- a soapy water wash;
- a rinse with distilled water or tap water; and
- a thorough rinse with hexane followed by a two-minute air-drying period; and
- a final distilled water rinse.

All liquids generated by the equipment decontamination procedure will be collected and disposed of properly.

Materials Required

- safety gloves
- 3 x 3 inch sterile cotton gauze pads, individually wrapped
- Disposable rubber gloves
- Sample labels
- Clean glass sample containers
- Two 10-gallon plastic wash basins
- Acetone
- Scrub brush
- Hexane
- Plastic Sheeting
- Soap
- Chain-of-custody forms
- Marker pen
- Sample labels

- Distilled water
- Disposable wipes
- Template (where applicable)
- Spray bottles
- Field notebook
- Polyethylene garbage bags
- Shipping containers (coolers)

Appendix D

APPENDIX D

POROUS MATERIAL SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

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POROUS MATERIAL SAMPLE COLLECTION PROTOCOL
NYSDEC LOWVILLE PESTICIDE STORAGE FACILITY

General

This protocol describes the procedure to be followed during the collection of porous building material samples for closure activities at the Lowville Pesticide Storage Facility.

Procedure

1. Sketch area to be sampled in field notebook. Sketches should include locations of building columns and walls and should show porous material areas.

2. Note sample number and sample location in field notebook.

3. Prepare sample bottle(s) for receiving sample(s).

4. Wearing a new pair of disposable gloves, place a clean aluminum foil trough under area to be sampled to collect sample. Using a clean drill bit, drill holes up to a depth of 1/4 inch over the entire sample location. Dust and chips will pile up on the trough. Repeat drilling of 1/4 inch holes as needed. Empty trough into sample jar as necessary.

5. Note sample time in the field notebook.

6. Repeat Steps 1 through 4 at the remaining sample locations for the composite sample area.

7. Discard gloves in designated location and decontaminate all equipment that has come in contact with sample as discussed below.

8. Complete chain-of-custody form.

9. Repeat Steps 1 through 8 for additional composite areas, if necessary.

Equipment Decontamination Procedures

All equipment and associated tools that may have come in contact with contaminated materials during sampling activities will be decontaminated as follows:

- a soapy water wash;
- a rinse with distilled water or tap water; and
- a thorough rinse with hexane followed by a two-minute air-drying period; and
- a final distilled water rinse.

All liquids generated by the equipment decontamination procedure will be collected and disposed of properly.

Materials Required

- Safety glasses
- Disposable rubber gloves
- Clean glass sample containers
- Sample labels
- Field books
- Marker pen
- Aluminum foil
- Chain-of-Custody form
- Hexane
- Distilled H_2O
- Disposable wipes
- Soap
- Spray bottles
- Polyethylene garbage bags

- Shipping containers (coolers)
- 1-inch diameter spade-type wood drill bits
- AC-operated drill
- 100-foot extension cord
- Generator with fuel (if necessary)