

[DRAFT—JANUARY 17, 2017]

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by:

Occidental Chemical Corporation,
Glenn Springs Holdings, Inc., and
Mariana Properties, Inc.

For:

Occidental Chemical Facilities Site
Facility Site No. 4326
Cleanup Site No. 1212

AGREED ORDER

No. DE _____

TO: Occidental Chemical Corporation
Glenn Springs Holdings, Inc.
Mariana Properties, Inc.
Attn: Mr. Clinton Babcock
7601 Old Channel Trail
Montague, MI 49437

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I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology) and Occidental Chemical Corporation (OCC), Glenn Springs Holding, Inc., and Mariana Properties, Inc. (collectively referred to as potentially liable parties or PLPs under this Agreed Order (Order)) is to provide for remedial action at a facility where there has been a release or threatened release of hazardous substances. This Order requires the PLPs to complete a Feasibility Study, perform a longer-term pumping test at inactive extraction well EXT-9, develop a Baseline Monitoring Program, and submit a draft Cleanup Action Plan (dCAP). Ecology believes the actions required by this Order are in the public interest.

An Enforcement Order was issued to PRI Northwest, Inc. (PRI), F.O. Fletcher, Inc. and OCC on September 1, 1995, for the implementation of a Cleanup Action Plan at 709 Alexander Avenue. This Order shall supersede and replace the 1995 Enforcement Order No. DE 95TC-S242 issued by Ecology to PRI, F.O. Fletcher, Inc., and OCC. This Order also shall supersede and replace the Administrative Order on Consent (AOC), as amended, among the United States Environmental Protection Agency (EPA), Ecology, and OCC in EPA Docket No. 10-97-0011-CERCLA (Amended AOC), attached to this Order as Exhibit B, as that Amended AOC pertains to Ecology and OCC, upon the execution by EPA, Ecology, and OCC of a separate document providing for Ecology's withdrawal from the Amended AOC. The status of the Amended AOC as it pertains to EPA and OCC will be addressed separately by EPA and OCC.

II. JURISDICTION

This Agreed Order is issued pursuant to the authority of the Model Toxics Control Act (MTCA), RCW 70.105D.050(1). This Order also satisfies the requirements of WAC 173-303-646 through -64630.

III. PARTIES BOUND

This Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. The undersigned representative of each Party hereby certifies that he or she is fully

authorized to enter into this Order and to execute and legally bind such Party to comply with the Order. The PLPs agree to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter the PLPs' responsibility under this Order. The PLPs 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 complies with this Order.

IV. DEFINITIONS

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

A. Agreed Order or Order: Refers to this Order and each of the exhibits to this Order. All exhibits are integral and enforceable parts of this Order. The terms "Agreed Order" or "Order" shall include all exhibits to this Order.

B. Area of Concern: Refers to any area of the Facility where a release of dangerous constituents (including dangerous waste and hazardous substances) has occurred, is occurring, is suspected to have occurred, or threatens to occur.

C. CERCLA: Refers to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601, et seq.

D. Cleanup Action Plan (CAP): Refers to the document issued by Ecology under WAC 173-340-380 which selects Facility-specific corrective measures and specifies cleanup standards (cleanup levels, points of compliance, and other requirements for the corrective measures).

E. Cleanup Standards: Refers to the standards promulgated under RCW 70.105D.030(2)(e) and include (1) hazardous substance concentrations (cleanup levels) that protect human health and the environment, (2) the location at the Facility where those cleanup levels must be attained (points of compliance), and (3) additional regulatory requirements that apply to a cleanup because of the type of action and/or the location of the Facility.

F. Corrective Action: Refers to any activities including investigations, studies, characterizations, and corrective measures, including actions taken pursuant to RCW 70.105D and WAC 173-340, undertaken in whole or in part to fulfill the requirements of WAC 173-303-64620.

G. Corrective Measure: Refers to any measure or action to control, prevent, or mitigate release(s) and/or potential release(s) of dangerous constituents (including dangerous waste and hazardous substances) reviewed and approved by Ecology for the Facility and set forth in a Facility-specific CAP prepared in compliance with the requirements of WAC 173-340, including WAC 173-340-360. Corrective measures may include interim actions as defined by WAC 173-340. Interim actions will not necessarily be set forth in a Facility-specific CAP.

H. Dangerous Constituent or Dangerous Waste Constituent: Refers to any constituent identified in WAC 173-303-9905 or 40 C.F.R. part 264, appendix IX; any constituent that caused a waste to be listed or designated as dangerous under the provisions of WAC 173-303; and any constituent defined as a hazardous substance under RCW 70.105D.020(13).

I. Dangerous Waste: Refers to any solid waste designated in WAC 173-303-070 through -100 as dangerous or extremely hazardous or mixed waste. Dangerous wastes are considered hazardous substances under RCW 70.105D.020(13).

J. Dangerous Waste Management Facility: Used interchangeably in this document with the term "Facility."

K. Dangerous Waste Management Unit (DWMU): Refers to a contiguous area of land on or in which dangerous waste is placed, or the largest area in which there is a significant likelihood of mixing dangerous waste constituents in the same area, as defined in WAC 173-303-040.

L. Facility: Refers to the Occidental Chemical Facility, EPA ID Number WAD009242314, a site with former DWMUs located at 605 Alexander Avenue, Tacoma, Washington; all property contiguous to the former DWMUs, including 709 Alexander Avenue;

and all property, regardless of control, affected by release(s) or threatened release(s) of hazardous substances, including dangerous wastes and dangerous constituents, at and from these areas. “Facility” also includes the definition found in RCW 70.105D.020(8). “Facility” shall not include the extent of contamination caused by the release of hazardous substances originating from activities associated with historic petroleum storage and processing facilities that were operated at real properties located at 709 Alexander Avenue and at 901 and 1001 Alexander Avenue (previously known as 721 Alexander Avenue), subject to Agreed Order No. DE 9835 among Ecology, Mariana Properties, Inc., and the Port of Tacoma, and denominated as the Alexander Avenue Petroleum Tank Facilities Site. *See* Exhibit A, Facility Diagram.

M. Feasibility Study (FS): Refers to the investigation and evaluation of potential corrective measures performed in accordance with the FS requirements of WAC 173-340-350 which includes the substantive requirements for a Resource Conservation and Recovery Act (RCRA) Corrective Measures Study and a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Feasibility Study, and which is undertaken in whole or in part to fulfill the corrective action requirements of WAC 173-303-64620.

N. Parties: Refers to the State of Washington, Department of Ecology, OCC, Glenn Springs Holdings, Inc., and Marianna Properties, Inc.

O. Potentially Liable Person (PLP): Refers to OCC, Glenn Springs Holdings, Inc., and Marianna Properties, Inc.

P. Permit or Permitting Requirement: Unless otherwise specified, refers to the requirements of WAC 173-303 for applying for, obtaining, maintaining, modifying, and terminating Dangerous Waste Management Facility permits.

Q. Property: Refers to the real property located at 605 Alexander Avenue, Tacoma, Washington, consisting of approximately 23 acres, and the real property located at 709 Alexander Avenue, consisting of approximately 4.4 acres, both currently owned by Marianna Properties, Inc.

R. RCRA: Refers to the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k.

S. RCRA Facility Assessment (RFA): Refers to the EPA conducted investigation of release(s) and potential release(s) at the Dangerous Waste Management Facility and the information contained in the report entitled RCRA Facility Assessment Report, Occidental Chemical Corporation, Tacoma, Washington dated February 26, 1988 (“RFA Report”). The RFA is incorporated into this Order by reference as if fully set forth herein.

T. Release: Refers to any intentional or unintentional spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of dangerous waste or dangerous constituents into the environment. It also includes the abandonment or discarding of barrels, containers, and other receptacles containing dangerous waste or dangerous constituents, and includes the definition of “release” in RCW 70.105D.020(32).

U. Remedial Investigation (RI): Refers to a facility-wide investigation and characterization performed in accordance with the requirements of WAC 173-340, which includes the substantive requirements for a RCRA facility investigation and a CERCLA remedial investigation, undertaken in whole or in part to fulfill the corrective action requirements of WAC 173-303-64620, and the Amended AOC, Exhibit B, Statement of Work.

V. Solid Waste Management Unit (SWMU): Refers to any discernible location at the Dangerous Waste Management Facility where solid wastes have been placed at any time, irrespective of whether the location was intended for the management of solid or dangerous waste. Such locations include any area at the Dangerous Waste Management Facility at which solid wastes, including spills, have been routinely and systematically released, and include regulated units as defined by WAC 173-303.

W. Site: Is used interchangeably with “Facility” and has the same definition.

V. FINDINGS OF FACT

Ecology makes the following Findings of Fact, without any express or implied admissions of such facts by the PLPs.

Findings of Fact Addressing Ownership of the Facility

A. The Property is located on the eastern-most peninsula within the 12-square mile area of the Commencement Bay Nearshore/Tideflats (CB/NT) Superfund Site in Tacoma, Washington, at the southern end of the main basin of Puget Sound. The CB/NT Superfund Site includes several waterway problem areas and adjoining uplands, including the Mouth of Hylebos Problem Area where the Facility is located. The peninsula is bordered by the Hylebos Waterway on the east side and the Blair Waterway on the west. The Property includes a shoreline with the Hylebos Waterway, and is further bounded on the west, north, and south by real property formerly owned and/or operated by the United States (the United States Maritime Commission, Navy, Air Force, Naval and Marine Corps Reserve, and/or other instrumentalities of the United States), now owned by the Port of Tacoma. On September 8, 1983, EPA placed the CB/NT Superfund Site on the National Priorities List pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605.

B. The real properties which comprise the Site were undeveloped tidal mudflats prior to 1920. The area was filled with approximately 16 feet of dredge material as part of an upland expansion project between 1920 and 1936.

C. The Property located at 709 Alexander Avenue was owned and operated by F.O. Fletcher, Inc. (and predecessor and related entities)(Fletcher Oil) as a bulk petroleum fuel storage and distribution terminal from the 1930s to the 1980s. During the 1970s and 1980s, Fletcher Oil operated a tetraethyl lead plant at 709 Alexander Avenue, blending lead with gasoline. In addition,

United Independent Oil operated a topping plant for crude oil distillation on the property in the 1970s and 1980s.

D. Hooker Electrochemical Company began operations at the Facility in 1929 and acquired additional adjacent parcels over time, including what is known as the North Ten Acres, acquired in 1937 from Todd Pacific Shipyards, Inc. (aka Seattle-Tacoma Shipbuilding Corp.)(Todd Shipyards). Todd Shipyards leased what is known as the North Ten Acres from Hooker Electrochemical Company from May 1941 to about June 1946. Todd Shipyards and instrumentalities of the United States including the Maritime Commission and Navy operated a salvage yard, waste incinerator and maintenance activities on this parcel during World War II. Between 1945 and 1946 a portion of the shoreline of this 10-acre parcel was used as a waste dump now known as the Navy/Todd Dump.

1. Navy Bureau of Ships entered into a contract with Todd Shipyards whereby “certain shipbuilding facilities owned by the Government” were “furnished for the use of [Todd Shipyards].” The government-owned equipment on Hooker Electrochemical Company’s property (leased to Todd Shipyards) included an incinerator, a nut and bolt salvage building, salvage bins, as well as catch basins and drainage lines.

2. Defense Plant Corporation leased a portion of Hooker Electrochemical Company’s Tacoma plant site and constructed Plancor 1560, an aluminum chloride plant, at the request of the War Production Board. The operation of this Plancor by Hooker Electrochemical Company was dependent on receiving chlorine, hydrogen and steam from the adjoining Hooker Electrochemical Company plant via pipelines. The Defense Plant Corporation was a subsidiary of the Reconstruction Finance Corporation (a Depression-era United States government corporation created to fund economic

recovery). The current successor of Reconstruction Finance Corporation is the General Services Administration (GSA).

E. Hooker Electrochemical Company entered into a joint venture with Detrex Inc. in 1946, forming Hooker-Detrex Inc., to manufacture tetrachloroethylene (PCE) and trichloroethylene (TCE) at the Facility. In 1958 Hooker Electrochemical Company adopted the name Hooker Chemical Corporation. By 1968 Hooker Chemical Corporation was acquired by and became a subsidiary of Occidental Petroleum Corporation. Hooker Chemical Corporation continued as a wholly-owned subsidiary of Occidental Petroleum Corporation. Hooker Chemical Corporation changed its name to Occidental Chemical Corporation (OCC) in 1981.

F. OCC's predecessor ceased TCE/PCE manufacturing in May of 1973. However, the Facility continued to manufacture chlorine, caustic soda, muriatic acid, and calcium chloride. In 1979 the demolition of the PCE/TCE plant was initiated.

G. The Facility was transferred by Quit Claim Deed from OCC to Occidental Chemical Corporation Tacoma, Inc. (OCC Tacoma). OCC Tacoma "...assumed all of the liabilities and obligations of Occidental Chemical Corporation with respect to the Tacoma Plant [Facility], including the Joint Permit, as of February 1, 1997."

H. The Facility was then sold to Pioneer Chlor-Alkali Company, Inc. (Pioneer), a Delaware corporation, on June 17, 1997. OCC Tacoma retained ownership of the groundwater treatment plant; however, Pioneer employees operated the plant on OCC Tacoma's behalf.

I. By letter dated May 9, 2001, OCC Tacoma informed Ecology and EPA of a merger of OCC Tacoma, Inc., into its parent and sole stockholder, OCC. All of OCC Tacoma's obligations, including corrective action and continued operation of the groundwater treatment plant, were transferred to OCC on June 15, 2001.

J. On December 20, 2005, Pioneer (emerging from bankruptcy as Pioneer Americas, LLC) notified Ecology and EPA that Pioneer Americas, LLC was negotiating a sale of the Facility to Mariana Properties, Inc., an affiliate of OCC. Pioneer Americas, LLC had already terminated the manufacturing of chlor-alkali and was operating the Facility solely for product storage and transfer operations. The final sale to Mariana Properties, Inc. occurred on January 5, 2006.

K. Glenn Springs Holdings, Inc., "...an affiliate of Occidental Chemical Corporation..." manages remediation projects for OCC in multiple states, including remediation of the Facility in Tacoma.

Findings of Fact Addressing Permit Status and Corrective Action

L. On November 17, 1980, a Part A permit application was submitted to EPA to operate a hazardous waste management facility under RCRA by OCC's predecessor for the Facility. An amended Part A permit application was submitted on August 12, 1982. EPA issued a letter dated April 17, 1985, acknowledging the submittal of both Part A applications. The EPA letter formally requested the submittal of a Part B application under the authority of 40 CFR 270.10(e)(4), which was submitted by OCC in October 1985.

M. In February 1988, EPA issued a RCRA Facility Assessment report identifying seventeen (17) solid waste management units (SWMUs) at the Facility.

N. On November 16, 1988, Ecology and EPA issued a joint permit for the storage of dangerous waste at the Facility. The permit authorized dangerous waste management in the following units without specific capacity limits:

1. Two railcar container storage units in areas referred to as TC-1, TC-2, and TC-3. Wastes authorized to be stored were chlorinated hydrocarbons/sulfuric acid

mixture (waste codes K073, D002), decanted chlorinated hydrocarbons (K073), decanted sulfuric acid (D002, K073), and chlorinated hydrocarbons (K073).

2. One container drum storage unit authorized to store solid residues from closure and/or spill cleanup of chlorinated hydrocarbons (K073). Spent graphite electrode “blades and butts”, mastic, and dross (D008), and contaminated clothing (K073).

3. Graphite waste pile building containing spent graphite electrode “blades and butts”, mastic, and dross (D008).

O. Since 1979, corrective action was conducted with both Ecology and EPA oversight. In December 1979, a Phase I groundwater investigation was completed, and in August 1980 a Phase II groundwater investigation was completed. A Phase III investigation of chlorinated volatile organic compounds (CVOCs) in unsaturated soils was conducted in October 1980. Additional work completed from 1980 to 1988 included the completion of a groundwater quality report and proposed corrective action (December 1980), excavation and disposal off-site of 1850 cubic yards of soils containing CVOCs from the vadose zone in the former TCE/PCE plant area and from adjacent former lime settling ponds that served the plant, evaluation of monitoring data by Conestoga-Rovers & Associates (CRA), quarterly groundwater monitoring, multiple reports on the Hylebos Waterway sediment sampling, reports assessing groundwater treatment technologies, and compilation of a groundwater data base, with an addendum.

P. Corrective action, after the permit was issued, was covered by Section V of the permit entitled “Corrective Action for Past Practices”. The permit directed the continuation of

investigations already underway. OCC submitted RCRA Facility Investigation I and II reports in July and October 1989, respectively.

Q. Closure of the permitted units was accomplished between 1990 and 1995. In May 1990 OCC closed permitted storage areas TC1 and TC3 as well as the graphite waste pile. These units were certified by OCC to be clean closed, and Ecology approved the certifications in August of the same year. Between March of 1995 and August of 1995 OCC completed, and Ecology approved, the certified clean closure of the remaining permitted units.

R. Under the Dangerous Waste Permit, the corrective action to address soil and groundwater contamination between 1990 and 2005 consisted of the removal of 750 cubic yards of contaminated soils during construction of the groundwater treatment facility, submittal of a Corrective Action Plan and a Corrective Action Monitoring Plan, analysis of Preliminary Pumping Tests, construction and start-up of the groundwater treatment facility, and the start-up of groundwater extraction and injection systems. Beginning in 1996, OCC submitted quarterly monitoring event reports under a revised Corrective Action Plan and an updated Corrective Action Monitoring Plan, approved by EPA in October 1998. After the start-up of the extraction system, OCC also submitted Annual Data and Performance Evaluations. A "Compilation of Soils and Related Data" was submitted in January 1999. Annual "Investigation Progress Reports" were submitted by OCC beginning in December 2000.

S. In 2005, Ecology required OCC to submit a Corrective Measures Study work plan. The work plan was submitted by OCC and approved by Ecology on February 1, 2005.

T. The last groundwater monitoring report under the Corrective Action Monitoring Plan was dated May 2009. Ecology formally suspended implementation of the Corrective Action

Monitoring Plan in 2013 acknowledging that the plan would be revised when Ecology determined clear objectives for continued groundwater monitoring.

U. A Part B permit renewal application was received on May 20, 1998. The existing permit subsequently expired on November 16, 1998, but remained effective until April 29, 2005, when a RCRA corrective action permit was issued incorporating by reference the Amended AOC. The corrective action permit expired on April 29, 2015.

Facts Related to Contamination

V. OCC and its predecessors, formerly owned and operated a chemical plant which continuously operated from 1928 until June, 1997. At various times, the plant manufactured chlorine, sodium hydroxide, calcium chloride, muriatic acid, ammonia, ammonium hydroxide, trichloroethylene, tetrachloroethylene, sodium aluminate, and aluminum chloride. From approximately 1929 to 1970, effluents from chlorine production operations were discharged directly to the Hylebos Waterway through the main plant outfall. Wastes from the trichloroethylene and tetrachloroethylene production process were discharged to the Hylebos Waterway, disposed of at a deep-water disposal site, temporarily held in on-site settling ponds, or disposed of off-site. Due to past operating practices, soil and groundwater on and under portions of the Facility contain chlorinated organic compounds. Direct discharge of sludges and wastewaters as well as the soil and groundwater are potential sources of certain organic compounds detected in the Hylebos Waterway.

W. Todd Shipyards, via Todd Dry Dock & Construction Co., formerly owned and operated ship construction facilities which were active during World War I under the supervision of the United States Maritime Commission, the United States Navy, and/or other instrumentalities of the United States. The shipyard continued to exist after World War I and into the 1930s, but little is currently known about its activities. In 1939, Todd Shipyards under contract with the

United States Maritime Commission began construction of a shipyard at the end of the Hylebos/Blair Peninsula that during World War II occupied essentially all of the peninsula north of Eleventh Street, with the exception of the chemical plant located at 605 Alexander Avenue and a petroleum storage/distribution facility located at 709 Alexander Avenue. The shipyard operated from 1939 to 1946, and its operations were supervised and controlled by instrumentalities of the United States. The North Ten Acres at 605 Alexander Avenue were used by Todd Shipyards and the United States for a variety of shipyard activities, including: a “scrap disposal yard,” waste incineration, vehicle maintenance (including a 2000 gallon fuel tank on the shoreline), and a sewer system that discharged to the Hylebos Waterway. Shipyard wastes were dumped on the uplands and on the shoreline of the North Ten Acres and partially pushed into the Hylebos Waterway, forming the Navy/Todd Dump. Following World War II, the United States Navy used most of the Mouth of the Hylebos Waterway area and adjacent upland properties (then called the Naval Station Tacoma) for mothballing, berthing, maintaining, and/or dismantling Navy ships. The Port of Tacoma purchased most of the Naval Station Tacoma properties from the United States in 1960, and has since leased portions of the properties to many businesses, including several ship-related businesses. Operations at 401 Alexander Avenue (north of, and adjacent to, 605 Alexander Avenue), previously known as the Port Industrial Yard and now known as the Early Business Center, have included ship dismantling by Zidell Dismantling (1960 to 1984), ship construction by Tacoma Boatbuilding (1969 to 1987), ship construction by AK-WA Shipbuilding (1986 to 1997), and ship-related operations of the United States Army Reserve. Other operations in the vicinity of the Property (south of, and adjacent to, 709 Alexander Avenue) have included United States Air Force petroleum storage/distribution facilities and the United States Naval and Marine Corps Reserve homeport for vessels. Due to past operating practices associated with the activities described above, soil and groundwater on and under portions of the Facility contain various hazardous substances. Direct discharge of wastes as well as the soil and groundwater are potential sources of hazardous substances detected in the Hylebos Waterway.

X. Under a Cooperative Agreement with EPA, Ecology conducted a RI/FS of the CB/NT Superfund Site. Within the Tideflats area of the CB/NT Superfund Site, the RI/FS evaluated the nature and extent of contamination in the Sitcum, Blair, Milwaukee, Hylebos, St. Paul, Middle, Thea Foss (formerly known as City), and Wheeler-Osgood Waterways. The final RI/FS was made available for public comment in February 1989. Several chemicals were detected in the Mouth of the Hylebos Waterway sediments, including, but not limited to, polychlorinated biphenyls (PCBs), hexachlorobenzene, trichloroethane, tetrachloroethane, 1,2-dichlorobenzene, 1,3-dichlorobenze, hexachlorobutadiene, and lead. On September 29, 1989, EPA issued a Record of Decision (ROD) that selected the remedy for remediation of sediments for Operable Unit 1 (Mouth of the Hylebos and Head of the Hylebos) and sources of contamination (Operable Unit 05) in the CB/NT Superfund Site. PCBs and hexachlorobenzene, were selected as chemical indicators of biological effects and human health risks at the Mouth of the Hylebos Waterway because these chemicals were found at the highest concentrations over the greatest area.

1. The ROD also determined that natural recovery will not sufficiently reduce contaminant concentrations in some areas of the Mouth of the Hylebos Waterway within the ten (10) year period, so the ROD required active sediment cleanup with one (1) of the four (4) technology options as a component of the remedy.
2. OCC, along with five other companies or entities, performed pre-remedial design activities pursuant to the ROD on the Hylebos Waterway under an AOC, dated November 25, 1993.

Y. During pre-remedial design activities, organic compounds were detected in sediment adjacent to the Property and in the vicinity of where barges were used for sludge dewatering. This area was identified as Area 5106, and characterized as having relatively high concentrations of trichloroethylene, tetrachloroethylene, vinyl chloride, hexachlorobenzene, and hexachlorobutadiene above the sediment quality criteria.

Z. An investigation into the embankment area of the Facility, between +18 feet mean lower low water level (MLLW) and 0 feet MLLW, found concentrations of contaminants significantly above the sediment quality objectives, including: DDE, a pesticide, DDT, PCBs, and semivolatile organic compounds. Intertidal sampling conducted as part of the pre-remedial design studies also identified chemicals in the intertidal area similar in composition and concentration and on the adjacent PRI Northwest embankment.

AA. On November 6, 1997, EPA and OCC entered into an AOC in EPA Docket No. 10-97-0011-CERCLA to conduct removal actions to abate an imminent and substantial endangerment to the public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Facility.

BB. On February 2, 2005, the 1997 AOC was amended (Amended AOC) to add Ecology as a party, to require compliance with CERCLA, MTCA and RCRA, and to conduct additional site characterization for both upland areas and beneath the Hylebos Waterway to determine the nature and extent of soil, groundwater, surface water, and sediment contamination; develop feasible alternatives to address the remaining contamination of all media; and develop an integrated remedy or set of remedies to be selected and designed to satisfy both EPA and Ecology's statutory requirements.

CC. The tasks required by the Amended AOC Statement of Work, the current status of each task, and each task's approval date for final products through June 30, 2016, are listed in Exhibit C as "Table 1, Status of SOW Deliverables, Groundwater and Sediment Remediation as of December 31, 2016." The list also includes tasks performed by OCC under Ecology and EPA oversight in addition to those specified in the Amended AOC Statement of Work.

DD. According to the draft Site Characterization Report, submitted to Ecology and EPA on August 14, 2015, that included all RI data and the final Conceptual Site Model, approved by Ecology and EPA on April 16, 2014, hazardous substances continue to be released from sources at the Facility into the environment including the Hylebos Waterway, shallow groundwater

beneath and beyond the Facility and Commencement Bay, and buildings at the Port of Tacoma “Port Industrial Yard”. The draft Site Characterization Report was conditionally approved by Ecology and EPA via letter dated October 11, 2016.

Facts Related to Contamination at 709 Alexander Avenue

EE. From 1979 to 1983 the following spills were documented at the 709 Alexander Avenue property:

- a. 1979 - Gasoline spill, 69 gallons.
- b. 1981 - Safety-Kleen (aliphatic solvent) spill, quantity unspecified.
- c. 1981 - Product spills from leaky valves noted, quantity unspecified.
- d. 1983 - Diesel fuel spill, 300 gallons, seeped into ground, did not enter Hylebos Waterway over land.

FF. In 1989, Ecology and Environment, Inc., under contract with EPA, performed a file review and inspection of 709 Alexander Avenue. Chemical constituents detected in soil and groundwater samples included:

Chlorinated hydrocarbons such as tetrachloroethylene (PCE), trichloroethylene (TCE), chloroform; semi-volatile compounds such as hexachlorobutadiene; and metals such as arsenic, chromium, copper, lead, nickel, and zinc. Only arsenic and nickel were detected as dissolved constituents in more than one groundwater sample. Some soil samples contained petroleum hydrocarbons dominated by diesel-range or heavier hydrocarbons, and semi-volatile compounds.

GG. The source of the non-petroleum chemical constituents in the soil, ground water, and seep samples were identified as backfill debris containing graphite anodes and white fibrous sludge-like material similar in appearance to waste historically derived from industrial processes at the OCC property (605 Alexander Avenue). The vertical extent of backfill debris varies from 9 to 13 feet below grade with an average depth of 11 feet. The horizontal extent of backfill debris is approximately 210 feet with an average width of 105 feet. The depth to ground water below the ground surface is approximately 9 feet at the contaminated areas; therefore, the backfill debris is in direct contact with the groundwater. The approximate in-place volume of the backfill debris is

9,000 cubic yards, of which approximately 2,000 cubic yards consist of white fibrous sludge-like material, graphite anodes, other industrial debris such as rubber, metal, and ceramic fragments, and concrete debris. The remaining is silty fill material.

HH. In May 1995, Ecology drafted an Agreed Order for the 709 Alexander Avenue property to support the source control program being implemented by EPA in Commencement Bay to eliminate or reduce the hazardous substance release into the Hylebos Waterway. Ecology faxed copies of the Agreed Order, and the Cleanup Action Plan, to PRI for their comments/signature. As of August 1995, Ecology received no response. This caused delays in implementing the site cleanup at 709 Alexander Avenue, which led Ecology to issue an Enforcement Order No. DE 95TC-S242 jointly to PRI, OCC, and F.O. Fletcher, Inc. for completing the site cleanup at 709 Alexander Avenue on September 1, 1995.

II. Section 10 of the Amended AOC held in abeyance the 1995 Enforcement Order pending the implementation of a Consent Decree or Agreed Order implementing the selected remedies for the Property.

JJ. The petroleum contamination located at 709 Alexander Avenue and at other real properties located at 901 and 1001 Alexander Avenue (previously known as 721 Alexander Avenue) is addressed in a separate October 3, 2013, Agreed Order No. DE 9835 entered between Ecology, Mariana Properties, Inc., and the Port of Tacoma. Ecology's findings of fact regarding the history of land use, property ownership, and contamination at those real properties are set forth in Agreed Order No. DE 9835.

VI. ECOLOGY DETERMINATIONS

A. OCC, Glenn Springs Holdings, Inc., and Mariana Properties, Inc. are persons within the meaning of RCW 70.105D.020(24).

B. OCC is the past owner and operator of a Dangerous Waste Management Facility that received a final facility permit, subject to RCRA, 42 U.S.C. §§ 6924 and 6925, and regulations promulgated thereunder, including authorized state regulations in WAC 173-303. OCC is also a

past “owner or operator” as defined by RCW 70.105D.020(22) of a “facility” as defined by RCW 70.105D.020(8).

C. Glenn Springs Holdings, Inc. is the current operator of the groundwater treatment plant.

D. Mariana Properties, Inc. is the current owner of the Facility and the Property.

E. Certain waste and constituents found at the Facility are dangerous wastes and/or dangerous constituents as defined by WAC 173-303 and in Section IV (Definitions) of this Order.

F. These dangerous wastes and dangerous constituents are considered hazardous substances within the meaning of RCW 70.105D.020(13).

G. Based on the Findings of Fact and the administrative record, Ecology has determined that release(s) and potential release(s) of hazardous substances at and/or from the Facility present a threat to human health and the environment.

H. Based on credible evidence, Ecology issued a PLP status letter to OCC dated August 27, 1998, for the Facility and Property located at 605 Alexander Avenue, pursuant to RCW 70.105D.040, .020(26), and WAC 173-340-500. By letter dated August 28, 1998, OCC voluntarily waived its rights to notice and comment and accepted Ecology’s determination that OCC is a PLP under RCW 70.105D.040. On September 23, 1994, Ecology issued a PLP status letter to OCC for the Property located at 709 Alexander Avenue. By letter OCC voluntarily waived its rights to notice and comment and accepted Ecology’s determination that OCC is a PLP under RCW 70.105D.040.

I. Based on credible evidence, Ecology issued a PLP status letter to Mariana Properties, Inc. dated June 8, 2015, and to Glenn Springs Holdings, Inc. also dated June 8, 2015, pursuant to RCW 70.105D.040, .020(26), and WAC 173-340-500. In separate letters, both dated July 17, 2015, Glenn Springs Holdings, Inc. and Mariana Properties, Inc. voluntarily waived its rights to notice and comment and accepted Ecology’s determination that they are PLPs under RCW 70.105D.040.

J. Based on credible evidence, Ecology issued a PLP status letter to Mariana Properties, Inc., for the Property at 709 Alexander Avenue, pursuant to RCW 70.105D.040, .020(26), and WAC 173-340-500. In a letter dated April 4, 2013, Mariana Properties, Inc. voluntarily waived its rights to notice and comment and accepted Ecology's determination that it is a PLP under RCW 70.105D.040.

K. The 1995 Enforcement Order No. DE 95TC-S242 issued to PRI, OCC and F.O. Fletcher on September 1, 1995, is hereby withdrawn and its terms are superseded and replaced by this Order.

L. This Order does not and is not intended to address the petroleum contamination located on the 709 Alexander Avenue Property and on real property located at 901 and 1001 Alexander Avenue (previously known as 721 Alexander Avenue). That is covered in the October 3, 2013, Agreed Order No. DE 9835 among Ecology, Mariana Properties, Inc., and the Port of Tacoma.

M. Pursuant to RCW 70.105D.030(1) and .050(1), Ecology may require PLPs to investigate or conduct other remedial actions with respect to any release or threatened release of hazardous substances, whenever it believes such action to be in the public interest. Based on the foregoing facts, Ecology believes the remedial actions required by this Order are in the public interest.

N. Under WAC 173-340-430, an interim action is a remedial action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance, that corrects a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed, or that is needed to provide for completion of a site hazard assessment, remedial investigation/feasibility study, or design of a cleanup action plan. Either party may propose an interim action under this Order. If the Parties are in agreement concerning the interim action, the Parties will follow the process in Section VII.E. If the Parties are not in agreement, Ecology

reserves its authority to require interim action(s) under a separate order or other enforcement action under RCW 70.105D, or to undertake the interim action itself.

VII. WORK TO BE PERFORMED

This Order shall supersede and replace the procedural and substantive requirements set forth in the 1995, Enforcement Order No. DE 95TC-S242 issued jointly to PRI, F.O. Fletcher and OCC on September 1, 1995. This Order also shall supersede and replace the procedural and substantive requirements set forth in the Amended AOC in EPA Docket No. 10-97-0011-CERCLA, as that Amended AOC pertains to Ecology and OCC, upon the execution by EPA, Ecology, and OCC of a separate document providing for Ecology's withdrawal from the Amended AOC. The status of the Amended AOC as it pertains to EPA and OCC will be addressed separately by EPA and OCC.

Based on the Findings of Fact and Ecology Determinations, it is hereby ordered that the PLPs take the following remedial actions and that these actions be conducted in accordance with WAC 173-340 unless otherwise specifically provided for herein.

A. Site Baseline Monitoring. The PLPs shall conduct baseline monitoring activities in accordance with the schedule in Exhibit D and the specific requirements in this Order. The purpose of the baseline monitoring event is to complete on-going collection of information already in progress under the Amended AOC and to provide information for remedy design for the draft Cleanup Action Plan. The components for the site baseline monitoring event include groundwater quality, groundwater levels, and soil vapor. Baseline pore water sampling was completed. In accordance with the schedule in Exhibit D, the PLPs shall submit a draft Baseline Monitoring Plan that includes at a minimum, sections describing the monitoring activities as follows:

- 1. Groundwater Quality Section.** A baseline monitoring event will be performed prior to remedy design and implementation with the objective being to create a baseline for the evaluation of the post-construction remedies. The PLPs presented a "Long-Term Groundwater Monitoring Plan" presentation during a technical

meeting held in Tacoma on February 17–18, 2015. The scope of the baseline groundwater quality monitoring will consider that initial proposal as well as the preferred remedy.

2. Groundwater Level Section. The objective for the baseline water level monitoring activities described below is to develop a water level database that describes water levels prior to remedy design and implementation.

a. Water level data shall be collected continuously using dedicated and calibrated pressure transducers. The data will be downloaded and reported at least annually.

b. The number and rationale for water level monitoring locations will be included in the Baseline Monitoring Plan. The monitoring locations shall be located in clusters that are selected to obtain data from various zone grouping planes.

c. The water level data collected will be used to evaluate seasonal variations in water levels and to assess if groundwater flow conditions are consistent with those used to develop the three-dimensional groundwater flow model. They are not intended to directly demonstrate the hydraulic effectiveness of the existing or future extraction system.

3. Soil Vapor Section. Include in the Baseline Monitoring Plan the work plan and implementation schedule for conducting soil vapor monitoring as part of an on-going characterization of vapor intrusion at areas within the Site footprint.

4. QA/QC Section. The Baseline Monitoring Plan will include quality assurance/quality control (QA/QC) measures as well as a safety and health plan consistent with WAC 173-340-350(7)(c)(iv).

5. Baseline Monitoring Plan Schedule. The Baseline Monitoring Plan shall include a schedule for implementation for all work to be performed consistent with the schedule in Exhibit D.

6. Draft and Final Baseline Monitoring Plan. Upon submittal Ecology will review and comment on the draft Baseline Monitoring Plan. The PLPs will respond to comments and provide a revised plan to Ecology until the Baseline Monitoring Plan is approved. Revisions to the plan will receive Ecology's approval prior to implementation.

B. Baseline Monitoring Report.

1. The Baseline Monitoring Report will provide results of field measurements and laboratory analyses of samples in electronic form. This data will be provided to Ecology for entering into Ecology's Environmental Information Management System (EIM).

2. The PLPs shall provide results of field measurements, laboratory analyses of samples, and other data relevant to accomplishing the tasks in the Baseline Monitoring Plan such as CAD files of base maps and other graphic presentations of data, in a usable format to facilitate Ecology review.

3. The report shall include a compilation of data from the sampling event, a narrative evaluation of the results, and recommendations, if any, for follow up actions.

4. The Baseline Monitoring Report will be submitted no later than ninety (90) days following completion of field activities and receipt of final laboratory data. The report will include analysis and evaluations of the monitoring data and provide recommendations for changes or improvements to future monitoring.

C. Feasibility Study. The PLPs received written comments from Ecology and EPA on the preliminary draft FS submitted in May 2015. The PLPs revised the draft FS in response to

those comments and resubmitted the FS on June 13, 2016, December 9, 2016, and January 11, 2017. The PLPs shall submit any subsequent drafts to Ecology consistent with the schedule provided in Exhibit D and in compliance with WAC 173-340-350(8).

D. Groundwater Extraction Demonstration. Ecology and EPA's comments on the preliminary drafts of the FS required the PLPs to evaluate the reliability and performance of hydraulic containment systems. The PLPs must conduct the following:

1. **Longer-term Groundwater Extraction Demonstration.** If directed in writing by Ecology, the PLPs shall submit a work plan for a longer-term groundwater pumping test at inactive extraction well EXT-9 in accordance with the schedule in Exhibit D and the Data Quality Objectives (DQOs) in Exhibit E. Upon completion of these pumping tests, EXT-9 will be permanently connected to the treatment system and pumped at 20 gallons per minute unless there are operational issues within the treatment plant.

2. Data and a Written Summary Report

a. The data and written summary report shall be submitted to Ecology within forty-five (45) days of completion of the pumping tests for review and approval in accordance with the schedule in Exhibit D.

b. The data and results from the short-term pumping test performed on inactive extraction well EXT-9 under the June, 2013 "Extraction Well Pilot Test Installation Work Plan" shall be included in this report.

E. Risk Assessments. Ecology may determine, based on an evaluation of the alternatives, that a quantitative or ecological risk assessment of cleanup action alternatives is required under Chapter 173-340 WAC. Ecology will notify the PLPs by letter that such a determination has been made and that a work plan must be submitted on a specific schedule. Once Ecology makes this determination the work plan and schedule are an enforceable part of this Order.

F. Draft Cleanup Action Plan. Once Ecology has approved the FS as a final document Ecology will select cleanup actions consistent with the procedures and requirements of WAC 173-340-360 and WAC 173-340-370. Ecology will either direct the PLPs to prepare an agency review draft cleanup action plan, consistent with WAC 173-340-380, by a specific date, or Ecology will prepare the public review draft cleanup action plan.

1. The draft CAP must include a preliminary engineering design for a ground-water extraction system.
2. The extraction system design must depict the locations of extraction wells that will meet specified drawdowns or other performance objectives presented in the FS.
3. The proposed design must also incorporate the latest understanding of ground-water chemistry, particularly as it relates to high pH water and the potential for precipitation of silica and other inorganics.
4. The design must incorporate the results of the longer-term pumping test for inactive extraction well EXT-9, if conducted.
5. If Ecology chooses to prepare the draft cleanup action plan the PLPs agree to provide figures, tables, and graphics needed to prepare the plan for public review.
6. If Ecology chooses to prepare the draft cleanup action plan, Ecology agrees to provide the PLPs a reasonable opportunity to review and to comment upon a preliminary draft version of the document, and to discuss the document and comments with Ecology, before the public review draft cleanup action plan is completed and issued for notice and opportunity for public comment.

G. Progress Reports. The PLPs shall submit semiannual progress reports on the 15th of January and July. If Ecology agrees, in writing, progress reports may be submitted at less frequent intervals. The semiannual progress reports shall include at a minimum:

1. A description of work performed or completed in accordance with the approved work completed during the reporting period.
2. A description of work activities planned for the next reporting period.
3. A description of any problems and how problems were resolved including any deviation from the approved work that Ecology and the PLPs have agreed to under Section VII of this Order.
4. A summary of progress toward completion of the Order including work in progress, problem areas, key activities, deliverables submitted, field work and data generated, if any, subcontracting, analytical services performed, significant findings, changes in personnel, and significant contacts with all federal, state, local governments, community, and public interest groups.

H. Deliverables. All plans or other deliverables submitted by the PLPs for Ecology's review and approval under Section VII of this Order and the attached Schedule (Exhibit D) shall, upon Ecology's approval, become integral and enforceable parts of this Order. All plans or other deliverables submitted by the PLPs for Ecology's review and approval under Section VII of this Order and the attached Schedule (Exhibit D) shall also be provided to EPA by the PLPs.

I. Interim Actions. If the Parties agree on an interim action under Section VI.N., the PLPs shall prepare and submit to Ecology an Interim Action Work Plan, including a scope of work and schedule, by the date determined by Ecology. Ecology will provide public notice and opportunity to comment on the Interim Action Work Plan in accordance with WAC 173-340-600(16). The PLPs shall not conduct the interim action until Ecology approves the Interim Action Work Plan in writing. Upon approval by Ecology, the Interim Action Work Plan becomes an integral and enforceable part of this Order, and the PLPs are required to conduct the interim action in accordance with the approved Interim Action Work Plan.

J. SWMU and Area of Concern Identification. The PLPs shall notify Ecology's project coordinator in writing of any newly-identified SWMU(s), newly-discovered release(s)

from known SWMU(s), and newly-discovered Areas of Concern at the Facility no later than fifteen (15) days after discovery, and shall investigate and report on these areas as directed by Ecology's project coordinator. If required, the investigation (assessment) and reporting shall be done in accordance with Section VII subsection I, and the schedule in Exhibit D.

K. Completion By Ecology. If at any time after the second exchange of written comments on drafts, Ecology determines that insufficient progress is being made in the preparation of any of the deliverables required by this section, Ecology may complete and issue the final deliverable.

VIII. TERMS AND CONDITIONS

A. Remedial Action Costs

The PLPs shall pay to Ecology costs incurred by Ecology pursuant to this Order and consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or its contractors for, or on, the Facility under RCW 70.105D, including remedial actions and Order preparation, negotiation, oversight, and administration. These costs shall include work performed both prior to and subsequent to the issuance of this Order. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). For all costs incurred subsequent to the effective date of this Order, the PLPs shall pay the required amount within thirty (30) 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. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

The PLPs shall pay to Ecology costs incurred by Ecology for work performed by Keta Waters LLC and its contractors in accordance with the terms and conditions specified in Agreement No. HW9M22 between Ecology and OCC.

In addition to other available relief, pursuant to RCW 19.16.500, Ecology may utilize a collection agency and/or, pursuant to RCW 70.105D.055, file a lien against real property subject to the remedial actions to recover unreimbursed remedial action costs.

B. Implementation of Remedial Action

If Ecology determines that PLPs have failed without good cause to implement the remedial action, in whole or in part, Ecology may, after written notice to PLPs, perform any or all portions of the remedial action that remain incomplete. If Ecology performs all or portions of the remedial action because of PLPs' failure to comply with their obligations under this Order, PLPs shall reimburse Ecology for the costs of doing such work in accordance with Section VIII.A (Remedial Action Costs), provided that PLPs are not obligated under this section to reimburse Ecology for costs incurred for work inconsistent with or beyond the scope of this Order.

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

C. Designated Project Coordinators

The project coordinator for Ecology is:

Kerry Graber
P.O. Box 47775
Olympia, WA 98503
(360)-407-0241

The project coordinator for the PLPs is:

Clinton Babcock
Glenn Springs Holdings, Inc.
7601 Old Channel Trail
Montague, MI 49437
(972) 687-7506

Each project coordinator shall be responsible for overseeing the implementation of this Order. Ecology's project coordinator will be Ecology's designated representative for the Facility. To the maximum extent possible, communications between Ecology and the PLPs, 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. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Order.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

D. Performance

All geologic and hydrogeologic work performed pursuant to this Order shall be under the supervision and direction of a geologist or hydrogeologist licensed by the state of Washington or under the direct supervision of an engineer registered by the state of Washington, except as otherwise provided for by RCW18.43 and18.220.

All engineering work performed pursuant to this Order shall be under the direct supervision of a professional engineer registered by the state of Washington, except as otherwise provided for by RCW 18.43.130.

All construction work performed pursuant to this Order shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered by the state of Washington, except as otherwise provided for by RCW 18.43.130.

Any documents submitted containing geologic, hydrologic, or engineering work shall be under the seal of an appropriately licensed professional as required by RCW 18.43 and18.220.

The PLPs shall notify Ecology in writing of the identity of any engineer(s) and geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms of this Order, in advance of their involvement at the Facility.

E. Access

Ecology or any Ecology authorized representative shall have access to enter and freely move about all property at the Facility that the PLPs either own, control, or have access rights to at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the PLPs' progress in carrying out the terms of this Order; conducting such tests or collecting such samples as Ecology 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 the PLPs. The PLPs shall make all reasonable efforts to secure access rights for those properties within the Facility not owned or controlled by the PLPs where remedial activities or investigations will be performed pursuant to this Order. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Facility property owned or controlled by the PLPs unless an emergency prevents such notice. All persons who access the Facility pursuant to this section shall comply with any applicable health and safety plan(s). Ecology employees and their representatives shall not be required to sign any liability release or waiver as a condition of Facility property access.

F. Sampling, Data Submittal, and Availability

With respect to the implementation of this Order, the PLPs shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf available to Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with Section VII (Work to be Performed), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.

If requested by Ecology, the PLPs shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by the PLPs pursuant to implementation of this Order. The PLPs shall notify Ecology seven (7) days in advance of significant field activity at the Facility related to this Order. Ecology shall, upon request, allow the PLPs and/or its authorized representative to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Order, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section VIII.E (Access), Ecology shall notify the PLPs prior to any sample collection activity unless an emergency prevents such notice.

In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be conducted by a laboratory accredited under WAC 173-50 for the specific analyses to be conducted, unless otherwise approved by Ecology.

G. Public Participation

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing this 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 this Order is inadequate or improper in any respect.

A Public Participation Plan is required for this Facility. Ecology shall review any existing Public Participation Plan to determine its continued appropriateness and whether it requires amendment, or if no plan exists, Ecology shall develop a Public Participation Plan alone or in conjunction with the PLPs.

Ecology shall maintain the responsibility for public participation at the Facility, but shall consult and collaborate with the PLPs in advance of all Ecology-sponsored public participation activities. The PLPs shall cooperate with Ecology, and shall:

1. If agreed to by Ecology, develop appropriate mailing list, prepare drafts of public notices and fact sheets at important stages of the remedial action, such as the submission of work

plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets and prepare and distribute public notices of Ecology's presentations and meetings.

2. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before major meetings with the interested public and local governments. Likewise, Ecology shall notify the PLPs prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by the PLPs that do not receive prior Ecology approval, the PLPs shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

3. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Facility. Participation may be through attendance at public meetings to assist in answering questions, or as a presenter.

4. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:

- (a) Department of Ecology
Southwest Regional Office
300 Desmond Drive SW
Lacey, WA 98502
(360) 407-6300
- (b) Citizens for a Healthy Bay
917 Pacific Avenue, Suite 100
Tacoma, Washington 98402
(253) 383-2429
- (c) Mary Rose Kobetich Library
212 Browns Point Blvd NE
Tacoma, WA 98422
(253) 248-7265

At a minimum, copies of all public notices, fact sheets, and documents relating to public comment periods shall be promptly placed in these repositories. A copy of all documents related to this Facility shall be maintained by Ecology in the repository at Ecology's Southwest Regional Office in Olympia, Washington.

H. Retention of Records

During the pendency of this Order, and for ten (10) years from the date of completion of work performed pursuant to this Order, the PLPs shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Order and shall insert a similar record retention requirement into all contracts with project contractors and subcontractors. Upon request of Ecology, the PLPs shall make all records available to Ecology and allow access for review within a reasonable time.

Nothing in this Order is intended to waive any right the PLPs may have under applicable law to limit disclosure of documents protected by the attorney work-product privilege and/or the attorney-client privilege. If the PLPs withhold any requested records based on an assertion of privilege, the PLPs shall provide Ecology with a privilege log specifying the records withheld and the applicable privilege. No Facility-related data collected pursuant to this Order shall be considered privileged.

I. Resolution of Disputes

1. In the event that the PLPs elect to invoke dispute resolution the PLPs must utilize the procedure set forth below.

a. Upon the triggering event (receipt of Ecology's project coordinator's written decision or an itemized billing statement), the PLPs have fourteen (14) calendar days within which to notify Ecology's project coordinator in writing of its dispute ("Informal Dispute Notice").

b. The Parties' project coordinators shall then confer in an effort to resolve the dispute informally. The parties shall informally confer for up to fourteen (14) calendar

days from receipt of the Informal Dispute Notice. If the project coordinators cannot resolve the dispute within those 14 calendar days, then within seven (7) calendar days Ecology's project coordinator shall issue a written decision ("Informal Dispute Decision") stating: the nature of the dispute; the PLPs position with regards to the dispute; Ecology's position with regard to the dispute; and the extent of resolution reached by informal discussion.

c. The PLPs may then request regional management review of the dispute. This request ("Formal Dispute Notice") must be submitted in writing to the Southwest Regional Office's Hazardous Waste and Toxic's Reduction Section Manager within seven (7) calendar days of receipt of Ecology's Informal Dispute Decision. The Formal Dispute Notice shall include a written statement of dispute setting forth: the nature of the dispute; the disputing Party's position with respect to the dispute; and the information relied upon to support its position.

d. The Section Manager shall conduct a review of the dispute and shall issue a written decision regarding the dispute ("Decision on Dispute") within thirty (30) calendar days of receipt of the Formal Dispute Notice. The Decision on Dispute shall be Ecology's final decision on the disputed matter.

2. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used.

3. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Order, unless Ecology agrees in writing to a schedule extension.

4. In case of a dispute, failure to either proceed with the work required by this Order or timely invoke dispute resolution may result in Ecology's determination that insufficient progress is being made in preparation of a deliverable, and may result in Ecology undertaking the work under Section VII (Work to be Performed) or initiating enforcement under Section X (Enforcement).

J. Extension of Schedule

1. An extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion consistent with the timeframe provided in Exhibit D, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify:

- a. The deadline that is sought to be extended;
- b. The length of the extension sought;
- c. The reason(s) for the extension; and
- d. Any related deadline or schedule that would be affected if the extension were granted.

2. The burden shall be on the PLPs to demonstrate to the satisfaction of Ecology that the request for such extension has been submitted in a timely fashion and that good cause exists for granting the extension. Good cause may include, but may not be limited to:

- a. Circumstances beyond the reasonable control and despite the due diligence of the PLPs including delays caused by unrelated third parties or Ecology, such as (but not limited to) delays by Ecology in reviewing, approving, or modifying documents submitted by the PLPs;
- b. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or
- c. Endangerment as described in Section VIII.L (Endangerment).

However, neither increased costs of performance of the terms of this Order nor changed economic circumstances shall be considered circumstances beyond the reasonable control of the PLPs.

3. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give the PLPs written notification of any extensions granted pursuant to this Order. A requested extension shall not be effective until approved by Ecology. Unless the extension is a

substantial change, it shall not be necessary to amend this Order pursuant to Section VIII.K (Amendment of Order) when a schedule extension is granted.

4. An extension shall only be granted for such period of time as Ecology determines is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety (90) days only as a result of:

- a. Delays in the issuance of a necessary permit which was applied for in a timely manner;
- b. Other circumstances deemed exceptional or extraordinary by Ecology; or
- c. Endangerment as described in Section VIII.L (Endangerment).

K. Amendment of Order

The project coordinators may verbally agree to minor changes to the work to be performed without formally amending this Order. Minor changes will be documented in writing by Ecology within seven (7) days of verbal agreement.

Except as provided in Section VIII.M (Reservation of Rights), substantial changes to the work to be performed shall require formal amendment of this Order. This Order may only be formally amended by the written consent of both Ecology and the PLPs. The PLPs shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing and in a timely manner after the written request for amendment is received. If the amendment to this Order represents a substantial change, Ecology will provide public notice and opportunity to comment. Reasons for the disapproval of a proposed amendment to this Order shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section VIII.I (Resolution of Disputes).

L. Endangerment

In the event Ecology determines that any activity being performed at the Facility is creating or has the potential to create a danger to human health or the environment on or surrounding the

Facility, Ecology may direct the PLPs to cease such activities for such period of time as it deems necessary to abate the danger. The PLPs shall immediately comply with such direction.

In the event the PLPs determine that any activity being performed at the Facility is creating or has the potential to create a danger to human health or the environment, the PLPs may cease such activities. The PLPs shall notify Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after making such determination or ceasing such activities. Upon Ecology's direction the PLPs shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with the PLPs' cessation of activities, it may direct the PLPs to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this section, the PLPs' obligations with respect to the ceased activities shall be suspended until Ecology determines the danger is abated, and the time for performance of such activities, as well as the time for any other work dependent upon such activities, shall be extended in accordance with Section VIII.J (Extension of Schedule) for such period of time as Ecology determines is reasonable under the circumstances.

Nothing in this Order shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

M. Reservation of Rights

This Order is not a settlement under RCW 70.105D. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any of Ecology's rights or authority. Ecology will not, however, bring an action against the PLPs to recover remedial action costs paid to and received by Ecology under this Order. In addition, Ecology will not take additional enforcement actions against the PLPs regarding remedial actions required by this Order, provided the PLPs comply with this Order.

Ecology nevertheless reserves its rights under RCW 70.105D, including the right to require additional or different remedial actions at the Facility should it deem such actions necessary to

protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Facility.

By entering into this Order, the PLPs do not admit to any liability for the Facility. Although the PLPs are committing to conducting the work required by this Order under the terms of this Order, the PLPs expressly reserve all rights available under law, including but not limited to the right to seek cost recovery or contribution against third parties, and the right to assert any defenses to liability in the event of enforcement.

N. Transfer of Interest in Property

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Facility shall be consummated by the PLPs without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to the PLPs' transfer of any interest in all or any portion of the Facility, and during the effective period of this Order, the PLPs shall provide a copy of this Order to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, the PLPs shall notify Ecology of said transfer. Upon transfer of any interest, the PLPs shall notify all transferees of the restrictions on the activities and uses of the property under this Order and incorporate any such use restrictions into the transfer documents.

O. Compliance with Applicable Laws

1. All actions carried out by the PLPs 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 RCW 70.105D.090. The permits or specific federal, state, or local requirements that the agency has determined are applicable and that are known at the time of entry of this Order have been identified in Exhibit F.

2. Pursuant to RCW 70.105D.090(1), the PLPs are exempt from the procedural requirements of RCW 70.94, 70.95, 77.55, 90.48, and 90.58 and of any laws requiring or authorizing local government permits or approvals. However, the PLPs shall comply with the substantive requirements of such permits or approvals. The exempt permits or approvals and the applicable substantive requirements of those permits or approvals, as they are known at the time of entry of this Order, have been identified in Exhibit F.

The PLPs 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 either Ecology or the PLPs determines 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 the other party of its determination. Ecology shall determine whether Ecology or the PLPs shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, the PLPs 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 the PLPs and on how the PLPs must meet those requirements. Ecology shall inform the PLPs in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. The PLPs shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

3. 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 that is necessary for the state to administer any federal law, the exemption shall not apply and the PLPs 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.

P. Land Use Restrictions

Restrictive covenants restricting land use on the real property located at 605 Alexander Avenue to non-residential industrial use and prohibiting the extraction, supply or use for drinking or other human consumption or domestic use of any kind of the groundwater, surface water and subsurface water on the Property are contained and set forth in the Quit Claim Deed (Corrected) recorded on April 28, 1997, in the records of the Pierce County Auditor (Recording No. 9704280734).

Pertinent real properties owned by the Port of Tacoma are also the subject of a restrictive covenant recorded on May 5, 2003, in the records of the Pierce County Auditor (Recording No. 200305050452) prohibiting groundwater extraction, supply, or use for drinking or other human consumption or domestic use of any kind on those real properties north of Eleventh Street on the Hylebos/Blair peninsula as delineated in the restrictive covenant. Prior to any use of the groundwater on the property that is inconsistent with the terms of the restrictive covenant must be pre-approved by Ecology.

Q. Indemnification

The PLPs agree to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action (1) for death or injuries to persons, or (2) for loss or damage to property to the extent arising from or on account of acts or omissions of the PLPs, its officers, employees, agents, or contractors in entering into and implementing this Order. However, the PLPs shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Order.

IX. SATISFACTION OF ORDER

The provisions of this Order shall be deemed satisfied upon the PLPs' receipt of written notification from Ecology that the PLPs have completed the corrective actions required by this

Order, as amended by any modifications, and that the PLPs have complied with all other provisions of this Order.

X. 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 Facility.

C. A liable party who refuses, without sufficient cause, to comply with any term of this Order will be liable for:

1. Up to three (3) times the amount of any costs incurred by the State of Washington as a result of its refusal to comply; and

2. Civil penalties of up to twenty-five thousand dollars (\$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 RCW 70.105D.060.

Effective date of this Order: _____

Occidental Chemical Corporation

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Ava Edmonson
Section Manager
Toxics Cleanup Program
Southwest Regional Office
Olympia, Washington
(360)-407-6337

Glenn Springs Holdings, Inc.

Mariana Properties, Inc.
