



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
Division of Solid Waste Management  
Fifth Floor, L & C Tower  
401 Church Street  
Nashville, Tennessee 37243-1535

December 29, 2006

Mr. Ron Loving  
Plant Manager  
Velsicol Chemical Corporation  
1199 Warford Street  
Memphis, TN 38108

RE: Approval of a Class 3 Modification  
Velsicol Chemical Corporation  
Memphis, Tennessee  
Unit: Container Storage  
EPA ID No.: TND 00 702 4664  
Permit No.: TNHW-109  
Modification Number: 5 (D-32)

Dear Mr. Loving:

Enclosed is a copy of the Class 3 Modification for the above referenced permit. This modification is in accordance with Tennessee Hazardous Waste Management Rule 1200-1-11-.07(9)(c) and became effective as of the above date.

If you have any questions, please contact Mr. Clayton Bullington of my staff at (615) 532-0859.

Sincerely,

A handwritten signature in cursive script, appearing to read "William Krispin".

Mr. William Krispin  
Manager  
Permitting Sections

Enclosures

cc: Ms. Angela Ivory, Treatment, Storage and Disposal Section  
Mr. Clayton Bullington, Corrective Action Section  
Mr. Phil Davis, Memphis Environmental Field Office  
Mr. Jon Johnston, Chief, RCRA Branch, EPA, Region 4  
Mr. Gary Hermann, Memphis Environmental Center

State of Tennessee  
Department of Environment and  
Conservation  
Division of Solid Waste Management

Hazardous Waste Management  
Program  
5th Floor, L & C Tower  
401 Church Street  
Nashville, TN 37243-1535

**MODIFICATION TO  
HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT**

Permittee: Velsicol Chemical Corporation  
Owner: True Specialty Corporation  
Operator: Velsicol Chemical Corporation  
Location: 1199 Warford Street, Memphis, Tennessee 38108  
EPA ID Number: TND 00 702 4664  
Permit Number: TNHW-109  
Unit: Container Storage  
Modification Type: Class 3  
Modification Number: 5 (D-32)

Pursuant to the Tennessee Hazardous Waste Management Act of 1977, as amended (Tennessee Code Annotated 68, Chapter 212, Part 1) and the regulations promulgated thereunder by the Tennessee Solid Waste Disposal Control Board (found at Tennessee Rule Chapter 1200-1-11), hazardous waste management facility permit number TNHW-109 issued to Velsicol Chemical Corporation on September 30, 2002, is hereby modified, pursuant to Rule 1200-1-11-.07(9)(c), as follows:

1. The Final Remedy requirements for residential areas along Cypress Creek have been added to the permit as Appendix 9-6, "Corrective Action Remedies," in Attachment 9, "Solid Waste Management Units and Areas of Concern." A new Subsection IV.1, "Corrective Measures Implementation," has also been added to Section IV, "Specific Conditions for Corrective Action."
2. The emergency coordinator information has been updated on pages 6-2 and 6-4 of Attachment 6, "Contingency Plan."
3. An example form for inspections of the soil consolidation area has been inserted into Attachment 4, Inspection Schedule, as Figure 4-9.

This permit modification is further subject to and conditioned upon the terms, conditions, limitations, standards, and schedules contained in or specified in the attachments which are a part of this modification. This modification is hereby made a part of Permit Number: TNHW-109, EPA ID Number: TND 00 702 4664, and is effective as of December 29, 2006, and shall remain in effect until September 30, 2012, unless continued, revoked and reissued, or terminated under Rule 1200-1-11-.07(9). Failure to comply with the terms of this modification shall constitute a violation of the Permit.

December 29, 2006  
Date

*Mike Apple* <sup>by/1/16/06</sup>  
\_\_\_\_\_  
Mike Apple

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**MEMPHIS, TENNESSEE**  
**INSTALLATION ID No.: TND 00 702 4664**

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3. Within one hundred and twenty (120) calendar days after this permit has been modified for remedy selection, the permittee shall demonstrate financial assurance for completing the approved remedy.

**I. CORRECTIVE MEASURES IMPLEMENTATION**

The permittee shall implement the selected corrective action remedy for the properties specified in Appendix 9-6, "Corrective Action Remedies," of Attachment 9, "Solid Waste Management Units and Areas of Concern," in accordance with the requirements of Appendix 9-6.

**J. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE**

1. If at any time the Commissioner determines that modification of the Corrective Action Schedule of Compliance is necessary, the Commissioner may initiate a modification to the Corrective Action Schedule of Compliance (Attachment 9, Appendix 9-4).
2. Modifications that are initiated and finalized by the Commissioner will be in accordance with the applicable provisions of Rule 1200-1-11-.07(9). The permittee may also request a permit modification in accordance with Rule 1200-1-11-.07(9) to change the Corrective Action Schedule of Compliance.

**K. WORK PLAN AND REPORT REQUIREMENTS**

1. All work plans and schedules shall be subject to approval by the Commissioner prior to implementation to assure that such work plans and schedules are consistent with the requirements of this permit, applicable regulations, and guidance. The permittee shall revise all submittals and schedules as specified by the Commissioner. Upon approval the permittee shall implement all work plans and schedules as written.
2. All work plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Commissioner based on the permittee's demonstration that sufficient justification for the extension exists.
3. If the permittee at any time determines that the SAR information required under subsection IV.B, the CS Work Plan under subsection IV.D, or RFI Work Plan(s) required under subsection IV.E no longer satisfy the requirements of Rule 1200-1-11-.06(6)(l) or this permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units and/or areas of concern, the permittee shall submit an amended Work Plan(s) to the Commissioner within ninety (90) calendar days of such determination.

4. Three (3) hard copies and one (1) electronic copy of all reports and plans shall be provided by the permittee to the Commissioner in care of Mike Apple at the following address:

Mr. Mike Apple, Director  
Division of Solid Waste Management  
5th Floor, L & C Tower  
401 Church Street  
Nashville, Tennessee 37243-1535

5. The permittee may deviate from this section, "Specific Conditions for Corrective Action," by participating in the Facility Action Plan (FAP) process, with prior approval from the Director. The permittee will meet with the Division of Solid Waste Management (DSWM) personnel once a year to develop a FAP. During the FAP meeting the permittee must be prepared to discuss work done since the previous FAP meeting or, if this is the first FAP meeting, all work that has been done prior to the FAP meeting, and discuss at a minimum future work to be completed in the following work year. The FAP will include reporting requirements and an implementation schedule and will be submitted to DSWM within 45 days of the FAP meeting. The permittee must notify DSWM prior to any deviation from his FAP. The permittee must notify DSWM and provide the plans for fieldwork at least 30 days prior to the commencement of any field activities. The permittee must provide for a mid-year meeting, if deemed necessary by the Director. If the permittee fails to abide by the negotiated conditions and schedules in the FAP and as outlined in this paragraph, or the permittee or DSWM no longer wishes to remain in the FAP process, then upon notification of termination, the permittee will be required to revert back to this section, "Specific Conditions for Corrective Action."

**L. APPROVAL/DISAPPROVAL OF SUBMITTALS**

The Commissioner will review the work plans, reports, schedules, and other documents ("submittals") which require the Commissioner's approval in accordance with the conditions of this permit. The Commissioner will notify the permittee in writing of any submittal that is disapproved, and the basis therefore. Subsection IV.L shall apply only to submittals that have been disapproved and revised by the Commissioner, or that have been disapproved by the Commissioner, then revised and resubmitted by the permittee, and again disapproved by the Commissioner.

**M. DISPUTE RESOLUTION**

The Commissioner and the permittee shall use their best effort to resolve any disputes concerning submissions hereunder and the proper application of permit, statutory or regulatory provisions informally and in good faith. If a disagreement cannot be resolved informally, the parties jointly or individually may pursue the matter formally by requesting a Declaratory Order by the Tennessee Solid Waste Disposal Control Board in a contested case hearing under T.C.A. §4-5-223.

FIGURE 4-9

EXAMPLE FORM

SOIL CONSOLIDATION AREA at VELSICOL'S MEMPHIS FACILITY

MONTHLY INSPECTION LOG – HDPE COVER

Date \_\_\_\_\_ Time \_\_\_\_\_

		Yes	No
1.	Is the Soil Consolidation Area currently being modified to accept more soil and/or is more soil currently being added to the Consolidation Area? If yes, skip 2 - 4.		
2.	Are there any signs of loss of integrity of the HDPE cover (i.e., holes, rips, cracks, brittleness, mowing or other equipment damage)?		
3.	Are there any signs of failure of welded seams?		
4.	Are there any signs of stormwater leakage through the HDPE cover?		
5.	Are there any signs of damage to or holes in the Facility's security fence and gates, or gates being unlocked while unattended, in the immediate vicinity of the Soil Consolidation Area?		

Comments/Date and Nature of Maintenance/Repair Work or Operational Status:

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Signed: \_\_\_\_\_

## CONTINGENCY PLAN

### Overview

This Contingency Plan represents procedures and equipment maintained by the Velsicol Chemical Corporation, Memphis, Tennessee, to respond to hazardous situations related to generation, treatment, and storage of hazardous waste.

Responses to the emergencies involving hazardous waste will be supervised by the Emergency Coordinator. The Emergency Coordinator will have the ultimate authority and responsibility for the following:

1. Determining if the emergency involves a spill or release of a "reportable quantity" of material.
2. Assessing the immediate threat to the environment or human health.
3. Determining when to initiate notification procedures to other agencies.
4. Ensuring that the proper clean up equipment and procedures are available.
5. Providing assistance, personnel, and equipment to generate a spill response.

Specific individuals responsible for emergency response are identified in this plan. Specific methods of response to spills, fires, and industrial accidents involving hazardous wastes are given. Emergency and protective equipment are also described.

### General Information

The Velsicol Chemical Corporation hazardous waste storage facility is owned by Velsicol Chemical Corporation and is located at 1199 Warford Street, Memphis, Tennessee. Refer to maps and drawings located in Appendix 6-1 for the location of the hazardous waste storage area located inside the plant.

### Emergency Coordinators

In an emergency, contact the Emergency Coordinator listed below:

Utilities/Incinerator Supervisor (Ali Toutio), Emergency Coordinator:

Office Telephone: (901) 320-0258  
Home Telephone: (901) 380-9516  
Address: 2418 Genwood Street  
Memphis, TN 38134

Plant Manager (Ron Loving), Assistant Emergency Coordinator:

Office Telephone: (901) 320-0215  
Cell Phone: (901) 277-0736  
Address: 10220 Mackwood Drive  
Lakeland, TN 38002

- Hang up last;
- The Boiler Engineer will then activate the Emergency Alarm System Notification.

### Reporting Procedures

1. Reporting Procedures for Spills
2. Classification of Spills
  - A. In-Plant
    - i. Liquid spills, contained and non-contained from vessels, drums or process equipment.
    - ii. Vapor releases, fire, explosion, relief valves, etc.
    - iii. Spills associated with loading or unloading of tank trucks or railcars, or leaking truck/railcars within plant boundaries.
  - B. In Transit (leaking drums, tank truck or railcar outside of plant boundaries)
3. Reporting Procedures
  - A. The Area Production Supervisor or Shift Supervisor is to be notified immediately after a spill has occurred either in-plant or in transit. Phone: (901) 324-4401 ext. 241.
  - B. In case of an in-plant spill, the Area Supervisor or Shift Supervisor will take immediate action to prevent further spill discharge. He or she will then notify one of the following:
    - i. Utilities/Incinerator Supervisor – Ali Toutio, ext. 258.  
Home: 901-380-9516.
    - ii. Plant Manager - Ron Loving, ext. 215. Cell: 277-0736.
    - iii. In case of fire or explosion, the Shift Supervisor will also immediately call the following: Memphis Fire Department - 911
  - C. If a liquid spill reaches Cypress Creek, the contacted individual in Section B will notify the following:
    - i. National Response Center: (800) 424-8802.
    - ii. POTW: 353-2392.
    - iii. Shelby County Health Department: 576-7600.
    - iv. Tennessee Division of Water Quality Control: 543-6695.
    - v. Tennessee Emergency Management Agency: (800) 262-3300.
  - D. If a liquid release occurs that impacts off-site, or the liquid release is a RQ, the contacted individual in Section B will notify the following:
    - i. National Response Center: (800) 424-8802.

**APPENDIX 9-6**  
**CORRECTIVE ACTION REMEDIES**

## CORRECTIVE ACTION REMEDIES

### Final Remedy Requirements for Cypress Creek

The Final Remedy requirements for corrective measures at residential land use areas along Cypress Creek in Memphis, Tennessee are summarized as follows:

- Corrective Measures will be performed on residential properties where soil tests have found representative (or average) dieldrin concentrations equal to or greater than 2.5 milligrams per kilogram (mg/kg) on a dry weight basis.
- A marker followed by a minimum 15-inch thick soil barrier to human exposure will be placed over contaminated soils. These remedies will generally, but not always, require excavation of about 15-inches of contaminated soil. The 15-inch soil barrier shall generally consist of a 12-inch soil layer topped with a 3-inch layer of sod.
- The contaminated soil will be transported to Velsicol's Memphis Facility at 1199 Warford St., where it will be placed in an environmentally secure Consolidation Area in the general area of Solid Waste Management Unit (SWMU) No. 7, North Disposal Area, a former landfill.

A more detailed discussion of the Final Remedy is included below.

### Scope of Remedy

This Final Remedy is applicable to residential properties along Cypress Creek in Memphis, Tennessee where soils have been contaminated by way of Cypress Creek such that the contaminant levels exceed the Remedial Action Level (RAL) of 2.5 mg/kg representative dieldrin. Residential Properties include properties with single family and duplex residences, apartment complexes, and small vacant lots in residential neighborhoods that are adjacent to single family and duplex residences. Residential properties do not include properties that are currently in commercial or industrial use, or large undeveloped properties, unless and until those properties are developed for residential use.

Per the above requirements, the properties listed below have been identified as requiring Corrective Measures:

- |                          |                     |                          |
|--------------------------|---------------------|--------------------------|
| 1) 920 Bingham St.       | 7) 1075 Maury St    | 13) 1188 Tunica St.*     |
| 2) 2486 Dana Dr.         | 8) 948 Meagher St.  | 14) 2460 Vollintine Cove |
| 3) 2301 Dexter Ave.      | 9) 957 Meagher St.  | 15) 2466 Vollintine Cove |
| 4) 1978 Edward Ave.      | 10) 959 Meagher St  | 16) 2472 Vollintine Cove |
| 5) 1984 Edward Ave.      | 11) 961 Meagher St. | 17) 2478 Vollintine Cove |
| 6) 1787 Greenview Circle | 12) 965 Meagher St. | 18) 2486 Vollintine Cove |

\*Only the narrow grassed strip between driveway and Cypress Creek

Three of the properties (i.e., 1978 Edward Ave., 1984 Edward Ave., and 2478 Vollintine Cove) were remediated by Velsicol during 2005 under an Interim Measures directive from the Division of Solid Waste Management (DSWM). The methods and criteria used by Velsicol in performing those Interim Measures meet or exceed the final remedy requirements presented herein. On

September 12, 2006, the DSWM approved Velsicol's July 18, 2006 *Cypress Creek Interim Measures Completion Report* for those three properties and considers that the Interim Measures are the final remedy.

Implementation of the final remedy involves the installation of a clean soil barrier with a minimum thickness of 15 inches over contaminated soil that exceeds the RAL. The soil barrier may include the thickness of the sod. This will generally, but not always, require removal of a like thickness of contaminated soil in order to provide appropriate final grades that consider stormwater drainage and other land features.

Prior to placement of the protective soil barrier Velsicol (permittee) shall install a marker between the contaminated soil and the soil fill (i.e., at the bottom of the excavation) to indicate the depth of the protective barrier. Orange plastic construction fencing, or other materials approved by DSWM, which are long lasting and visible if uncovered, will be used as the marker.

Where more than one soil sample was used in evaluating human health risks at a property, only the portion of the property represented by samples that exceed the RAL will require Corrective Measures. Permittee may elect to perform additional surface soil testing and may use the results of that testing to more precisely determine the portions of properties that will require installation of the protective soil barrier. Permittee may elect to perform additional soil testing of the soils left in place below the bottom of the excavation and marker to determine if the contaminant levels exceed the RAL. Any additional soil testing will require DSWM oversight.

Upon DSWM approval of the Corrective Measures Completion Report, which is to be prepared by Velsicol for each property remediated, the DSWM will record a deed notification that presents the details of the final remedy and identifies any areas where contaminants are left in place above the RAL.

The specific procedures to be used in performing the Corrective Measures at the identified properties are detailed below. The permittee shall:

- Prepare a plan that ensures for the general safety of personnel involved with the implementation of this final remedy. The plan should address the conditions anticipated during all phases of the remedy.
- Prepare a Work Plan that describes the technical procedures to be used during the implementation of this final remedy. The plan should address requirements for the activities common to all of the properties, such as site security, personnel training, dust control measures, decontamination procedures, transportation of the soil, etc. Permittee shall submit the plan for TDEC written approval, prior to commencement of any excavation activity. This general work plan, upon approval, shall be considered an applicable appendix to each of the Excavation Plans described below.
- Prepare an Excavation Plan for each identified property for DSWM approval prior to commencement of the site work. This plan will indicate the horizontal extent of planned excavation, including setbacks from structures and other site features, and protective soil barrier placement. Each Excavation Plan shall contain a diagram detailing the setbacks from building foundations, trees and other site features, including the related protective soil barrier placement. Figure 1 provides an example of an Excavation Plan

diagram. The building set-backs are necessary to prevent damage to structures and foundations and to avoid removing soil containing termiticides that have been applied to protect the structures. Set backs used around trees and large shrubs that are not removed (e.g. so that the trees and/or shrubs and their roots are not injured by soil excavation or soil cover) will be established by a qualified landscape designer or horticulturist. If unusual site conditions are encountered during the pre-design site investigations and/or during soil excavation work, which impact the excavation and clean barrier soil placement work, permittee may, upon DSWM review and approval, modify certain aspects of the excavation and/or backfill requirements from those specified herein.

- Excavate contaminated soil and place and compact the protective soil barrier in accordance with the DSWM-approved Excavation Plan.
- Prepare a Site Restoration Plan for DSWM approval for each identified property, which will include certain Final Remedy requirements. The Final Remedy elements include the installation of grass sod and/or other means of surface soil erosion control to protect the soil barrier. At properties where the land to be remediated has steep surface slopes, the Site Restoration Plan may include erosion control features such as terraces, gentle surface slopes or hard surfacing. (Note: Extra site restoration work such as sodding of other disturbed areas; planting of replacement trees, shrubs and other landscape features; and other activities such as shed and fence removal/replacement will be performed according to site restoration plan elements that Permittee will develop in consultation with the property owner. However, this extra work will not be a part of the Final Remedy requirements.)
- Excavated contaminated soil will be transported to the Velsicol's property at 1199 Warford Street in Memphis for subsequent management. Permittee will adhere to applicable regulations regarding methods of transporting contaminated soil by truck over public roadways.
- Perform periodic air monitoring at properties where contaminated soils are excavated to provide a measure of impacts and to provide a basis for implementing dust control measures. Watering is expected to be the primary dust control method, but other suitable methods may be used.
- Prepare Corrective Measures Completion Reports that describe the work completed at each property for DSWM approval. DSWM's approval of the reports will confirm and document that the permittee has completed the final remedy for each property.

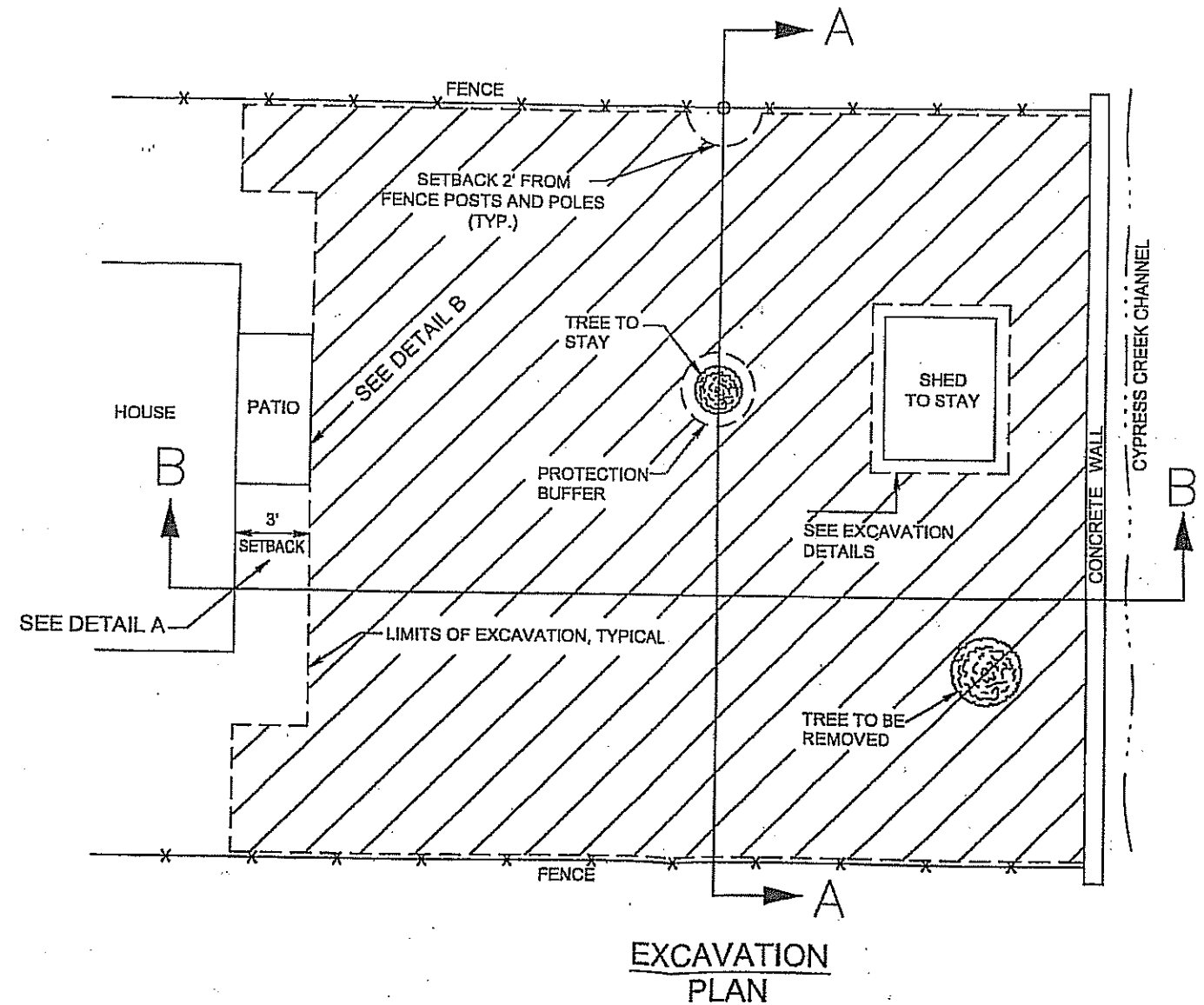
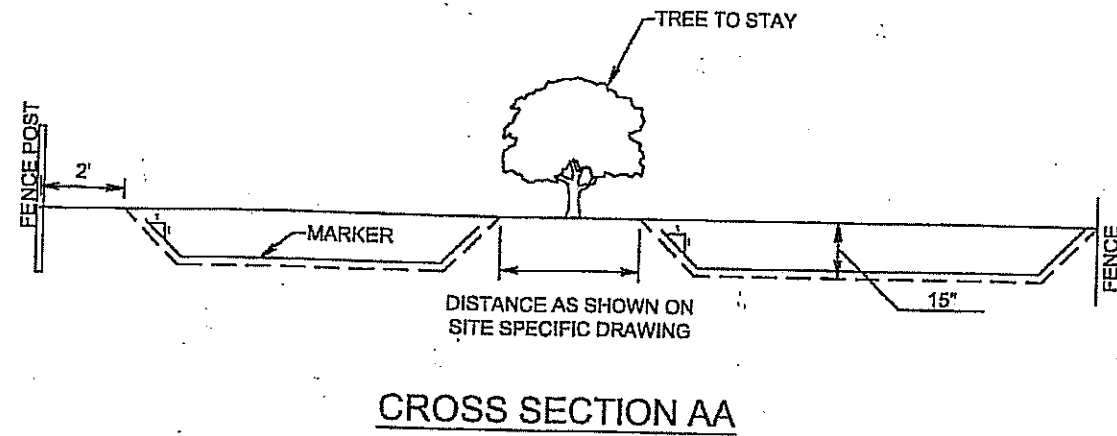
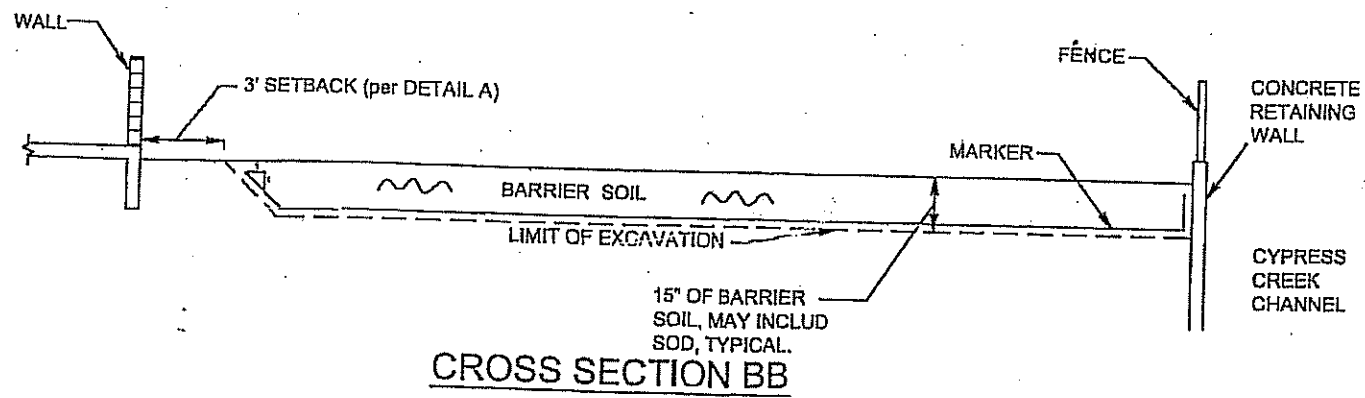
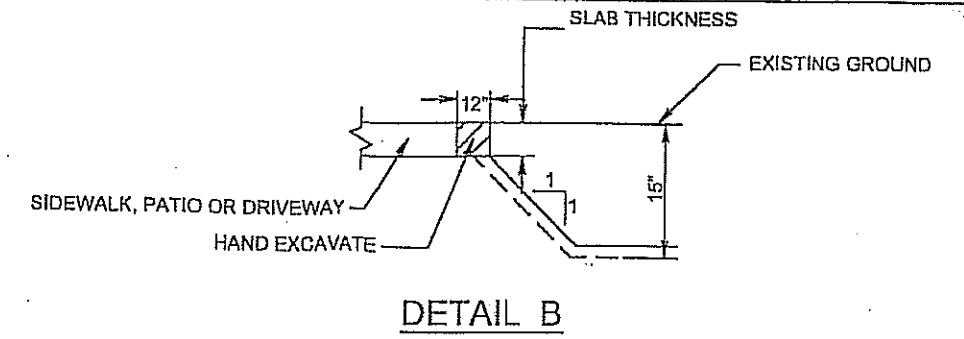
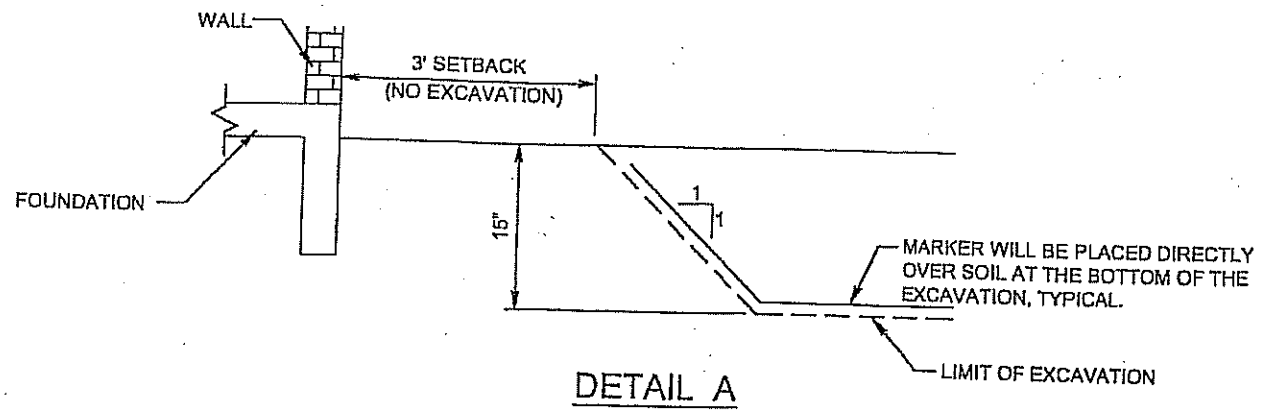
### **DISPOSITION OF CONTAMINATED MEDIA**

The contaminated soil will be consolidated on Velsicol's property at 1199 Warford St. in Memphis, Tennessee. Applying the Area of Contamination (AOC) policy, as described in EPA, Region 4's guidance document entitled *Management of Contaminated Media*, dated September, 1999, allows for the soils, which were contaminated from releases at Velsicol, to be returned to the facility.

Permittee shall prepare a Phase II Consolidation Plan for DSWM approval, prior to construction of the consolidation area. The plan shall include specific details concerning the construction, operation and maintenance of the unit in a manner that provides for the control of human exposures to the contaminated soil and prevents releases to the environment by wind or stormwater erosion. Velsicol's July 18, 2006 document, *Interim Measures Completion Report, Cypress Creek Project*, provides text and engineered drawings of the Phase I disposal unit. The Phase II Plan will include provisions for monthly inspections, site security, applicable monitoring, recordkeeping and reporting. In accordance with permit paragraph II.E.3, the permittee shall record inspections in an inspection log or summary. An example Monthly Inspection Log for the Soil Consolidation Area is provided as Figure 4-9, in Attachment 4, Inspection Schedule. The permittee shall keep the inspections records for at least three years from the date of inspection.

Upon completion of the filling phase, permittee shall install a cover that is designed to minimize rainwater infiltration into and through the contaminated soil. The cover will be composed of compacted soil and/or a membrane liner, as part of the DSWM approved Phase II Consolidation Plan. The permittee has the option of performing subsequent management for the treatment and disposal of the contaminated soil, subject to DSWM approval. In addition, a future permit modification will be necessary for the long-term operation, maintenance and applicable monitoring of the consolidation area.

Filename: W:\Projects\env\iron\velsicol\work order #4\reference files\Construction details.dwg  
 Layout: Site Plan, 7/10/2006



Class 3 Modification,  
 Dated: 12/29/06

VELSICOL CYPRESS CREEK CLEANUP PROJECT MEMPHIS, TENNESSEE			
DESIGN: F&A	DRAWN: B. S.	SCALE: N.T.S.	FIGURE  1
DATE: 7/2006	EXCAVATION DETAILS		
JOB. NO. G-5634-2			