Frederickson Industrial Park FS 1301

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by:)	
Mallinckrodt, Inc.)	
C-5-S)	AGREED ORDER
16305 Swingly Ridge Road)	No. DE 97TC-S121
Chesterfield, MO 63017)	
and)	
Olin Corporation)	
c/o Husch & Eppenberger)	
100 North Broadway, Suite 1300)	
St. Louis, MO 63102)	

TO: Mallinckrodt, Inc. 16305 Swingly Ridge Road Chesterfield, MO 63017

I.

JURISDICTION

This Agreed Order (Order) is issued pursuant to the authority of Revised Code of Washington (RCW) 70.105D.050(1).

II.

FINDINGS OF FACI

The Washington State Department of Ecology (Ecology) makes the following Findings of Fact, without admission of such facts by Mallinckrodt, Inc. and Olin Corporation.

Carbon tetrachloride releases have contaminated groundwater in and around the property known as the Frederickson Industrial Park (Site) The Site comprises 527 acres of land south of 176th Street East and east of Canyon Road in the Frederickson area of Pierce County (Exhibit A/Site Location Map) The Site is located approximately 10 miles south of Tacoma and 8 miles southwest of Puyallup in Section 31, Township 19 North, Range 4 East of the Willamette Meridian, and a portion of Section 6, Township 18 North, Range 4 East of the Willamette Meridian

- In 1988, carbon tetrachloride was discovered in monitoring wells on the Site. Since that time, various studies have confirmed the presence of carbon tetrachloride in the groundwater, both on and off the Site at concentrations exceeding cleanup levels established under the authority of 70.105D, the Model Toxics Control Act (MTCA) and Chapter 173-340 Washington Administrative Code (WAC), the MTCA Cleanup Regulation. Several domestic drinking water wells to the northwest side of the Site contain concentrations of carbon tetrachloride exceeding the MTCA Method B carcinogenic formula value (0.337 ppb) for groundwater (Exhibit B/Extent of Contamination Map). Documentation of the presence of carbon tetrachloride-contaminated groundwater, both on and off the Site, is contained in the following documents which are on file at Ecology's Southwest Regional Office:
- A. Wehran Engineering Corporation, 1989. Environmental Site Assessment of the Wheelabrator-Frederickson Site, Frederickson Area, Pierce County. Prepared for Wheelabrator Environmental Systems, Inc. March 1989.
- B. Crosby and Overton, Inc., 1989. Report on Groundwater Sampling Study Done on Lot 9, Centrum Properties, Frederickson Area, Pierce County, Washington. Prepared for Centrum Properties. April 7, 1989.
- C. Adams, Hodsdon, Robinson (AHR) Engineers, Inc., 1989. A Summary of the Environmental Investigation for Contaminated Wastes and Remedial Actions. Prepared for Centrum Properties. September 1989.
- D. GeoEngineers, 1990. Lab Report, Off-Site Water Well Analyses, Frederickson Industrial Park. September 4, 1990.

- E. Harding Lawson Associates, 1995. Technical Memorandum, Frederickson Industrial

 Park Site, Phase I Remedial Investigation, Pierce County, Washington. Prepared for Centrum Properties

 Corporation. March 24, 1995.
- F Emcon, 1995 Frederickson Industrial Park Water Quality Sampling Letter report from Emcon to Department of Ecology October 5, 1995
- The Site was used from 1935/36 through 1976 to manufacture and process explosives (TNT, RDX, dynamite, and nitrocellulose-based propellants) for small arms and artillery
- 4 From 1935/36 to 1956, the Site was operated as an explosives manufacturing and processing plant ("powder plant") under the names of J A. Denn Powder Corporation and Columbia Powder Company
- 5 From 1956 to 1963, Olin Mathieson Chemical Corporation owned and operated the powder plant. The Site property was conveyed to Olin Mathieson Chemical Corporation in July of 1956 as part of the Plan of Liquidation for the Columbia Powder Company On September 1, 1969, Olin Mathieson Chemical Corporation changed its name to Olin Corporation ("Olin") The term "Olin" hereinafter refers to any predecessor companies or corporations
- On October 1, 1963, Olin conveyed the Site property to Commercial Solvents Corporation ("CSC"). CSC continued to operate the powder plant until 1976 under the names of CSC, Trojan-U.S. Powder Division of CSC, and International Minerals and Chemical Company ("IMC"), the latter of which CSC became a part in a 1975 merger. In 1990, IMC changed its name to IMCERA Group, Inc., and then in 1994 to Mallinckrodt Group Inc., and then in 1997 to Mallinckrodt Inc. ("Mallinckrodt"). The term "Mallinckrodt" hereinafter refers to any predecessor companies or corporations
- 7 Carbon tetrachloride was reportedly used as an industrial cleaning solvent, degreasing agent, fire extinguishing compound, and pesticide in the 1950s and 1960s.

- 8. Carbon tetrachloride was used on the Site through the early 1970s for various purposes, including, but not limited to: a cleaning solvent for equipment and paint brushes, a fire extinguishing compound, and a laboratory solvent for cleaning funnels and test tubes and for testing the moisture content of dynamite. Carbon tetrachloride was stored on the Site in 55-gallon drums.
- 9. Carbon tetrachloride was released onto the Site in connection with explosives manufacturing and processing during the period 1935/36 to 1976. Suspected releases of carbon tetrachloride include: disposal of paint brush cleaning waste to the ground, disposal of laboratory waste and general cleaning waste to the burn pits, runoff from the cleaning of equipment to the ground, and discharge of fire extinguishers for pest control.
 - 10. Explosives manufacturing and processing operations ceased in 1976.
- Mallinckrodt conveyed the Site to John M Brazier and Jan P Brazier, husband and wife, on September 6, 1976. In the contract between Mallinckrodt and Brazier, Mallinckrodt states that the property was used for the manufacturing of explosives. In the contract, Mallinckrodt further acknowledged that the Site was contaminated and excepted the responsibility to decontaminate the property.
- John M. Brazier and Jan P. Brazier conveyed a portion of the Site to Brazier Forest Products, Inc., a Washington corporation, in 1980 (hereinafter the BFP Portion).
- John M. Brazier and Jan P. Brazier conveyed the remaining portion of the Site to Brazier Forest Industries, Inc., in 1986 (hereinafter the Remainder Portion).
- Brazier Forest Industries, Inc. conveyed the Remainder Portion to Brazier Forest Products, Inc., and Brazier Forest Products of Oregon, Inc., as tenants in common, also in 1986
- Brazier Forest Products, Inc. and Brazier Forest Products of Oregon, Inc., as tenants in common, conveyed the Remainder Portion to Rainier National Bank, in lieu of foreclosure, also in 1986.

- 16. Brazier Forest Products, Inc. conveyed the BFP Portion to Rainier National Bank, in lieu of foreclosure, also in 1986.
- During the time period 1976 to 1986, the Site was used for timber cutting, lumber milling, and related storage purposes
- 18. Rainier National Bank conveyed the Remainder Portion and the BFP Portion to Centrum Properties Corporation (Centrum), a Washington corporation (now a wholly owned subsidiary of Seafirst Bank), in 1987.
- During the period 1987 to 1990, when it owned the Site, Centrum began developing the Site as an industrial park to facilitate sale of the property. In the course of the development process, Centrum's environmental contractors investigated and removed residual debris and waste from the Site. This included: roughly 1,100 abandoned barrels/drums (58,000 pounds); 57,000 pounds of scrap metal; waste and debris comprised of paper, wood, and concrete; 1800 gallons of unused wood preservative containing pentachlorophenol and tetrachlorophenol; 225,000 pounds of waste water, waste oil, paint-related sludge, and waste solvents; discarded batteries and several non-PCB transformers; asbestos; and nine underground storage tanks. Additionally, soil containing tricloroethane was remediated and a pilot pump and treat system was installed to remove carbon tetrachloride from the groundwater.
- In 1990, Centrum conveyed the Site property to the Boeing Company (Boeing), the current owner. Boeing constructed and currently operates an aircraft parts manufacturing facility on the Site.
- On September 7, 1993, Centrum, as part of the Site property transaction contract with Boeing, entered into a pre-payment agreement with Ecology to address the carbon tetrachloride contamination at the Site.

- On June 6, 1994, Centrum entered into Agreed Order No. DE 94TC-S217 with Ecology to conduct a remedial investigation and feasibility study (RI/FS) on and adjacent to the Site. To date, Phase I of the RI/FS has been completed and the RI/FS is ongoing.
- Centrum has been providing bottled water to households and businesses whose drinking water contains concentrations of carbon tetrachloride above the MTCA Method B carcinogenic formula value for groundwater. Bottled water will continue to be provided by Mallinckrodt and Olin until a more permanent solution is realized.
- 24. The continued presence of carbon tetrachloride contamination in the groundwater at and around the Site presents a threat to human health and the environment.

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ECOLOGY DETERMINATIONS

Ecology makes the following determinations without admission of such determinations by Mallinckrodt, Inc. and Olin Corporation.

- 1. Centrum Properties Corporation was an "owner" and Mallinckrodt and Olin were "owners and/or operators" as defined at RCW 70.105D.020(11) of a "facility," as defined in RCW 70.105D 020(4).
 - 2. The facility is known as the Frederickson Industrial Park site (Site).
- 3. The substance found at the Site, as described in Section II above, is a "hazardous substance" as defined at RCW 70.105D.020(7).
- Based on the presence of this hazardous substance at the Site and all factors known to Ecology, there is a release or threatened release of a hazardous substance from the Site, as defined at RCW 70 105D 020(19).

- 5. By letters dated December 1, 1995, Ecology notified Mallinckrodt and Olin of their status as Potentially Liable Persons (PLPs) under RCW 70.105D.040, after notice and opportunity for comment.
- 6. Pursuant to RCW 70.105D.030(1) and 70.105D.050, Ecology may require PLPs to investigate or conduct other remedial actions with respect to the release or threatened release of hazardous substances whenever it believes such action to be in the public interest.
- 7. Based on the foregoing facts, Ecology believes the remedial action required by this

 Order is in the public interest.

IV.

WORK TO BE PERFORMED

Based on the foregoing Facts and Determinations, it is hereby ordered that Mallinckrodt and Olin take the following remedial actions, and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein

Mallinckrodt and Olin shall work with Ecology to devise and implement a permanent solution regarding the impact of carbon tetrachloride affected domestic drinking water wells. Until a permanent solution has been achieved, Mallinckrodt and Olin shall provide bottled water to affected households and businesses. Within 90 days of the effective date of this Order, Mallinckrodt and Olin shall develop and submit a conceptual plan in writing regarding the solution to the drinking water problem to Ecology for review and comment. The conceptual plan shall contain a schedule for design and implementation of a solution to the drinking water problem. The conceptual plan shall be revised by Olin and Mallinckrodt per Ecology's comments within 30 days of receiving Ecology's written comments. Once Ecology has approved the conceptual plan, implementation shall occur in accordance

with the approved schedule. Ecology may assist in negotiations with affected citizens and businesses,
Pierce County, the City of Tacoma, and any other parties who have a valid interest in this project.

- 2 Mallinckrodt and Olin shall submit to Ecology, for review and approval, a Draft Work

 Plan to provide a basis for completion of the RI/FS. The Draft Work Plan shall include actions necessary

 for:
- A. Characterizing the on-site and off-site extent of the carbon tetrachloride groundwater plume,
 - B. Determining any existing potential source areas of carbon tetrachloride,
 - C. Acquiring the information necessary for the selection of a cleanup action, and
 - D. Determining a time line under which the above actions will be implemented.

Mallinckrodt and Olin shall submit to Ecology a Draft Work Plan within 60 days of finalizing this Order (No. DE 97TC-S121). Ecology's comments on the Draft Work Plan shall be incorporated into the final work plan by Olin and Mallinckrodt. The final work plan shall be submitted to Ecology within 60 days of receipt of such comments subject to Section VI, item 9. The final RI/FS Work Plan shall be implemented within 30 days of Ecology's approval to meet the requirements of WAC-173-340-350 (State Remedial Investigation and Feasibility Study under the MTCA).

- Results from sampling shall be provided to Ecology's project coordinator on an Ecology approved schedule to be established for each phase of the work.
- Written progress reports shall be submitted to Ecology's project coordinator on behalf of Mallinckrodt and Olin on a quarterly basis during the Remedial Investigation, starting 90 days after the effective date of this Order. The quarterly report will also describe what Remedial Investigation activities will occur during the subsequent quarter.

- 5. Mallinckrodt or Olin shall immediately notify Ecology's project coordinator by telephone of any unexpected delays in implementing the previous requirements.
- 6. Mallinckrodt or Olin shall provide Ecology's project coordinator seven days notice, by telephone, prior to all RI field activities.

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INCORPORATION OF EXHIBITS

All exhibits are hereby incorporated into this Order by reference and are integral and enforceable parts of this Order

VI.

TERMS AND CONDITIONS OF ORDER

1 <u>Definitions</u>:

Unless otherwise specified, the definitions set forth in Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms used in this Order.

2. Public Notices:

WAC 173-340-600(10)(c) requires a 30-day public comment period before this Order on a state RI/FS becomes effective. Ecology shall be responsible for providing such public notice, and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that the Order is inadequate or improper in any respect. In the event that Ecology modifies or withdraws any provision of the Order pursuant to this paragraph, and Olin and Mallinckrodt do not concur with such modifications or withdrawals, Olin and Mallinckrodt reserve the right to withdraw their agreement with this Order.

3. Remedial Action Costs:

Mallinckrodt and Olin shall pay to Ecology costs incurred by Ecology pursuant to this Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order preparation, oversight, and administration. Ecology costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). Mallinckrodt and Olin shall pay the required amount within 90 days of receiving, from Ecology, an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project, including a general description of work performed. Itemized statements shall be prepared quarterly. Failure to pay Ecology's costs within 90 days of receipt of the itemized statement of costs will result in interest charges.

4. <u>Designated Project Coordinators:</u>

The project coordinator for Ecology is:

Name:

Robert Warren

Address:

Southwest Regional Office

Department of Ecology

P.O. Box 47775

Olympia, WA 98504-7775

Telephone:

(360)407-6361

FAX:

(360) 407-6305

E-Mail:

RWAR461@ecy wa gov

The project coordinator for Mallinckrodt is:

Name:

James K. Grant, Dir Environmental Affairs

Address:

Mallinckrodt, Inc.

16305 Swingly Ridge Road Chesterfield, MO 63017

The project coordinator for Olin is:

Name:

Raymond J. Horn, Senior Associate Project Engineer

Address:

Olin Corporation

1186 Iower River Road Northwest

PO BOX 248

Charleston, TN 37310-0248

The project coordinators shall be responsible for overseeing the implementation of this Order. To the maximum extent possible, communications between Ecology and Mallinckrodt and Olin, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed through the project coordinators. Should Ecology or Mallinckrodt and/or Olin change project coordinators, written notification shall be provided to Ecology or Mallinckrodt and Olin at least ten calendar days prior to the change.

5. Performance:

All work performed pursuant to this Order shall be under the direction and supervision, as necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate training, experience, and expertise in hazardous waste site investigation and cleanup. Mallinckrodt and Olin shall notify Ecology as to the identity of such engineer(s) or hydrogeologist(s), and of any contractors and subcontractors to be used in carrying out the terms of this Order, in advance of their involvement at the site. Mallinckrodt and Olin shall provide a copy of this Order to all agents, contractors, and subcontractors retained to perform work required by this Order, and shall ensure that all work undertaken by such agents, contractors, and subcontractors will be in compliance with this Order.

Except where necessary to abate an emergency situation, Mallinckrodt and Olin shall not perform any remedial actions at the Site outside that required by this Order unless Ecology concurs, in writing, with such additional remedial actions

WAC 173-340-400(7)(b)(i) requires that "construction" performed on the Site <u>must</u> be under the supervision of a professional engineer registered in Washington.

6. Access:

Ecology, or any Ecology authorized representative, shall have the authority to enter and freely move about the Site at all reasonable times for the purposes of, <u>inter alia</u>: inspecting records, operation

logs, and contracts related to the work being performed pursuant to this Order; reviewing the progress in carrying out the terms of this Order; conducting such tests or collecting samples as Ecology or the project coordinator may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by Mallinckrodt and Olin Ecology shall allow split or replicate samples to be taken by Mallinckrodt and Olin during an inspection unless doing so interferes with Ecology's sampling. Mallinckrodt and Olin shall allow split or replicate samples to be taken by Ecology and shall provide seven days notice before any sampling activity.

Mallinckrodt and Olin will make all reasonable efforts to gain access to the Frederickson property, and any other neighboring properties which are needed for the successful completion of the Remedial Investigation and the preparation of the Feasibility Study Failure by parties to gain access will not excuse the parties from their obligation to conduct the work under this order. Should Olin and Mallinckrodt fail to gain the access needed to complete the work, Ecology will make reasonable efforts to facilitate access to real property for Olin and Mallinckrodt for the purpose of conducting remedial actions pursuant to this agreed order.

7. Public Participation:

Mallinckrodt and Olin shall help prepare and/or update a public participation plan for the Site.

Ecology shall maintain the primary responsibility for public participation at the site. Mallinckrodt and Olin shall help coordinate and implement public participation for the Site.

8 Retention of Records:

Olin, representing both Olin and Mallinckrodt, shall preserve in a readily retrievable fashion, during the pendency of this Order and for ten years from the date of completion of the work performed pursuant to this Order, all records, reports, documents, and underlying data in its possession relevant to

this Order. Should any portion of the work performed hereunder be undertaken through contractors or agents of Mallinckrodt and/or Olin, then Mallinckrodt and/or Olin agree to include in their contract with such contractors or agents a record retention requirement meeting the terms of this paragraph during their participation in the work. At the conclusion of all contractor's work, all contractor's records shall be turn over to Olin, who will retain them as per the terms of this order.

9. <u>Dispute Resolution</u>:

Mallinckrodt, and/or Olin may request Ecology to resolve disputes which may arise during the implementation of this Order. Such requests shall be in writing and directed to the signatory, or his/her successor(s), to this Order. Ecology resolution of the dispute shall be binding and final. Mallinckrodt and/or Olin are not relieved of any requirement of this Order during the pendency of the dispute and remains responsible for timely compliance with the terms of the Order unless otherwise provided by Ecology in writing.

In the event a dispute arises as to an approval, disapproval, proposed modification, or other decision or action by Ecology's project coordinator; Mallinckrodt, Olin, and Ecology shall utilize the dispute resolution procedure set forth below.

- A. Upon receipt of the Ecology project coordinator's decision, Mallinckrodt and Olin shall have 14 days within which to notify Ecology's project coordinator of its objection to the decision.
- B. Mallinckrodt, Olin, and Ecology's project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within 14 days, Ecology's project coordinator shall issue a written decision.
- C. Mallinckrodt and Olin may then request Ecology management review of the decision.

 This request shall be submitted in writing to the Toxic Cleanup Program Manager within 14 days of receipt of Ecology's project coordinator's decision.

D. Ecology's Program Manager shall conduct a review of the dispute, and shall issue a written decision regarding the dispute within 30 days of Mallinckrodt and Olin's request for review. The Program Manager's decision shall be binding and final.

10 Reservation of Rights/No Settlement:

This Agreed Order is not a settlement under Chapter 70 105D RCW. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority. Ecology will not, however, bring an action against Mallinckrodt and/or Olin to recover remedial action costs paid to and received by Ecology under this Agreed Order. In addition, Ecology will not take additional enforcement actions against Mallinckrodt and/or Olin to require those remedial actions required by this Agreed Order, provided Mallinckrodt and Olin comply with this Agreed Order.

Ecology reserves the right, however, to require additional remedial actions at the site should it deem such actions necessary

Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the releases or threatened releases of hazardous substances from the Site.

In the event Ecology determines that conditions at the Site are creating or have the potential to create a danger to the health or welfare of the people on the Site, the surrounding area, or to the environment, Ecology may order Mallinckrodt and Olin to stop further implementation of this Order for such period of time as needed to abate the danger

11 Compliance With Applicable Laws:

A. All actions carried out by Mallinckrodt and/or Olin pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits, except as provided in paragraph B of this section.

B. Pursuant to RCW 70.105D.090(1), the substantive requirements of Chapters 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW, and of any laws requiring or authorizing local government permits or approvals for the remedial action under this Order, that are known to be applicable at the time of issuance of the Order, shall be included in the order and are binding and enforceable requirements of the Order.

Mallinckrodt and Olin have a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order. In the event Mallinckrodt and Olin determine that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order, it shall promptly notify Ecology of this determination. Ecology shall determine whether Ecology or Mallinckrodt and Olin shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Mallinckrodt and Olin shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by Mallinckrodt and Olin, and on how Mallinckrodt and Olin must meet those requirements. Ecology shall inform Mallinckrodt and Olin in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. Mallinckrodt and Olin shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

Ecology shall ensure that notice and opportunity for comment is provided to the public and appropriate agencies prior to establishing the substantive requirements under this section.

- C Pursuant to RCW 70.105D 090(2), in the event Ecology determines that the exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D 090(1) would result in the loss of approval from a federal agency, which is necessary for the state to administer any federal law, the exemption shall not apply and Mallinckrodt and Olin shall comply with both the procedural and substantive requirements of the laws referenced in RCW 70.105D 090(1), including any requirements to obtain permits
- 13. <u>Limitation of Mallinckrodt and Olin's Obligation</u>:

Mallinckrodt and Olin have no ownership interest in the Site. Accordingly, this Order shall not be deemed to impose any duty on Mallinckrodt and/or Olin that is inconsistent with the absence of any ownership interest in the Site on the part of Mallinckrodt and/or Olin.

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SATISFACTION OF THIS ORDER

The provisions of this Order shall be deemed satisfied upon Mallinckrodt and Olin's receipt of written notification from Ecology that Mallinckrodt and Olin have completed the remedial activity required by this Order, as amended by any modifications, and that all other provisions of this Order have been complied with

VIII.

ENFORCEMENT

- Pursuant to RCW 70.105D 050, this Order may be enforced as follows:
- A. The Attorney General may bring an action to enforce this Order in a state or federal court.

- B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the site.
- C. In the event Mallinckrodt and/or Olin refuses, without sufficient cause, to comply with any term of this Order, Mallinckrodt and/or Olin will be liable for:
- (i) up to three times the amount of any costs incurred by the state of Washington as a result of its refusal to comply; and
 - (ii) civil penalties of up to \$25,000 per day for each day it refuses to comply.
- D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under Section 6 of Chapter 70.105D RCW.
- Each PLP named in this Order is individually responsible for compliance with the terms and conditions of this Order. Compliance with this Agreed Order by any PLP is not conditioned on the performance of any other PLP. Similarly, the right of Ecology to enforce this Order against any PLP is not conditioned on the performance or enforcement against any other PLP.

Effective date of this Order:

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

David R Jansen

Southwest Region Supervisor

Toxics Cleanup Program

MALLINCKRODT, INC.

OLIN CORPORATION

Roger Keller

Vice President and General Counsel

Peter C. Kosch e

Senior Vice President Corporate Affairs