USPCI
A Subsidiary of
Union Pacific Corporation

APPLICATION FOR

APPROVAL OF COMMERCIAL STORERS PERMIT

OF PCB WASTE 40 CFR 761.65

SUBMITTED BY

PPM, INCORPORATED OF GEORGIA

DOING BUSINESS AS

USPCI

FOR

PPM, INC. of GRAYBACK MOUNTAIN
3 Miles East and 7 Miles North
of Knolls Exit #41 off I-80
Grayback Mountain, Utah
(801) 534-0054

Cary Mans
Facility Manager

August 2, 1990

Volume II

This application consists of two (2) volumes. Volume One contains chapters 3, 5 and 6 as outlined in the TSCA GUIDANCE MANUAL FOR COMMERCIAL PCB STORAGE FACILITY APPLICATIONS, October 18, 1989. Volume Two contains chapter 4, the stand alone Closure Plan. Volume Two is modeled after the TSCA GUIDANCE MANUAL and EXHIBIT 4-4, page 33 of the TSCA GUIDANCE MANUAL.

VOLUME II

TABLE OF CONTENTS

VOLUME II

The Table of Contents is modeled after the TSCA GUIDANCE MANUAL FOR COMMERCIAL PCB STORAGE FACILITY APPLICATIONS, October 18, 1989.

CHAPTER FOUR

4. The Closure Plan

4.1 Facility Description

4.1.1 General description 1

4.1.2 Jurisdiction in which facility is located 1

4.1.3 Written description as well as topographic map detailing information on

A. PCB storage facilities 2

B. PCB treatment and disposal facilities 2

C. Hazardous Waste Management Unit 3

D. All buildings and structures 3

E. Any 100-year flood plain 3

F. Adjacent surface waters or wetlands 3

G. Surrounding land uses 4

H. Other key topographic features 4

I. Traffic patterns 4

J. Location and status of underground storage tanks 4

K. Location and nature of security systems 5

L. Closed PCB Units 6

4.1.4 Description of environmental conditions on-site

A. Proximity to surface waters including ponds, lagoons, wetlands and storage reservoirs 7

B. Proximity to public or private drinking water sources 7

C. Sewer location and design which could result in contamination of sewers or sewage treatment systems from PCB spills 7

D. Location of nearby grazing lands, farms, and vegetable gardens 7

E. Presence of a shallow well, ground water near the surface, or which poses a high potential for ground-water contamination ... 8

4.1.5 Detailed description with engineering drawings

A. CERTIFICATION STATEMENT (40 CFR 761.3) 9

B. Roof and walls 10

C. Flooring 10

D. Curbing and Containment Volume 11

E. Drain valves, floor drain, Expansion Joints, etc 14

F. Storage pallets outside of storage buildings 14

G. Bulk tanks 15

4.2 Disposal of PCB Waste Inventory

4.2.1 Maximum inventory

A. Provide design capacity 40

B. Estimate of maximum types and quantities of contaminated containers, equipment, etc 41

4.2.2 Disposal of inventory

A. Details to ensure compliance as a PCB waste generator 42

B. Estimate of maximum inventory to be sent off - site 47

C. Description of any treatment prior to transport, if applicable 47

D. Methods and arrangements used for PCB waste removal and transportation off-site to approved storage and disposal facilities ... 48

E. Description of treatment or disposal methods at the final treatment or disposal facilities 49

F. Bulk tank removal, transport,tracking, and off-site disposal of tank capacity 50

G. Proposed schedule to complete disposal within 90 days from closure commencement 51

4.3 Closure Plan Sampling, Decontamination, and Complianc with the Spill Cleanup Policy

4.3.1 Equipment and Area Classification 52

4.3.1.1 Tank Farm 52

4.3.1.2 Container Storage Area 55

4.3.2 Numerical Standards 58

4.3.3 Statistical Sampling Program 60

4.3.3.1 Safety Plan 60

4.3.3.2 Initial Inspection of the Facility 82

4.3.3.3 Sampling Plan 86

4.3.3.3.1 QA/QC 88

4.3.3.3.2 Sampling Handling Requirements .. 88

4.3.4 Decontamination Procedures 88

4.3.5 Post Cleanup Verification Procedures 107

4.4 Other Colsure Activities

4.4.1 Ground-Water Monitoring 108

4.4.2 Methods to treat, remove, or dispose of run-on and run-off due to decontamination water, rain,or melting snow 109

4.4.3 Security devices 109

4.5 Schedule For Closure 109

4.6 Modification to Closure Plans 112

Closure Appendices

A. Facility Location on USGS Map

B. Facility Map

C. Tooele County, Utah - Letter about Flood Plain

D. Traffic Map

E. Security Map

F. Security Sign Locations

G. MTU Diagram

H. Proposed Engineer Drawings

I. Process Flow Diagram

J. Inspection Schedule

K. Manufacturers' Specifications

L. EPA - Verification of PCB Spill Cleanup By Sampling And Analysis.

M. Quality Assurance Project Plan

N. Field Manual For Grid Sampling of PCB Spill Sites To Verify Cleanup

O. MSDS For Exxon Univolt 60

P. MSDS For PCB's

CHAPTER 4 chapter 4 follows the Closure Plan Checklist, Exhibit 4-4, of the October 18, 1989 TSCA Guidance Manual.

4.1 Facility Description:

4.1.1 General description:

The PPM, INC. portion of this facility consists of two areas. These areas are the warehouse and the PCB destruction area. The PPM facility handles, stores and decontaminates polychlorinated biphenyl (PCB) contaminated oils for use as fuel oil. A strong caustic solution is created as a by product of the PCB decontamination process. The facility consists of an outside tank area and the Drain and Flush building which includes an office area and drum pad. The accompanying drawings in Closure Appendix B show these areas.

4.1.2 Jurisdiction in which facility is located:

PPM, INC. of GRAYBACK MOUNTAIN
3 Miles East and 7 Miles North
of Knolls Exit #41 off I-80
Grayback Mountain, Utah
(801) 534-0054

4.1.3 Written description as well as topographic map detailing information on:

A. PCB storage facilities:

Grayback Mountain has one building with inside bermed storage areas used for PCB container storage. This building is designated as PPM warehouse one. The warehouse storage areas are used for storage of various PCB material including oil suitable for chemical treatment, askarel (pure PCB), transformers, capacitors and debris.

See Facility Map (Appendix 8) and USGS map in Closure Appendix A.

B. PCB treatment and disposal facilities:

The PCB destruction area is divided into three sections labeled areas 1, 2, and 3 on the attached drawing, Closure Appendix B. This area is only used for the decontamination of PCB contaminated oils and storing of caustic water in drums for shipment to the on site stabilization and landfill area. Only PPM authorized personnel are allowed on the premises.

C. Hazardous waste management units

This is not applicable.

D. All buildings and structures:

See section 4.1.1 above.

E. Any 100-year flood plain:

Although we have not yet been provided with a Federal Insurance Rate Map for this facility, this facility is above any 100 year floodplain. The lowest point of elevation is 4220 feet. See letter from Tooele County Department of Development Services, Closure Appendix C.

F. Adjacent surface waters or wetlands:

There are no adjacent surface waters or wetlands in proximity to facility.

G. Surrounding land uses:

The Grassy Mountain facility is located in the desert. There is one other company in the proximity, The Amacs Magnesium Company. The Hill Airforce Range is approximately 7 mile North of facility.

H. Other key topographic features:

Located in the Salt Lake Basin.

I. Traffic patterns:

The line that forms for incoming traffic is thirty feet to the east of the PCB activity areas, see Closure Appendix D. Located opposite of this road is Cell-x, the PCB landfill. All road surfaces are clay and lime fines mixtures. The roads are watered continuously with brine water from the well located in the adjacent Grassy Mountains. There are no special weight restrictions.

J. Location and status of underground storage tanks:

There are no underground tanks for waste storage.

K. Location and nature of security systems:

1. 24-Hour Surveillance System

The entire facility is enclosed by a 5 to 6 foot high security fence with two gates. The rear gate is locked at all times, and entrance is gained by the use of a punch code known by a few key employees. The front gate is locked at night and monitored 24 hours by a security guard in the guard shack located on the map in Closure Appendix E.

2. Barriers and Means to Control Entry

The entire USPCI facility is fenced as show on the attached map, Closure Appendix E. Access is through code locked gates and the guard shack located on the incoming roadway. The PPM facility is located within the USPCI facility as indicated on the map in Closure Appendix B.

3. Warning Signs

The following warning signs are posted at entrances and approaches to the active areas of the facility by PPM, Inc.; (See Sign Location Maps, Closure Appendix F for sign locations);

TANK FARM

1,16.	FIRE EXTINGUISHER
2.	SAFETY FIRST REPORT ALL UNSAFE CONDITIONS
3,31.	DANGER HARD HAT AREA
4.	CAUTION SAFETY GLASSES REQUIRED
5.	DANGER EMPLOYEES MUST WEAR SAFETY SHOES
6,18.	NO SMOKING
7.	SAFETY FIRST SAFETY SHOWER AND EYEWASH STATION
8,26.	DANGER FLAMMABLE LIQUIDS
9,10,11,12.	FLAMMABLE SOLIDS
13.	DANGER CAUSTIC
14,15.	DANGER You are standing in the venting area of a pressure relief device. You are in a zone of potential danger. You may be injured by escaping pressure, noise, chemicals, and/or fragmenting particles.
17.	ALL DRIVERS CHECK YOUR WHEELS!
19,23.	DANGER SAFETY GLASSES REQUIRED IN THIS AREA
20,25.	DANGER HARD HATS MUST BE WORN IN THIS AREA
21.	DANGER POSITIVELY NO SMOKING
22.	DANGER FLAMMABLE
24.	DANGER SAFETY SHOES MUST BE WORN IN THIS AREA
27,28,29.	DANGER UNAUTHORIZED PERSONNEL KEEP OUT
30.	CAUTION SAFETY GLASSES REQUIRED

WAREHOUSE

1,23,25,26.	EXIT
2,19.	DANGER, HARD HATS PROTECTIVE CLOTHING RESPIRATORS SAFETY GOGGLES SAFETY SHOES REQUIRE IN THIS AREA
3,9,15,17.	DANGER UNAUTHORIZED PERSONNEL KEEP OUT
4.	REPORT ALL INJURIES IMMEDIATELY TO SUPERVISOR
5.	SAFETY FIRST (REPORT ACCIDENTS TO FOREMAN)
6.	USE OTHER DOOR
7.	NO PARKING
8,13.	EYE PROTECTION AND PROTECTIVE CLOTHING REQUIRED BEYOND THIS POINT
10,14,16,20.	NO SMOKING
11.	SAFETY FIRST (REPORT ALL UNSAFE CONDITIONS)
12,22,24.	FIRE EXTINGUISHER
18,21.	NO PARKING IN DRIVEWAY

L. Closed PCB Units

There are no closed PCB units at Grayback Mountain.

4.1.4 Description of environmental conditions on-site

A. Proximity to surface waters including ponds, lagoons, wetlands and storage reservoirs

None in proximity to facility. See Topographical maps in Closure Appendix A.

B. Proximity to public or private drinking water sources

Water for drinking is Bottled.

C. Sewer location and design which could result in contamination of sewers or sewage treatment systems from PCB spills.

There are no surface sewer collection areas on the facility. The warehouse building has an adjoining office which has a bathroom, which is served by a septic tank. The human waste is periodically pumped solidified and placed in USPCI Grassy Mountain's RCRA cell.

D. Location of nearby grazing lands, farms, and vegetable gardens

20 miles to nearest grazing areas.

E. Presence of a shallow well, ground water near the surface, or which poses a high potential for ground-water contamination

1. There are no known injection or withdrawal wells either on or off-site within 1000 feet of the facility.

2. There are no known intermittent streams within 1000 feet of the facility.

3. There are no other known sources of ground waters that would be affected by PCB contamination.

4.1.5 Detailed description with engineering drawings

A. CERTIFICATION STATEMENT (40 CFR 761.3)

Under the civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Cary D. Mans

Cary D. Mans
Facility Manager
PPM, Incorporated

B. Roof and walls

The PCB storage areas are in warehouse 1. The buildings walls and roof are in good repair and prevent rain water from reaching stored PCBs and PCB items.

C. Flooring

The Warehouse has a concrete floor with 12,687 square feet of bermed space as indicated on the floor plan, Closure Appendix B. There are no expansion joints on the floor. The floor is inspected weekly for crack or damage to sealed joint and repaired accordingly.

D. Curbing and Containment Volume

Curbing and Material of Construction Information

At the time the floor was poured reinforcement bar was placed to provide support for the curbing that was poured a few days later. The new concrete floor was freshly cured and required no surface preparation. Additional reinforcement bar was wired to the vertical studs of bar imbedded in the floor. This additional bar consisted of two strands, one above the other running parallel and horizontally around the area that was to form the berm. Wooden forms were constructed around the reinforcement bar and the curbing was poured using medium strength concrete.

Containment Volume

	warehouse one			
	Area A	Area B	Area C	
Length (ft)	40	40	80	29
Width (ft)	44	44	19	29
Height(ft)	1	1	1	1
Gross Volume (cu. ft)	1760	1760	2361	
Gross Volume (gal.)	13165	13165	17660	
Sump Volume (gal.)	239	60	180	
Ramp Volume (gal.)	718	239	479	
Net Volume (gal.)	12686	12985	17361	
Capacity (gal.)*	27355	28002	0 - No Walls	
Maximum Number of Containers That Can Be Stored*	497	509		
Maximum Number of Containers That Will Be Stored**	400	379		
Size of Containers (gal.)	55	55		

* The Capacity and Maximum Number of Containers for each berm is determined by the following equation:

$$X = [Vn - (X/(110\ gal)) \times Ad \times Hb \times (7.48\ gal/cu\ ft)] \times 4$$

Where X = Berm Capacity in gal.
Vn = Volume of Berm Plus Sump Volume Minus Ramp Displacement in gal.
Ad = Area of Drum on Floor (For 55 gal. drums, Ad = 3.14 sq ft)
Hb = Height of Berm Wall in feet

The maximum number of 55 gal. drums (or equivalent containers) that can be stored in each berm equals X/55. In the case of containers larger than 55 gal., their volumes are divided by 55 to obtain an equivalent number of 55 gal. drums. For example, a 110 gal. transformer would be equivalent to two 55 gal. drums.

It is assumed that pallets of drums will be stored in stacks two high and that the storage capacity of the berm is equal to four times the volume of the berm minus four times the volume displaced by the drums on the floor, therefore the storage areas conform to containment capacity specifications that net containment volume equal or exceed twenty five percent of the total volume stored or two times the volume of the largest container stored.

** The berm capacity expressed in number of 55 gallon drums equals the operations maximum drums in storage. The historical ratios of material type will be applied to this maximum in storage to calculate closure disposal costs for material in storage.

E. Drain valves, floor drain, Expansion Joints, etc.

The existing floor has no expansion joints, and no floor drains or other openings of any type.

F. Storage pallets outside of storage buildings (including locations and numbers)

Storage pallets are stored inside of storage area berms. New pallets are temporarily stored in area C of warehouse. No pallets are stored outside of storage buildings.

G. Bulk tanks

1. Description of Tanks

Drawings of the tanks locations are provided in Closure Appendix B.

Bulk Pretreatment Tanks			
Tank No.	1	2	5
Year Made	1985	1985	1985
Height, ft	25	25	15
Diameter, ft	12	12	11
Capacity, gal	21,000	21,000	10,600
Construction Materials	All Steel Construction		

Bulk Reaction Tank	
Tank No.	4
Year Made	1985
Height, ft	15
Diameter, ft	11
Capacity, gal	10,600
Construction Materials	All Steel Construction

Decontaminated Oil Storage Tanks		
Tank No.	6	7
Year Made	1985	1985
Height, ft	15	25
Diameter, ft	11	12
Capacity, gal	10,600	21,000
Construction Materials	All Steel Construction	

Vacuum Degasifier Tank	
Year Made	1981
Hight, ft	2
Diameter, ft	4
Capacity, gal	200
Construction Materials	All Steel Construction

Mobile Treatment Unit #6

Tank No.	#1	#2
Year Made	1985	1985
Length, ft	5.5	5.5
Diameter, ft	4	4
Capacity, gal	520	520
Construction Materials	All Steel Construction	

Tanks 1, 2, 4, 5, 6, and 7 were designed and constructed according to the American Petroleum Institute standard 650 (API 650), Welded Steel Tanks For Oil Storage, Edition 7.

The API 650 standard encompasses all the parameters necessary for the design and construction of the tanks including;

Materials of construction.

Design of bottoms, roofs, shells, joints, connections, and appurtenances.

Anchoring.

Fabrication and construction.

Testing, repairs, and inspection.

Welding.

Marking.

There are two 520-gallon tanks located on the mobile treatment unit. The RRT and WWT were designed and constructed according to the Underwriter's Laboratories Standard 142 (UL 142) Steel Above Ground Tanks for Flammable and Combustible Liquids.

The UL 142 standard encompasses all the parameters necessary for the design and construction of the tanks including;

Materials of construction.

Capacities, sizes and dimensions

Design of bulkheads, shells, joints, connections, and appurtenances.

Fabrication and construction.

Testing, repairs, and inspection.

Welding.

The pertinent sections of UL 142 for the design of the tanks are articles 1.1 through 4.4 for all tanks, and 5.1 though 12.4 for horizontal tanks.

A drawing of the MTU (Trailer #6) is show in Closure Appendix G. Details and drawings of the tank farm foundations are shown in the Proposed Treatment Facility Plans - sheet 2, 3, 4 and 5, Closure Appendix H.

All tank seams were welded in accordance with the applicable standards to which each tank was built. Refer to the appropriate standard for more detailed information. Tanks #1, #2, #4, #5, #6, and #7 have the following spill prevention controls.

Float type level gauges.

Before pumping into the above tanks the level is checked to determine the amount of material that may be pumped without possibility of spill. Use of these gauge readings are the normal procedure for determining the free board space.

Internal emergency valve with fusible link.

Each of the above tanks have internal emergency valves with fusible links on the bottom valve openings. These valves are designed to automatically close if the temperature at that valve is above a predetermined setpoint. This safety factor is designed to seal the tank in case of fire.

Emergency Vent.

This vent is designed to remain closed until a predetermined internal tank pressure is exceeded. This valve is meant to open if the tank requires additional venting capabilities, and provide additional protection against tank rupture.

Normal breathing vent.

This vent provides for the normal venting of the tank during operation. This vent is normally closed, but opens at predetermined set points for pressure or vacuum.

Manual valving.

Each tank, in addition to the internal emergency valve, has a manual ball valve that can be visually checked to determine its' open or closed status.

Physical binding of quick connect couplings.

This procedure insures that all quick connect couplings are wired or otherwise physically bound together to prevent accidental line decoupling during PCB transfer.

Contingency Plan

The tank farm area that contains all tanks described in this section has a written protocol for the prevention and handling of spills or other emergencies.

Spill kit.

The tank farm area described in this section has a spill kit that contains supplies for spill containment and clean up.

The vacuum degasifier tank has the following spill prevention controls:

Sight glass.

Liquid level in the vacuum degasifier (alternately referred to as drier) can be visually inspected through sight glasses. This visual inspection is the normal procedure used to provide adequate free board space. These sight glasses are located at the front and rear of the tank.

Manual valving.

The vacuum degasifier has manual valving that can be visually checked to determine it's open or closed status.

Tanks on mobile treatment unit (MTU) have the following spill prevention controls:

Sight tubes.

Tanks on the MTU have sight tubes for visual checks of liquid level. This is the normal method to determine the required free board space in the respective tanks for chemical or water addition.

Audio and visual high limit alarms.

Ball type level switches activate relays in the mobile treatment unit's panel box at a preset free board level which activate an audio alarm and a rotating red beacon. These controls alert employees that the level in the tank is exceeding the acceptable normal free board.

Automatic pump shutdown on high limit alarm.

After activation of the relays for the audio and high limit alarms a time delayed pump cut-off relay is engaged which shuts down the MTU's pumps for the respective tank. The time delay on this relay is employed to prevent pump shut-down from false high level signals due to internal splashing or wave action.

Graphite rupture disks.

Graphite rupture disks are located on both tanks on the MTU. These rupture disks are designed to break at a predetermined internal tank pressure in the event that additional venting is required. The additional venting capacity is employed to prevent tank rupture and to reduce the possibility of a spill.

Physical binding of quick connect couplings.

This procedure insures that all quick connect couplings are wired or otherwise physically bound together to prevent accidental line decoupling during liquid transfer.

2. Tank Management Practices

Instrumentation, and process flow for tank systems are located in Closure Appendix G and I for reference purposes, respectively. The Instrumentation in Appendix G is Typical of PPM Trailer #6. As the tank systems are very small, the piping system is comparably small and easy to manage. However, minor repiping is occasionally necessary for operational purposes.

The following practices are employed by PPM Inc. in the handling of their tank systems as a means of spill prevention;

Typical inlets and outlets to tanks and quick connect couplings are preceded by a ball valve that enables operators to shut off the flow of liquids before connecting or disconnecting any hoses or other parts of the tank system for repairs, maintenance or regular operations.

Most lines in the system are designed to allow them to be pumped dry by the pumps in operation before being opened or closed.

When appropriate,. connections and breaks in lines are done with an appropriately sized spill pan or absorbent pad underneath the connection so as to reduce the possibility of spills or spatters.

Heavy duty flexible oil transfer hoses, or their equivalent are used.

Coupling connections are typically tied off with wire or an equivalent fastener to reduce the possibility of their coming undone while undergoing a transfer operation.

In order to minimize the potential for leaks from tanks during loading or unloading, the inlet and outlet lines of the large tanks are equipped with a locking ball valve that is locked in the closed position with a padlock when the facility is closed.

To minimize de minimus releases from lines, couplings are typically covered with fitted covers (if male) or plugged (if female) when not in use.

All lines are checked for obvious leaks and for correct valve position by a chemical technician or crew chief prior to any transferring operation taking place.

The following equipment and procedures are typical of those used to prevent the overfilling of the eight large tanks (referred to as tanks 1, 2, 3, 4, 5, 6, 7, and 8) during transfer and process operations;

All tanks are equipped with level sensing devices that enable operators to determine the level of the liquid in the tank to the nearest half inch. The PPM, Inc. process is a batch process, where only a negligible amount of processing material is added to the waste being processed from the start to the finish of the decontamination procedure. Thus, there is very little chance of an overfill occurring during processing of the

PCBs. Ample freeboard is left in the tanks for addition of processing chemicals prior to the start of the process and there is no other additional flow through the system while the process is occurring.

All tank levels are recorded in the daily tank farm log at the beginning and end of the working day. Whenever any transfer has occurred from one tank to the other the affected tanks are rechecked to verify liquid levels. These figures are checked by operations personnel to ensure that no mistakes have occurred and that, within reason, all material is accounted for.

Prior to any transfer operation taking place, the operations personnel check the level sensing device on both tanks to make sure that it is the same as recorded on the operations log. The amount to be transferred is then calculated from a conversion chart that converts the level in the tank to gallons of material and vice-versa. The final levels for both tanks are calculated, the transfer lines are checked for valve position and leaks, and the transfer process is begun. At all times during the PCB transfer process, there is an employee in the area of operations. An operations employee checks the level sensing devices at appropriate intervals to ensure that the predetermined amount is transferred, and that overfill does not occur. At the end of the transfer