Thermatiber LLC
SIC 3/ATI
Project # ~~8795~~ 1260 (ISIS)

In the Matter of Remedial Action by:	AGREED ORDER
Port of Tacoma and USG Interiors, Inc.	No. DE 3405

TO:

Port of Tacoma
P. O. Box 1837
Tacoma, WA 98401-1837
Attn: Suzanne Dudziak

USG Interiors, Inc.
125 South Franklin Street
Department 176
Chicago, IL 60606
Attn: Lanita Stevens

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I. INTRODUCTION

The mutual objective of the State of Washington, Department of Ecology (Ecology), Port of Tacoma (the Port), and USG Interiors, Inc. (USG) 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. The Port and USG are collectively referred to in this order as the PLPs. This Order requires the PLPs to supplement existing Remedial Investigations of the facility and develop a Feasibility Study. The Feasibility Study will be used to determine a preferred cleanup strategy. Ecology believes the actions required by this Order are in the public interest.

II. JURISDICTION

This Agreed Order is issued pursuant to the authority of the Model Toxics Control Act (MTCA), RCW 70.105D.050(1).

III. PARTIES BOUND

This Agreed 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 Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms used in this Order.

1. Site: The Site has been referred to in the past as USG Interiors, and is currently listed on the Washington State Hazardous Sites List as the Thermafiber, LLC Site (Site).

The Site is generally located at 2301 Taylor Way in Tacoma, Washington. The Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. Based upon factors currently known to Ecology, the Site is more particularly described in Exhibit A to this Order, which includes a detailed Site diagram. The Site constitutes a Facility under RCW 70.105D.020(4).

2. Parties: Refers to the Washington State Department of Ecology, Port of Tacoma, and USG.

3. PLPs: Refers to Port of Tacoma and USG.

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

V. FINDINGS OF FACT

Ecology makes the following findings of fact, without any express or implied admissions of such facts by the PLPs:

1. USG owned and operated a rock wool production facility at 2301 Taylor Way in Tacoma, Washington (Taylor Way Property) between 1959 and 1996. One of the raw materials used in the rock wool manufacturing process was copper smelter slag from the nearby Asarco copper smelter. The slag and its byproducts typically contain levels of arsenic, antimony, lead, copper, zinc, and other heavy metals above the MTCA Cleanup Standards for soils, unrestricted land use.

2. The Site is located within the boundaries of the Commencement Bay Nearshore/Tideflats (CBN/T) Superfund site. The remedial actions for contaminated sediments and upland source control within the CBN/T site are documented in a Record of Decision (ROD), dated September 30, 1989. Upland Source Control was identified as operable unit number 5 under the ROD, and jurisdiction for source control was assigned to Ecology under a cooperative agreement between the United States Environmental Protection Agency (EPA) and Ecology dated June 30, 1989. The Site is adjacent to the Head of Hylebos Waterway Problem Area in the CBN/T Superfund site. Ecology's

primary involvement in the Site was to address source control needs under the ROD. Ecology's Source Control Status Report for the Head of Hylebos Waterway Problem Area, dated June 14, 2000, stated that source control was achieved in the Head of Hylebos Problem area. EPA concurred with this determination. However, the Site continues to be of concern to Ecology under MTCA due to the presence of contaminated soil, and potential for discharge of contaminated groundwater to the Hylebos waterway.

3. In 1973, USG reportedly scraped baghouse dusts and spent shot from the Taylor Way Property and removed the material to two sites referred to by USG and Ecology as "the Highway 99 site" and "the Puyallup site." In 1984, USG voluntarily excavated the materials from the two dump sites and sent them to Chem Security Services, Inc., a hazardous waste management facility at Arlington, Oregon. The vertical and lateral extent of the soil scraping on the Taylor Way Property in 1973 was not documented.

4. A bank seep sample obtained from the Taylor Way Property by EPA in 1980 contained levels of arsenic, copper, lead, nickel, zinc, and mercury which indicated the Taylor Way Property may be a source of contamination to the Hylebos Waterway. In 1992, Ecology, in cooperation with USG, took a bank seep sample, storm drain sample, a sediment sample, and three soil/waste material samples at the Taylor Way Property. The samples showed releases of antimony, arsenic, copper, lead, zinc, chromium, nickel, silver, and mercury from the Taylor Way Property's stormwater, tidal seeps, shoreline sediments, and within soils. The samples were taken as part of Ecology's efforts to control sources of contaminants to the Hylebos Waterway problem area of the Commencement Bay Nearshore/Tideflats Superfund site.

5. Ecology entered into Agreed Order No. DE 93TC-S163 (1994 Agreed Order) with USG on March 1, 1994, for USG to conduct a Phased Remedial Investigation and Feasibility Study (RI/FS). The initial tasks for the phased RI/FS were to carry out an Ecology-approved work plan for a Phased Remedial Investigation, develop a public participation plan, submit a draft and final work plan for cleaning the storm drain system at the Taylor Way Property, and submit a Stormwater Pollution Prevention Plan.

6. In a letter dated May 12, 1995, Ecology agreed to allow USG to pursue interim actions on the Site to control sources of sediment pollution to Hylebos Waterway. Although the 1994 Agreed Order referenced an RI/FS, it was determined that a feasibility study was not needed to move forward with the interim actions and a feasibility study was never required by nor submitted to Ecology. Ecology subsequently entered into two amendments to the 1994 Agreed Order, dated August 10, 1995, and May 13, 1996. The first amendment to the Order required USG to develop an Interim Action Plan for removal of a contaminated soil berm at the north property boundary. It also required USG to develop and implement plans to investigate contaminated waste materials and soils present within the Hylebos Waterway embankment, address heavy metals contamination in stormwater runoff, improve waste management procedures to prevent discharge to the waterway, prevent discharge of contaminated groundwater through the storm drainage system, reduce potential groundwater contamination through application of appropriate infiltration controls, and conduct confirmational monitoring. Although the first amendment discussed implementation of the work through a consent decree, a consent decree was never filed and the work was completed under the first amendment. The second amendment required removal of the contaminated berm, excavation of contaminated soil in the embankment, implementation of the paving and stormwater drainage plans, and confirmational/performance monitoring.

7. A summary of the reports developed under the 1994 Agreed Order and Amendments, and the interim actions completed are attached as Exhibit B to this Order. Although USG completed interim actions to prevent recontamination of the sediments in Hylebos Waterway, Ecology did not consider the interim actions to be the final cleanup actions for the Site, and the Site remains on Ecology's Hazardous Sites List.

8. USG sold the Taylor Way Property to Thermafiber, LLC, in the spring of 1996. Thermafiber, LLC and its successor Thermafiber, Inc. (collectively "Thermafiber") owned the Taylor Way Property from 1996 through 2002, and operated the rock wool production

facility during that time. The Port purchased the Taylor Way Property from Thermafiber on December 19, 2002.

9. In December 2002, Kennedy Jenks Consultants produced a Phase I and Limited Phase II Environmental Site Assessment for the Port of Tacoma, which discusses soil and groundwater contamination on the Taylor Way Property. In November 2003, Kennedy Jenks Consultants produced the Former Thermafiber Site, Soil Removal and Waste Disposal Report. The Report documents removal of a railroad berm by Thermafiber that contained high levels of arsenic, although no confirmation samples were obtained from the footprint. At approximately the same time buildings located on the site were removed by Thermafiber. The Report also documents the 2003 excavation of an area containing diesel and heavy oil between the former buildings and an area where other hydrocarbon-contaminated soils were removed in 1997. These actions were conducted as independent remedial actions by Thermafiber pursuant to the Purchase and Sale Agreement between Thermafiber as Seller and the Port of Tacoma as Buyer.

10. In September – November 2004, Kennedy Jenks Consultants collected soil samples from underneath a proposed building footprint at the Taylor Way Property. The samples indicated that arsenic was present in soils at up to 1,100 mg/kg. Two localized areas of soil within the building footprint were excavated up to 3 feet deep, but no confirmation samples were obtained. The entire building footprint area was subsequently covered with several feet of imported soils, upon which the building would be constructed above the existing Taylor Way Property grade. In April 2005, the Port of Tacoma installed five test pits around the edge of the imported soil to attempt to identify if arsenic remained in the soils underneath the building location. Samples from the test pits indicate that some arsenic above the MTCA, Method C, industrial cleanup level remains in soils beneath the building footprint. These actions were conducted as independent remedial actions.

11. In June 2005, USG excavated soils up to 6 feet deep in two areas of the Taylor Way Property where higher levels of arsenic had been identified in the Phase I and Limited Phase II Environmental Site Assessment. These areas are adjacent to the soil removal from

an earlier interim action conducted under the 1994 Agreed Order. These actions were conducted as independent remedial actions by USG. The excavation report has been submitted to Ecology and will be reviewed formally when Ecology reviews the PLPs' supplemental RI report.

12. In August 2005, the Port of Tacoma removed two underground storage tanks as an independent remedial action. Reports required for documenting removal of underground tanks were submitted to Ecology on November 14, 2005. The UST removal reports will be reviewed formally when Ecology reviews the PLPs' supplemental RI report.

13. USG currently operates under the protection of Chapter 11 of the United States Bankruptcy Code.

14. As set forth in Exhibit B, data about the Site have been generated, and certain interim actions have been completed. However, soil and groundwater contamination remain on the Site. A full remedial investigation, including an assessment of potential sources, pathways, and receptors of contaminants has not been completed. Additionally, no feasibility study (WAC 173-340-350(8)) or Cleanup Action Plan (WAC 173-340-380) have been produced.

VI. ECOLOGY DETERMINATIONS

1. The Port of Tacoma is an "owner or operator" as defined in RCW 70.105D.020(12), of a "facility" as defined in RCW 70.105D.020(4) because the Port of Tacoma is the current owner of the Taylor Way Property, located at 2301 Taylor Way, Tacoma, Washington.

2. USG is the former owner of the facility, and owned and operated the facility at the time of disposal and release of hazardous substances.

3. Based upon all factors known to Ecology, a "release" or "threatened release" of "hazardous substance(s)" as defined in RCW 70.105D.020(20) and RCW 70.105D.020(7), respectively, has occurred at the Site.

4. By letter dated May 19, 1993, Ecology notified USG of its status as a "potentially liable party" under RCW 70.105D.040 after notice and opportunity to comment.

5. Based upon credible evidence, Ecology issued a potentially liable person status letter to the Port of Tacoma dated September 17, 2004, pursuant to RCW 70.105D.040, RCW 70.105D.020(16), and WAC 173-340-500. After providing for notice and opportunity for comment, reviewing any comments submitted, and concluding that credible evidence supported a finding of potential liability, Ecology issued a determination that the Port of Tacoma is a potentially liable person (PLP) under RCW 70.105D.040 and notified the Port of Tacoma of this determination by letter dated December 9, 2004.

6. 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 action(s) required by this Order is(are) in the public interest.

VII. WORK TO BE PERFORMED

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

1. **Supplemental Remedial Investigations (RI)**

A. Scope of Work

Considerable environmental investigations and localized soil removal and cleanup have been performed on the Site. However, work is needed to fill information gaps in previously submitted data and to prepare a feasibility study. The PLPs have prepared a Work Plan and schedule to fill the data gaps and finalize the Site remedial investigations. The Work Plan includes a worker safety and health plan, pursuant to WAC 173-340-810. A copy of the Work Plan and schedule is attached as Exhibit C. Exhibit C is incorporated by reference and is an integral and enforceable part of this Order. The PLPs shall perform the actions in the attached Work Plan and prepare a feasibility study as outlined below.

B. Deliverables and Schedules

1. The schedule for the work and reporting for the supplemental remedial investigation (RI) is set forth in the work plan attached as Exhibit C, and summarized here:

a) Groundwater sampling: The PLPs will complete groundwater sampling within 150 days of the effective date of this Order. The PLPs will submit the results to Ecology within 14 days of receiving final results from the laboratory.

b) Soil Sampling Plan.

- Scope of Work: The PLPs shall submit the Scope of Work for soil sampling within 30 days of submitting the groundwater sampling laboratory results to Ecology. If there is more than one set of groundwater sampling laboratory results, the PLPs shall submit the Scope of Work for soil sampling within 30 days of submitting the last groundwater sampling laboratory results to Ecology.
- Draft Work Plan: Within 45 days of Ecology's approval of the scope of work.
- Final Work Plan: Within 15 days of Ecology's comments on the draft work plan.

c) Supplemental RI Phase I report.

- Draft: Within 100 days from Ecology's approval of the final Soil Sampling Work Plan
- Final: The report shall be subject to Ecology's review. Ecology will provide comments on the Draft RI Phase I report to the PLPs and the parties will establish a mutually agreed upon date for the PLP's resubmittal of the RI report. If Ecology determines that no further action is necessary, upon Ecology's approval, this RI report will be the final RI report for the Site.

d) Supplemental RI Phase II Plan:

- As set out in Exhibit C, if Ecology determines it to be necessary, based on the results and conclusions from the phase I work conducted under Exhibit C, the PLPs shall submit a Phase II work plan to Ecology within 30 days of a written request by Ecology. The plan shall include a schedule for completion of the work and submittal of the RI Phase II report. The plan is subject to Ecology's approval. If Ecology determines no further sampling is needed after Phase I, the PLPs shall not be required to submit a Phase II plan.

e) Supplemental RI Phase II report

- The PLPs shall submit a draft report in accordance with the approved work plan schedule mentioned in paragraph VII.1.B.1(d), above, summarizing the results of the Phase I sampling results and explaining the results of the Phase II sampling. The Draft RI Phase II report shall be subject to Ecology comment and approval. Ecology will provide comments on the Draft RI Phase II report to the PLPs and the parties will establish a mutually agreed upon date for the PLP's resubmittal of the RI report. Upon Ecology's final approval, this RI report will be considered the final RI report for the Site.

2. Progress Reports: The PLPs shall keep Ecology apprised of the progress of the work plan activities through email or written correspondence, at a minimum of once a month.

3. Laboratory results: The PLPs shall provide laboratory results for soil and water analysis to Ecology within 14 days of receiving final results from the laboratory.

4. Hydrogeologic monitoring: The PLPs shall provide results of the water level monitoring and slug tests, along with a draft map of groundwater flow patterns, to Ecology within 30 days of conducting said monitoring.

5. Electronic Data Submittal: Pursuant to WAC 173-340-840(5), the PLPs shall submit all soil and groundwater sampling data to Ecology according to the requirements of Ecology's Policy 840 Data Submittal Requirements. The electronic data for each required phase of the supplemental RI shall be submitted according to the same schedule as the written reports.

2. **Feasibility Study (FS)**

A. Scope of Work

The PLPs shall develop an outline for a feasibility study (FS) report to evaluate cleanup action alternatives. Based on Ecology's review and approval of the FS outline, the PLPs shall produce a FS report that follows the requirements of WAC 173-340-350(8).

B. Deliverables and Schedule

1. Outline: The PLPs shall submit a draft outline and schedule for the FS report to Ecology at the same time as the Draft Supplemental RI Phase I Report, described above in paragraph VII. 1. B. 1. c. The outline shall notify Ecology of the different clean up options the PLPs will be evaluating in the FS report. The FS outline and schedule will be subject to Ecology's approval. A final FS outline and schedule shall be submitted within 30 days of receiving Ecology's comments on the draft FS outline.

2. FS Report: Based on the results of the RI report(s), described above in paragraphs VII. 1. B. 1.c. and e., the PLPs shall produce a draft FS report in accordance with WAC 173-340-350(8). The draft FS report shall be delivered to Ecology within 60 days of Ecology's approval of the final FS outline and schedule. The draft FS report shall be subject to Ecology comment and approval. Ecology will provide comments on the draft FS report to the PLPs and the parties will establish a mutually agreed upon date for the PLP's resubmittal of the final FS report.

3. **Progress**

If, at any time after the first exchange of 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 after 30 days prior notice to the PLPs, unless the PLPs issue the final deliverable within 30 days of Ecology's notice.

VIII. TERMS AND CONDITIONS OF ORDER

1. **Public Notices**

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 such public notice. Ecology 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.

2. **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 Site under Chapter 70.105D RCW, 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 the Order. The PLPs shall pay the required amount within ninety (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. A general description 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.

3. **Implementation of Remedial Action**

Except where necessary to abate an emergency situation, the 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.

4. **Designated Project Coordinators**

Ecology:

Joyce Mercuri, Site Manager
Toxics Cleanup Program
Southwest Region
Department of Ecology
P. O. Box 47775
Olympia, WA 98504-7775
(360) 407-6260
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The project coordinator(s) shall be responsible for overseeing the implementation of this Order. The Ecology project coordinator will be Ecology's designated representative for the Site. 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 coordinator(s).

Ecology and the PLPs may change their respective project coordinator(s), but must provide ten (10) days advance written notification of the change to the other party.

5. **Performance**

All work performed pursuant to this Order shall be under the direction and supervision, as necessary, of a licensed professional engineer or licensed hydrogeologist, or equivalent as approved by Ecology, with experience and expertise in hazardous waste site investigation and cleanup. USG's designated professional engineer, Martin Carlson of CDM, has been approved by Ecology. The PLPs shall notify Ecology in writing of the identity of any other such engineer(s), or hydrogeologist(s), or others, 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.

Any construction work performed pursuant to the Order shall be under the supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered in the State of Washington, except as provided in RCW 18.43.130.

6. **Access**

Ecology or any Ecology authorized representative shall have the full authority to enter and freely move about all property at the Site 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 Site not owned or controlled by the PLPs where remedial activities or investigations will be performed pursuant to this Order. If the PLPs are unable to secure necessary access rights, pursuant to WAC 173-340-800(8), Ecology shall make reasonable efforts to facilitate access to real property for PLPs conducting remedial actions under this Order. Ecology or any Ecology authorized representative shall give reasonable notice before entering any Site property

owned or controlled by the PLPs unless an emergency prevents such notice. All persons who access the Site pursuant to this paragraph shall comply with the approved health and safety plan, if any. Ecology employees and their representative shall not be required to sign any release or waiver as a condition of Site property access.

7. **Sampling, Data Reporting, 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 them or on their behalf available to Ecology and shall submit these results in accordance with this Section and Section VII of this Order. All sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with 173-340-840(5) WAC and Ecology Toxics Cleanup Program Policy 840: Data Submittal Requirements.

If requested by Ecology, the PLPs shall allow split or duplicate samples to be taken by Ecology and/or its authorized representative of any samples collected by the PLPs pursuant to implementation of this Order. PLPs shall notify Ecology a minimum of seven (7) days in advance of any sample collection or work activity at the Site (unless 7 days advance notice is not practicable, in which case PLPs shall give as much advance notice as is reasonably practicable). Ecology shall, upon request, allow split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Order to be taken by the PLPs or its authorized representative provided it does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section VIII. 6. of this Order, 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 Chapter 173-50 WAC for the specific analyses to be conducted, unless otherwise approved by Ecology.

8. **Public Participation**

Pursuant to 173-340-600(9) WAC and 173-340-600(11)(a) WAC, a public participation plan is required for this Site. 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 Site. However, the PLPs shall cooperate with Ecology, and shall:

A. If agreed to by Ecology, develop an 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;

B. Notify Ecology's project coordinator prior to any of the following: the issuance of all press releases; distribution of fact sheets; performance of other outreach activities; meetings with the interested public and/or local governments associated with this Order. Likewise, Ecology shall notify the PLPs prior to the issuance of all press releases and fact sheets, and before 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 their audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology;

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

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

Citizens for a Healthy Bay
917 Pacific Avenue Suite
Tacoma, WA 98402

Tacoma Public Library – Main Branch
Northwest Room
1102 Tacoma Avenue South
Tacoma, WA 98402

Ecology's Southwest Regional Office
300 Desmond Drive
Lacey, WA 98503

At a minimum, copies of all public notices, fact sheets, and press releases; all quality assured monitoring data; remedial action plans and reports, supplemental remedial planning documents, and all other similar documents relating to performance of the remedial action required by this Order shall be promptly placed in these repositories.

9. **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 their 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.

10. **Resolution of Disputes**

A. In the event a dispute arises as to an approval, disapproval, proposed change, or other decision or action by Ecology's project coordinator, or an itemized billing statement under Section VIII.2 (Remedial Action Costs), the Parties shall utilize the dispute resolution procedure set forth below.

1. Upon receipt of the Ecology project coordinator's decision, the PLPs have fourteen (14) days within which to notify Ecology's project coordinator of its objection to the decision.

2. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

3. The PLPs may then request Ecology management review of the decision. This request shall be submitted in writing to the Southwest Region Toxics Cleanup Section Manager within seven (7) days of receipt of Ecology's project coordinator's decision.

4. The Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within sixty (60) days of the PLPs' request for review. The Section Manager's decision shall be Ecology's final decision on the disputed matter.

B. 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.

C. 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.

11. **Extension of Schedule**

A. An extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the deadline for which the extension is requested, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify the reason(s) the extension is needed. The request shall specify:

(i) The deadline that is sought to be extended;

(ii) The length of the extension sought;

(iii) The reason(s) for the extension; and

(iv) Any related deadline or schedule that would be affected if the extension were granted.

B. 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 includes, but is not limited to:

(i) 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 or delays in performing work on Site property not owned by the PLPs and for which access is unreasonably denied by a third party; or

(ii) Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or

(iii) Endangerment as described in Section VIII 13 of this Order.

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. Further, delays in performing work on Site property not owned by the PLPs and for which access is unreasonably denied by a third party shall not necessarily constitute good cause for extending the schedule for performing work on Site properties to which the PLPs own or have access.

C. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give the PLPs written notification in a timely fashion of any extensions granted pursuant to the 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 12 when a schedule extension is granted.

D. 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:

(i) Delays in the issuance of a necessary permit which was applied for in a timely manner;

(ii) Other circumstances deemed exceptional or extraordinary by Ecology; or

(iii) Endangerment as described in Section VIII 13 of this Order.

12. **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.14 of this Order, 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 the Order represents a substantial change, Ecology will provide additional public notice and opportunity to comment. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section VIII.10 of this Order.

13. **Endangerment**

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

If, for any reason, the PLPs determine that any activity being performed at the Site 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 for such period of time as Ecology determines is reasonable under the circumstances.

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

14. **Reservation of Rights/No Settlement**

This 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 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 Chapter 70.105D RCW, including the right to require additional or different remedial actions at the Site 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 Site.

15. **Transfer of Interest in Property**

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site 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 Site, and during the effective period of this Order, the PLPs shall serve a copy of this Order upon 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 restrict uses and activities to those consistent with this Order and notify all transferees of the restrictions on the use of the property.

16. **Compliance with Applicable Laws**

A. 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.

B. Pursuant to RCW 70.105D.090(1), the substantive requirements of Chapters 70.94, 70.95, 70.105, 77.55, 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 and that are known to be applicable at the time this Order becomes effective have been included as exhibit D and are binding and enforceable requirements of this Order.

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 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 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.

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 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.

17. **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 for death or injuries to persons or for loss or damage to property arising from or on account of acts or omissions of the PLPs, and/or the PLPs' 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 arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in implementing the activities pursuant to 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 remedial activity

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

X. ENFORCEMENT

Pursuant to RCW 70.105D.050 this Order may be enforced as follows:

1. The Attorney General may bring an action to enforce this Order in a state or federal court.

2 The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for remedial actions and orders related to the Site.

3. In the event the PLPs refuse, without sufficient cause, to comply with any term of this Order, the PLPs will be liable for:

A. 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

B. Civil penalties of up to $25,000 per day for each day it refuses to comply.

4. 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.

USG INTERIORS, INC

Christopher Lawson Date
Vice President, Manufacturing

PORT OF TACOMA

Timothy Farrell Date
Executive Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Rebecca S. Lawson 9/1/06
Rebecca S. Lawson, P.E. Date
Regional Section Manager
Toxics Cleanup Program
Southwest Regional Office
(360) 407-6241

EFFECTIVE DATE OF THIS ORDER: August 31, 2006

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

X. ENFORCEMENT

Pursuant to RCW 70 105D 050 this Order may be enforced as follows:

1 The Attorney General may bring an action to enforce this Order in a state or federal court.

2. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for remedial actions and orders related to the Site

3 In the event the PLPs refuse, without sufficient cause, to comply with any term of this Order, the PLPs will be liable for:

A. 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

B. Civil penalties of up to $25,000 per day for each day it refuses to comply.

4. 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.

USG INTERIORS, INC

Christopher Lawson Date
Vice President, Manufacturing

PORT OF TACOMA

7/27/06
Timothy Farrell Date
Executive Director

DU PAULSEN FOR

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Rebecca S. Lawson, P E. Date
Regional Section Manager
Toxics Cleanup Program
Southwest Regional Office
(360) 407-6241

EFFECTIVE DATE OF THIS ORDER: August 31, 2006

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

X. ENFORCEMENT

Pursuant to RCW 70 105D 050 this Order may be enforced as follows:

1. The Attorney General may bring an action to enforce this Order in a state or federal court.

2. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for remedial actions and orders related to the Site.

3. In the event the PLPs refuse, without sufficient cause, to comply with any term of this Order, the PLPs will be liable for:

A. 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

B. Civil penalties of up to $25,000 per day for each day it refuses to comply.

4. 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.

USG INTERIORS, INC

7/11/06
Christopher Lawson Date
Vice President, Manufacturing

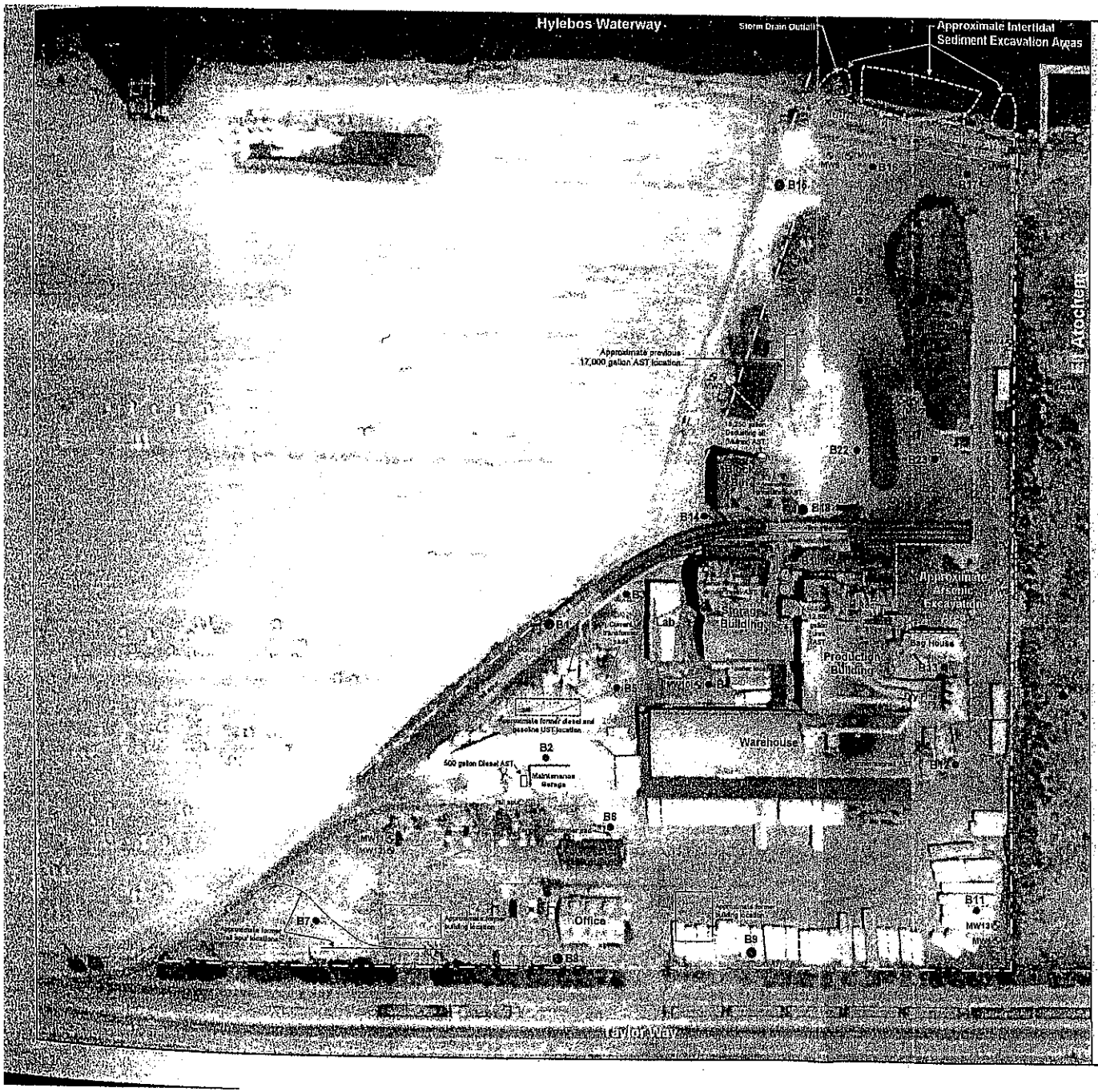
PORT OF TACOMA

Timothy Farrell Date
Executive Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Rebecca S. Lawson, P.E. Date
Regional Section Manager
Toxics Cleanup Program
Southwest Regional Office
(360) 407-6241

EFFECTIVE DATE OF THIS ORDER: August 31, 2006



LEGEND:

- ● B2 — Approximate soil sampling location and boring designation
- ● B1 — Approximate soil and reconnaissance groundwater sampling location and boring designation
- ⊗ MW6 (MW12) — Approximate shallow aquifer groundwater monitoring well location and designation (parentheses indicate that the well was not sampled)
- ⊗ MW5 (MW10) — Approximate intermediate aquifer groundwater monitoring well location and designation (parentheses indicate that the well was not sampled)

NOTES:

1. All locations are approximate.
2. Samples were collected by Kennedy/Jenks Consultants between 28 October and 1 November 2002.
3. Approximate previous excavation areas are based on maps provided in reports prepared by AGI (1996, 1997a, 1997b, 2000).

0 100 200
Approximate Scale in Feet

N

Kennedy/Jenks Consultants

THERMAFIBER FACILITY
2301 TAYLOR WAY
TACOMA, WASHINGTON

SITE OVERVIEW MAP

026130.00/FIGURE3.VSD

FIGURE 3

AGREED ORDER No. DE3405
EXHIBIT A – SITE MAP

AGREED ORDER No. DE 3405
Former USG Interiors Plant Site

EXHIBIT A – 1
Site Vicinity Map

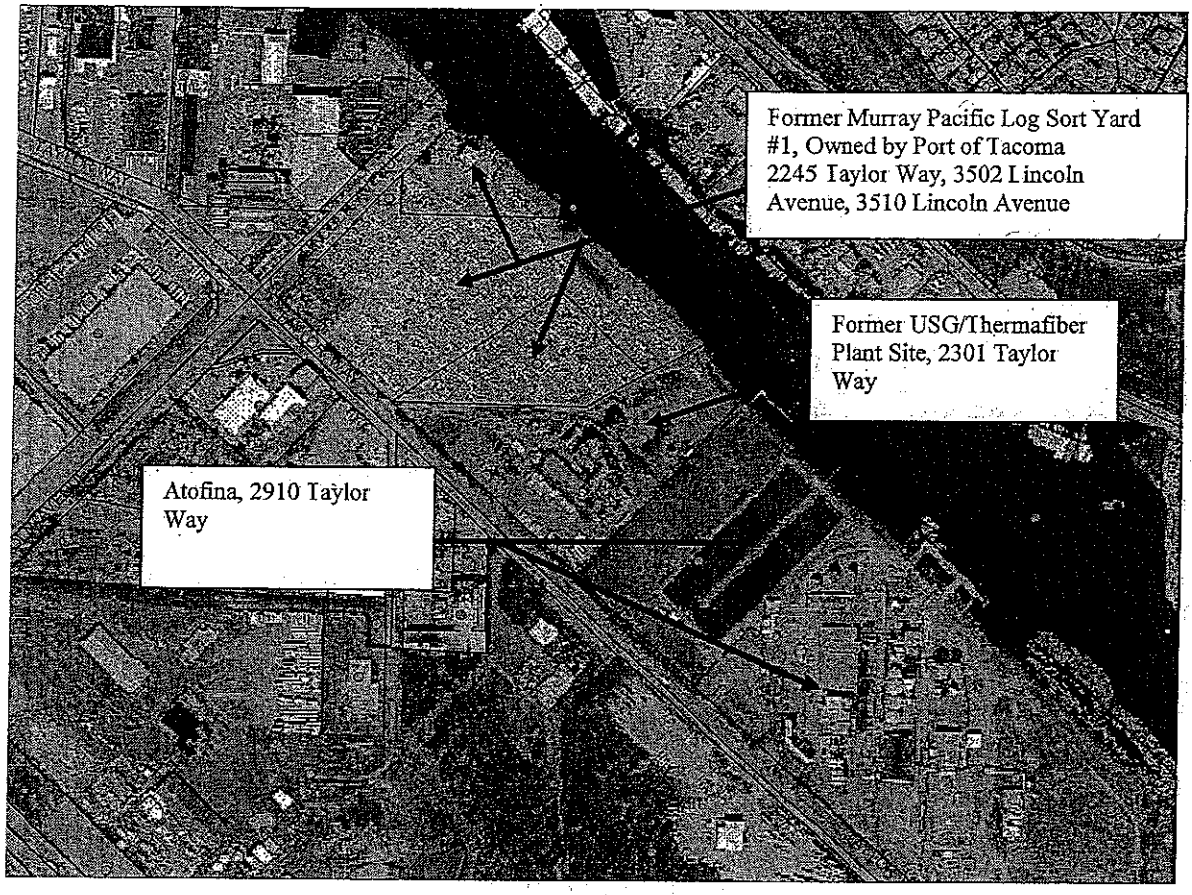


EXHIBIT B: Summary of Reports and Site Activities

USG Interiors Reports

3/94: Final Work Plan, Phased RI
4/94: Storm Drain Work Plan: install new pipe section w/ tide valve at outfall and clean out system (new pipe section put on hold until paving/storm drain project).
5/94: Phase I RI: 4 pt. soil composites 4 locations (only to 6-12" deep), 6 boreholes
11/94: Storm Drain Cleaning Summary: system pressure cleaned
2/95: Phase II RI: 5 2nd aquifer wells, 3 additional surface wells, soil samples collected from borings, sampled 4 seeps
6/95: Technical Memo, GeoMedia, Arsenic Levels and Groundwater Flow Directions near the Salt Pads
2/96: Final source control plan – interim actions: berm interim action, bank investigation/excavation; replace storm drain lines, monitor sw, gw, seeps (contains good summary of RI)
2/96: Final Interim Action Work Plan: Berm Evaluation and Disposal
4/96: Laboratory Data – Berm and Tidebank Soils
7/96: Draft interim action work plan – bank excavation and restoration
7/96: design report – paving and stormwater discharge system improvements
10/96: Berm Evaluation and Disposal
2/97: Supplemental Tidebank Investigation Results
3/97: Hydrocarbon Remediation
6/97: Interim Action Work Plan – Bank excavation and Restoration
12/97: Bank Excavation and Restoration Report
7/98: Design Report – Paving and stormwater Discharge
10/98: Addendum #1, Bank Excavation and Restoration Report
12/98: Soil Quality Assessment (MW-9 Area)
3/99: Revised Addendum #1, Bank Excavation and Restoration
8/99: Appendix to Ecology Milestones for Head of Hylebos Waterway – Tech Memo – Analysis of the Potential for Upland Groundwater to Contaminate Sediments in the Head of Hylebos Waterway.
6/00: Final Source Controls Implementation

USG Interiors Groundwater Monitoring Reports

May 20, 1998 – Groundwater and Seeps
December 18, 1998 - Groundwater
July 19, 1999 – Groundwater, Seep, Storm Drains
May 16, 2000 – Groundwater and Storm Drain
August 7, 2000 – Groundwater and Storm Drain
October 17, 2000 – Groundwater and Seeps
January 16, 2001 – Groundwater and Storm Drains
March 6, 2001 – Groundwater and Storm Drains
June 15, 2001 - Groundwater
September 14, 2001 - Groundwater
June 26, 2002 – Groundwater Monitoring and Summary Evaluation – groundwater, seeps, stormwater

Port of Tacoma/Thermafiber Reports

Phase I and Limited Phase II Environmental Site Assessment, Kennedy/Jenks Consultants, December 6, 2002
Former Thermafiber Site Soil Removal and Waste Disposal Report, Kennedy Jenks Consultants, November, 2003

2004 Soil Sampling Summary Report (for Carlilie Trucking Preload), Kennedy Jenks Consultants, November 11, 2004.
Soil Sampling Summary Report, Port of Tacoma, Carlilie Leasehold, Kennedy Jenks Consultants, March 11, 2005. (Supersedes November 11, 2004 report).

Work Done by USG – 1996 - 2002

Berm Evaluation and Disposal; 10/23/96:
19 segments, 23-30 feet long. 5 point composite from 6-8" deep at excavated surface. Additional excavation occurred in segment 1-12 because exceeded cleanup levels (MTCA industrial). Segments 1, 3, 4, and 5 had to remove 3-4 extra feet below surrounding grade. Also segments 6-12 were eventually overexcavated to below 7' below grade because they were also part of the hydrocarbon area. Soils left in place were up to 210 ppm arsenic at up to 4' below grade.

Bank
12/97: Bank Excavation and Restoration Report
10/98: Addendum #1, Bank Excavation and Restoration Report
3/99: Revised Addendum #1, Bank Excavation and Restoration
EPA found some confirmation samples did not meet the Sediment Quality Objectives. USG re-excavated that area. Ecology and EPA agreed that all samples in the end met the standards.

Paving/Storm Drain
Final Source Control Plan – Interim Actions – 2/96: Conceptual idea
Design Report - 7/98: Ecology approved
Final Source Controls Implementation 6/00: Did not pave over former berm footprint as plans were to build new rail spur there. Paved area between bank and older concrete slab, and also included paving in MW 9 area after excavated. Included complete replacement of existing stormwater system along northwest side of Taylor Way Property (not originally slated for replacement but found arsenic infiltration to stormwater). Entire Taylor Way Property storm system is now new. Used HDPE pipe w/ welded joints. pipes pressure tested. There is a lift station & pressure line from cb1 & 2 to vault at MH1. There are 5 type 2 sediment control cb's & 10 type 1 cb's.

Hydrocarbon Remediation 1997
Work carried out separately from Ecology Order. 5000 tons soils contaminated with bunker C/heavy diesel removed. Source was above ground storage tanks. Extended onto the former Murray Pacific property, now owned by the Port of Tacoma (current property addresses 2245 Taylor Way, 3502 Lincoln Avenue, and 3510 Lincoln Avenue). Dug down to silt layer. TPH smear zone 2-3' above silt layer. Base & sidewall samples were not detected (except on one sidewall contained 98 ppm oil). Groundwater contained diesel/oil. They kept pit open & soaked up sheen w/ pads. Then pumped water & sprayed back into excavation w/ added 'nutrients' to promote microbial degradation of the TPH – levels of TPH dropped off from 24 ppm to 2 2 ppm. Still above cleanup standards. Filled hole back in.

MW-9 Soil Remediation
Excavated soils delineated between hazardous/non-hazardous (based on TCLP). Much of upper 1-2 feet was hazardous – 1,358 tons haz waste & 2740 tons subtitle D. Excavation extended into Elf Atochem property (2901 Taylor Way; aka Atofina property or Arkema property) approximately 5 feet past where visible mineral fiber and black vitreous materials were visually removed. Sidewall samples on Atochem property (SW 27-30) boundary still high in arsenic (up to 640 ppm). USG did not clean up as they believe the arsenic is from operations at Atochem site.* Excavation based on meeting MTCA, Method A Industrial

standard – (however this was an interim action and now the level has changed to 20 ppm, and may not be protective of groundwater).
One base sample (B13) of 290 ppm at 2' deep, other base samples 3-4' deep 270 & 240 ppm. Few others between 1-200. 11 of base samples were under 40 ppm, with several of those ND. 4 sidewall samples close to building foundations at depths of 1-3' contained 380 to 460 ppm arsenic. Assumed clean under buildings since they were in place prior to use of Asarco slag.

*Arsenic on Atochem: July 11, '95 memo from Atochem to Joyce Mercuri contains data from the fill materials on the Atochem site next to USG in this area – that shows fairly low levels of arsenic (high around 50 ppm). However, the fill appears to be on top of the area where the confirmation samples from the MW 9 excavation were taken. Additional information is needed about vertical and lateral extent of arsenic contamination on this property boundary.

Post-Interim Action Monitoring by USG

The Final Source Control Plan – Interim Actions (AGI, 2/12/96) required quarterly sampling of monitoring wells and embankment seeps for 3 years, and wet and dry weather stormwater sampling quarterly, for 2 years.

Groundwater: MW 1 has highest levels of arsenic (520 ppb from June 2002 monitoring report). Regional hydrogeology not clear if this is upgradient of MW9 source area, or is possibly affected by Atochem. Boring at this location did not contain especially high arsenic. High arsenic still present in other wells (120 ppb at MW2; 85 ppb MW3; 160 ppb MW9). 2 surface aquifer wells closest to waterway have relatively low arsenic. Not clear if these represent discharge from Taylor Way Property groundwater or if there is a more cross gradient toward Murray Pacific.

Seeps: Seeps were supposed to have been sampled but often were not identifiable when attempted to sample – especially after the bank remediation work occurred in '97. The most consistently present seeps were during 4/98 and 4/99. At that time they contained up to 90 ppb arsenic and 130 ppb zinc. Seep 3 contained 260 ppb arsenic in 8/00. After 10/00, no seeps were identified.

Storm Drain: Storm water was required to be analyzed during dry and wet weather events. After the storm drain lines were replaced, no dry weather events were present. Wet weather storm events were sampled in 11/00, 1/01, 6/01, and 8/01. Arsenic was present in each event – ranging from 17 to 120 ppb. Analysis was for total and dissolved metals, and both were present at similar levels. Copper was present at up to 22 ppb, chromium at 16 ppb, lead at 150 ppb, nickel at 23, and zinc at 120.

Work done by Thermafiber/Port of Tacoma/Carlilie Trucking/USG 2002-present

December 6, 2002-Phase I and Limited Phase II Environmental Site Assessment; Kennedy/Jenks Consultants. Found slag and waste on outer 2' of rail berm in westerly corner of Taylor Way Property. Found petroleum contaminated area between old above ground tank area and building.

November, 2003- Soil Removal and Waste Disposal Report, Kennedy Jenks Consultants. Removed 1006 tons of hazardous waste from old railroad berm, and combined rest w/ petroleum removed. *No confirmation samples underneath berm.* Excavated oily area waterward of old buildings – between buildings and former hydrocarbon removal area. Removed diesel/oil above 2,000 mg/kg, 7-12 bgs. Sidewalls and bottom were generally quite low except for waterward edge had 1930 and 1860 ppm diesel and oil respectively. BTEX, PCBs not detected. Some PAH detected below MTCA "A" industrial. Dewatering

water contained 553 ppb arsenic. Hole backfilled with blast furnace slag – tested for priority pollutant metals and were below MTCA standards.

September-November, 2004 – Port of Tacoma consulted with Ecology about need to preload for warehouse building. Ecology requested that contaminated soils beneath the preload area be removed before adding preload so that future Site work would not preclude cleanup in that area. Soil sampling beneath preload area by Kennedy/Jenks – report done 11/11/04, superseded by March 11, 2005 Soil Sampling Summary Report, (K/J-496016). Sample B109 contained 1100 ppm at the surface. Sample B-1-3 contained 240 ppm arsenic at 3 feet deep. This area was excavated to 3 feet deep. Groundwater was encountered at 3.5 feet depth. A second part of the preload was excavated to 2 feet deep – 2' depth samples in this area (prior to excavation), contained only 13 ppm and <5 ppm arsenic. No confirmation samples were obtained from either excavation area. The remainder of the preload area was not overexcavated.

April, 2005 - Ecology requested the Port of Tacoma to voluntarily install five test pits around the edge of the imported soil of the building preload to attempt to identify if arsenic remained in the soils underneath the building location. Samples from the test pits indicate that some arsenic above the MTCA, Method C, industrial cleanup level remains inTaylor Way Property soils beneath the building footprint. Documentation for this work was faxed to Ecology.

June, 2005 - USG voluntarily excavated soils up to 6 feet deep in two areas of the Taylor Way property where higher levels of arsenic had been identified in the Phase I and Limited Phase II Environmental Site Assessment. These areas are adjacent to the soil removal from an earlier interim action conducted under the 1994 Agreed Order. Ecology will review the results from confirmation sampling at those excavation areas when they are reported with the Supplemental RI required under this Order.

August, 2005 – During construction activities to develop the Carlilie Trucking Facility at the Taylor Way property, the Port of Tacoma and Carlilie's contractor (Donovan Construction) discovered and removed two previously undocumented underground storage tanks. Documentation of this removal was submitted to Ecology on November 15, 2005.

CDM

Exhibit C to Agreed Order No. DE3405 Between the Department of Ecology, USG Interiors, Inc. and the Port of Tacoma

Final Work Plan
Supplemental Remedial Investigation
2301 Taylor Way
Tacoma, Washington

June 27, 2006

Prepared For:

USG Corporation
125 South Franklin Street
Post Office Box 6721
Chicago, Illinois 60680-6721

and

Port of Tacoma
P.O. Box 837
Tacoma, Washington 98401

Prepared By:

CDM
11811 NE 1st Street, Suite 201
Bellevue, Washington 98005

CDM Project No. 19921.38072.Tacoma RT

Exhibit C to Agreed Order No. DE3405
Between the Department of Ecology,
USG Interiors, Inc. and the Port of Tacoma

A Report Prepared For:

USG Corporation
125 South Franklin Street
Post Office Box 6721
Chicago, Illinois 60680-6721

and

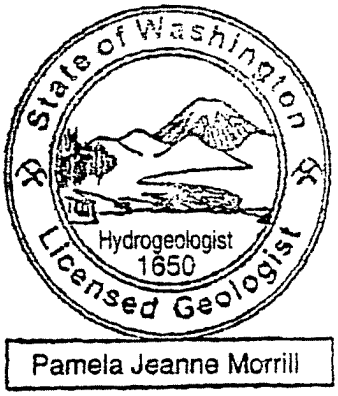
Port of Tacoma
P.O. Box 837
Tacoma, Washington 98401

FINAL WORK PLAN
SUPPLEMENTAL REMEDIAL INVESTIGATION
2301 TAYLOR WAY
TACOMA, WASHINGTON

June 27, 2006

Pamela J. Morrill, CHMM, LHG
Project Manager

Martin E. Carlson P.E.
Associate



CDM
11811 N.E. 1st Street, Suite 201
Bellevue, Washington 98005
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CDM Project No. 19921.38072.Tacoma RT

Contents

Appendices

Figures

Section 1
Introduction

1.1 General

This Supplemental Remedial Investigation (RI) Work Plan (Work Plan) has been prepared on behalf of USG Interiors, Inc. (USGI) and the Port of Tacoma (collectively referred to as the potential liable parties (PLPs) by Camp Dresser & McKee Inc. (CDM). The PLPs, or their authorized agent, will complete the work described in this Work Plan in accordance with the State of Washington Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC) under Agreed Order No. DE3405

The Work Plan presents a technical approach for conducting a supplemental remedial investigation at the Site generally located at 2301 Taylor Way, Tacoma, Washington. As explained in Agreed Order No. DE3405 paragraph IV. 1., the Site is defined by the extent of contamination caused by the release of hazardous substances at the Site. This Work Plan is applicable to the entire Site.

1.2 Site Location and Description

The properties referenced in this Work Plan include the property at 2301 Taylor Way, Tacoma, Washington (Taylor Way Property) and two properties adjacent to the Taylor Way Property, which will be referred to as the Atofina Property, located at 2901 Taylor Way, and the Port of Tacoma Property, located at 2245 Taylor Way, 3510 Lincoln Avenue, and 3502 Lincoln Avenue (Formerly Murray Pacific Log Sort Yard #1).

The Taylor Way property was formerly owned and occupied by USGI and Thermafiber, and is now owned by the Port of Tacoma. A mineral fiber insulation manufacturing facility was demolished from the property in 2002. The Taylor Way Property is an L-shaped 9.4 acre parcel on the southwest shore of the Hylebos Waterway in Tacoma, Washington (**Figure 1**) *(USE figure 1-A from the order for this figure if appropriate)*.. The Taylor Way Property is partially asphalt-paved and is currently under redevelopment. **Figure 2** shows the Taylor Way Property configuration prior to demolition of the plant buildings.

The Site lies within the Commencement Bay Nearshore Tideflats Superfund Area (CBN/T). Taylor Way borders the southwest side of the Taylor Way Property. A former chemical manufacturing plant owned by Atofina (formerly ELF Atochem) borders the southeast side of the Taylor Way Property. A gravel-surfaced yard (formerly Murray Pacific Log Yard #1) that is owned by the Port of Tacoma (Port of Tacoma Property) is located to the north, and the Hylebos Waterway is located to the northeast.

1.3 Objective and Scope of Supplemental RI

The objective of the work to be completed under this Work Plan is to develop a comprehensive portrayal of existing contamination in soil and groundwater throughout the Taylor Way Property. In addition, metals concentrations on surrounding properties will be evaluated to establish their relationship with the Taylor Way Property and thus define the Site boundaries. The PLPs will accomplish the objectives of the Work Plan by following the scope of work described below:

- Summarize localized soil removal activities completed on the Taylor Way Property and residual contaminant concentrations in soil and groundwater.
- Characterize groundwater flow patterns in the surface and intermediate aquifers for the Site and immediate vicinity with the purpose of identifying potential receptors or upgradient sources to the contaminated groundwater at the Site.
- Evaluate possible sources of arsenic and other contaminants in Site groundwater.
- Conduct additional sampling and analysis of Site soils in order to fill data gaps. Specific data gaps may include, but not be limited to, the former building footprints, former paved area along southwestern side of the property near Taylor Way, southeastern boundary with Atofina, and areas of former diesel and gasoline underground storage tanks (USTs).
- Evaluate potential contaminants of concern (COC) and make a determination of Site COC.
- Develop a conceptual understanding of actual and potential exposure pathways and receptors of site COCs.
- Evaluate the effectiveness of Site interim actions (i.e., source removal activities, site paving, and stormwater retrofits) in meeting groundwater, surface water, and soil cleanup standards, particularly with respect to future development plans.

Section 2
Background

2.1 Site History

The Taylor Way Property was originally developed in the early 1940s with a carbide plant that was operated by Carbide Corp. until 1946 (Kennedy Jenks Consultants [KJC], 2002). Between 1946 and 1959, Mineral Fiber Producing Company and Feltrock Insulation Manufacturing Company owned the Taylor Way Property (KJC, 2002). In 1959 United States Gypsum Company purchased the Taylor Way Property. Ownership was transferred to subsidiaries of US Gypsum in 1985 (USG Acoustical Products Company) and again in 1987 (USGI) (KJC, 2002). USGI sold the Taylor Way Property to Thermafiber LLC (Thermafiber) in the spring of 1996. The mineral fiber manufacturing facility was closed in August 2002 and above ground structures were removed. The Port of Tacoma purchased the Taylor Way Property from Thermafiber and the Port of Tacoma currently owns the Taylor Way Property.

Mineral fiber insulation products were produced on the Taylor Way Property between 1946 and 2002. Raw materials consisting of slag and basalt rock were mixed with coke and melted in large cylindrical vessels called cupolas (KJC, 2002). The molten material was extruded into the spinning disk and expelled through a high-speed air stream to produce fine fibers. These fibers were used to make insulation. Slag obtained from ASARCO was used as raw material from about 1959 to 1973. ASARCO slag was later found to typically contain high concentrations of arsenic, copper, lead, zinc, antimony, and silver and therefore became a source of contamination on the Site.

2.2 Prior Environmental Assessment Studies

In 1994, USGI entered into Agreed Order No. DE 93 TC-S163 with Ecology to begin Site evaluation for environmental contamination. The Agreed Order followed previous voluntary source control actions implemented by USGI in the mid-1980s, which generally included removal of surface and near surface source material between the plant and the Hylebos Waterway. Initially, the Agreed Order required several phases of remedial investigation, followed by preparation of a source control plan. RI Phases I and II conducted in 1994 and 1995 by CDM (formerly AGI Technologies and Applied Geotechnology Inc. [AGI]) identified metals, primarily arsenic, in soil, groundwater, and seeps (AGI, 1994a; AGI 1995). Additional investigations included evaluation of metals concentrations in a berm formerly located along the north side of the Taylor Way Property that abuts the Port of Tacoma Property (AGI, 1996a), in seeps and sediments along the tidebank (AGI, 1997d), and in near surface soils on the southeast side of the plant buildings (AGI, 1998a), and also assessment of petroleum hydrocarbons in soil and groundwater (AGI, 1993).

In addition to the work conducted by CDM, KJC conducted a Phase I and Limited Phase II Environmental Site Assessment (ESA) in 2002 on behalf of the Port of Tacoma

(KJC, 2002) and supplemental soil sampling under the new building footprint (KJC, 2005).

2.3 Summary of Interim Actions (IA)

2.3.1 Soil-Related IA Conducted by CDM/USGI

Agreed Order No. DE 93TC-S163 was amended in August 1995 and May 1996. These amendments obligated USGI to develop plans and to conduct interim actions to control sources of metals to the Hylebos Waterway. Between 1996 and 1999 USGI undertook a series of source control actions to reduce metals concentrations (primarily arsenic) and petroleum hydrocarbons in Site soil and groundwater. Investigation and interim actions were conducted in accordance with various work plans (AGI, 1996c; AGI, 1996d; AGI 1994b; AGI 1994c). In 2005, USGI undertook an additional independent remedial action to remove contaminated soils from an area near a new warehouse building being constructed on the property. These actions are described below.

Berm Soil and Bunker C Interim Action – During the summer of 1996, a soil berm along the Taylor Way Property's north side was removed (AGI, 1996a; AGI, 1996b, AGI, 1997b). A total of 4,420 tons of soil was removed and disposed at offsite landfills. Following berm removal, about 5,000 tons of petroleum contaminated soils (PCS) related to a former Bunker C fuel tank were also excavated and properly disposed of at a permitted landfill. Short-term groundwater treatment was implemented during the cleanup. The hydrocarbon cleanup was completed as an independent remedial action.

Interim actions were completed in accordance with MTCA Method A cleanup levels in effect at the time. Following its removal, residual arsenic concentrations in soils underlying the former berm ranged between <7.5 and 210 milligrams per kilogram (mg/kg). The Method A industrial soil cleanup level for arsenic was 200 mg/kg. Subsequent PCS excavation removed an additional one-half of the soils underlying the former berm down to the native tideflat layer. Total petroleum hydrocarbons (TPH) quantified as diesel and motor oil were detected in one of the fifteen confirmatory samples collected. TPH concentrations in this one sample were below the Method A cleanup level of 200 mg/kg in effect at the time. At the conclusion of groundwater treatment, the concentration of diesel range petroleum hydrocarbons was about 1.5 milligram per liter (mg/L) - slightly above the Method A groundwater cleanup level that was in effect at the time, but well below the presumed site-specific cleanup level of 10 mg/L, which at that time was considered applicable for diesel-range petroleum hydrocarbons at industrial sites where protection of surface water applies.

Intertidal Bank Interim Action – During the summer of 1997 soil, sediment, and source materials, totaling 3,134 tons were excavated from the intertidal bank and upland area along the bank and properly disposed of at a permitted landfill (AGI,

1997a). Following excavation, the bank was reconstructed with erosion control/habitat systems approved by both state and federal regulatory and fisheries agencies. The bank interim action was formally approved by both Ecology and the U.S. Environmental Protection Agency (USEPA).

Stormwater System and Paving - During the summer of 1998, a majority of the Taylor Way Property stormwater system was replaced and new asphalt paving was placed over the Taylor Way Property areas where process by-products and raw products were temporarily stored or handled (AGI, 1998b). The old stormwater system was replaced since it had loose joints and allowed groundwater infiltration, which then discharged directly into the Hylebos Waterway.

MW9 Area Soil Excavation - During the summer of 1999, source material containing metals located along the Taylor Way Property's southeast side in the area of monitoring well MW9 was excavated and disposed of at a permitted landfill (AGI, 2000). During the MW9-area interim action, arsenic was also identified in soil on the Atofina property at the property boundary with the Taylor Way Property.

Stormwater System and Paving Completion - The remaining portion of the stormwater collection and conveyance system was replaced and paving was completed in late 1999 (AGI, 2000). As a final step in this process, the entire stormwater system was flushed and sediment/water was vactored from manholes/catch basins for disposal. The purpose of the flushing/cleaning was to provide Thermafiber with a clean system, which would then be maintained by Thermafiber.

Soil Removal Near Warehouse - In June and July 2005 soils were excavated from two areas referred to as the B13 and B23 excavations (CDM, 2005a). B13 and B23 were two of KJC's 2002 Phase 2 ESA test hole locations. These two excavations bounded the MW9 excavation, coming within about 40 feet of the new warehouse building that was being constructed on the site at the time. The B13 excavation occurred under the former baghouse area and the B23 excavation occurred under a former concrete pad previously used for material storage. The B13 excavation ranged between 4 and 8 ft deep and the B23 excavation ranged between 2 and 5 ft deep. In addition, an approximately 2,500 cubic yard soil stockpile that had been excavated by the Port during construction activities was disposed of. A total of 8,176 tons of soil were disposed of during this site work.

2.3.2 Soil-Related IA Conducted by Kennedy/Jenks Consultants/Port of Tacoma

During, KJC's Phase I and Limited Phase II ESA, slag, shot, and cupola bottoms were identified in the railroad spur berm that entered into the Taylor Way Property from the northwest. Chemical analysis determined that the berm fill contained high concentrations of metals, particularly arsenic, lead, and cadmium. In 2003 KJC, on behalf of Thermafiber, excavated an approximately 265 foot stretch of these berm soils

down to pre-existing grade (KJC, 2003). In June 2003, 1,000 tons of the removed berm soils were transported to Chemical Waste Management's Arlington, Oregon Subtitle C landfill for stabilization and disposal. The remaining 1,500 tons of soil classified as nonhazardous and were transported to Rabanco's Subtitle D landfill in Roosevelt, Washington. KJC did not conduct confirmation sampling beneath the berm footprint.

The Phase II ESA also identified soil containing diesel and oil-range petroleum hydrocarbons near the former boiler behind the former production facility. Between January and May 2003 approximately 4,400 tons of petroleum hydrocarbon contaminated soil were excavated and transported to Rabanco's Subtitle D landfill in Roosevelt, Washington. The excavation was dewatered to facilitate soil removal and in the process, approximately 107,000 gallons of water were pumped from the excavation. Only one-sixth of the water met the City of Tacoma's sewer discharge limits, the rest of the water was transported to Emerald Services in Seattle for treatment prior to disposal.

In August of 2005, two underground storage tanks were discovered close to a new warehouse building being constructed on the site and were removed (DLH, 2005). The tanks, 4,000 and 5,000 gallons in size, and had apparently been used to store diesel fuel, based on soil analytical testing. Soil analytical data indicated the USTs had not leaked, however arsenic concentrations in several samples exceeded the MTCA Method A unrestricted land use cleanup level of 20 mg/kg so the excavated soils were transported to the Tacoma LRI facility for disposal. Soils encountered during the UST closure consisted of five to six feet of fill overlying layers of asphalt, concrete, basecourse, and then the tideflat sediment. The UST was below the asphalt and concrete layers, indicating the tanks were installed before the property was developed with the present facility.

2.3.3 Subsequent Confirmation Sampling by CDM/USGI

Because KJC had conducted no confirmation sampling under the former railroad berm, in July 2005 CDM excavated 10 test pits through this area (CDM, 2005b). Test pit depths ranged between n 3 and 4.5 ft deep. Soils were screened at approximately 1 ft intervals using an X-Ray Fluorescence (XRF) spectrometer. The XRF data were backed up by conducting laboratory analysis on a subset of the samples. Comparison of the XRF and laboratory data for arsenic showed excellent correlation where r=0.987.[1] The results of this investigation confirmed the variability of arsenic concentrations in site soils. With the exception of a small, isolated zone of shot

[1] A correlation coefficient is a number between -1 and 1 that measures the degree to which two variables are linearly related. If there is a perfect linear relationship with a positive slope between two variables, we have a linear correlation of 1. For example, if there is a positive correlation, whenever one variable is high, so is the other. If there is a perfect linear relationship with negative slope between two variables (r = -1), then there is a negative correlation. For example, if one variable has a high value, the other has a low value.

observed in one test pit, soil arsenic concentrations in this study ranged up to about 300 parts per million.

2.3.4 Groundwater, Stormwater, Seep Monitoring

After completing source control actions in accordance with Agreed Order No. DE 93TC-S163 and amendments, a two-year quarterly monitoring program related to the Taylor Way Property groundwater, stormwater, and intertidal bank seeps was initiated in January 2000 to evaluate source control effectiveness (CDM, 2001).

Groundwater

Groundwater monitoring was conducted periodically between March 1994 and January 2000 and on a quarterly basis during 2000 and 2001. KJC also conducted a round of groundwater monitoring during its Phase II ESA in October/November 2002. Arsenic concentrations in groundwater exceed the MTCA Method A cleanup level in several surface and second aquifer wells. Arsenic concentrations at MW9 declined significantly following source material removal from this area. Otherwise, metals concentrations varied between sampling rounds at individual well locations. Overall, metal concentrations in groundwater appeared to be relatively stable within certain concentration ranges for individual wells.

Stormwater Sampling

Stormwater sampling occurred in 2000 and 2001, in conjunction with the groundwater monitoring program. Following completion of the new stormwater drainage system, dry weather discharges were not observed at the storm drain outfall, indicating groundwater no longer infiltrates into the system. However, metals continued to be detected in wet weather discharges, indicating a source of metals in surface runoff.

Seeps

The intertidal bank was checked for seeps during each quarterly groundwater sampling round, but seeps have not been observed since April 1999, after completion of the bank interim action.

Section 3
Supplemental RI

3.1 Overview

This section addresses the methods that will be used to meet the objectives outlined in Section 1.3. During Phase I of this Supplemental RI, the PLPs will perform the soil and groundwater sampling and the hydrologic investigations identified in Sections 3.3 and 3.4, review and compile existing data about the Site, evaluate new and existing data, and determine if additional information may be needed to develop a feasibility study report. During Phase I, the PLPs will develop and carry out a soil sampling approach and subsequent work plan which will be subject to Ecology's approval. Additionally, if the PLPs determine during Phase I that additional characterization or modifications to the work plan will be necessary to fulfill the scope of the RI under this Work Plan, then the PLPs may notify Ecology and upon Ecology's approval, conduct such additional characterization during Phase I if doing so would serve to maximize the PLPs' resources. In the alternative, any additional work may be performed as part of Phase II. Specific methods that will be used to complete the field investigation are described in the Sampling and Analysis Plan (SAP) in **Appendix A.**

The PLPs will submit a Phase I report to Ecology according to the schedule in Section 5. The Phase I Report will describe the data compilation and results of the current soil and groundwater investigation, identify the remaining data gaps, recommend subsequent sampling events or other activities needed to fill these data gaps, and include other information needed to produce a feasibility study report. The Phase I report will be subject to Ecology's approval.

If Ecology determines additional investigations after the Phase I report are necessary to determine the extent of the contamination on the Site or to move forward with the feasibility study report, the PLPs will conduct Phase II of this Supplemental RI. A work plan for Phase II will be subject to Ecology's approval. Upon completion of Phase II testing, the PLPs will submit a Phase II Report to Ecology, subject to Ecology's approval. Sections 4 and 5 describe more fully documentation and reporting requirements and the schedule for this Supplemental RI.

3.2 Supplemental RI Data Compilation and Review

Substantial soil and groundwater data exist for the Site. For the Taylor Way Property, data are presented in a series of reports by CDM for remedial investigation and interim action activities that were conducted between 1993 and 2000, as well as KJC for activities that were conducted in 2002 and 2003. These reports are listed in Section 6, References. In addition, recent data was collected during investigation underneath the former railroad spur and during soil excavation from the areas of KJC borings B13 and B23 (CDM, 2005a and 2005b). Further, the Port of Tacoma recently collected additional soil data underneath and along the edges of the new building foundation preload and near two underground storage tanks that were removed in August 2005. Data on neighboring properties, including the Atofina and Port of

Tacoma properties, exist in Ecology's files; CDM currently has some of the information contained in Ecology's files, but may need to conduct a file review to obtain additional documents if necessary to complete the data compilation.

The PLPs will review all referenced recent and historical reports and compile all soils data that represent existing conditions. Soils data not currently applicable for the site, such as data generated prior to conducting interim actions (i.e., soil berm, soil excavated around MW9, soils in the petroleum hydrocarbon excavation, and soil excavated from the tide bank) will not be included.

New and historic groundwater data will also be reviewed and compiled. Groundwater data review will include current and historical groundwater quality and flow direction data for the Taylor Way property, the Atofina property, and the Port of Tacoma Property. In addition, available groundwater information on facilities to the west/southwest, across Taylor Way will be reviewed in order to identify other possible contamination sources.

The data compilation will include review, evaluation, and discussion of other potential contaminant source locations and contaminants of concern both on the Taylor Way Property (i.e., transformer pads, above ground tanks, waste disposal areas) and off of the Taylor Way Property (i.e., Port of Tacoma Property, Atofina Property, and properties to the west/southwest across Taylor Way).

3.3 Groundwater Investigation

3.3.1 Overview

The most recent Site groundwater sampling occurred over two years ago. Additional sampling needs to be conducted in order to determine current conditions and to evaluate effects of interim actions. In addition, because other properties near the Taylor Way Property, particularly the two adjacent properties, have or may have similar contaminants of concern in groundwater, the groundwater evaluation needs to consider possible interactions of contaminants and groundwater from, or to, these other properties. The PLPs will access existing wells on the Atofina Property and Port of Tacoma Property in order to measure water levels and collect samples for chemical analysis. Preliminary review of the data and a Site visit indicate the need to install two new wells on the Port of Tacoma Property, and repair/replace several damaged wells and reinstall one destroyed well on the Taylor Way Property, in order to provide a more complete groundwater evaluation. Finally, additional Site-specific hydrologic data needs to be collected to be used in developing Site cleanup levels.

3.3.2 Groundwater - Additional Monitoring Well Installation

Based on historical water level data, the groundwater flow direction across the Site is generally north, onto the adjacent Port of Tacoma property and then into the Hylebos Waterway. The PLPs will install two additional wells on the adjacent Port of Tacoma Property to provide data on metals concentrations downgradient of the Taylor Way

Property, just before the Hylebos Waterway. The PLPs will install the wells adjacent to each other. The PLPs will install one of the wells in the surface aquifer and the other well in the second aquifer. The PLPs will screen the wells at depth intervals similar to nearby wells on the Taylor Way Property, although specific conditions encountered during drilling may determine the need to modify those screened intervals. Additionally, the PLPs will repair/replace monitoring wells on the Taylor Way Property as appropriate. Existing monitoring wells MW3B, MW9, MW2 and MW14 will be repaired if possible. Any of these wells that cannot be repaired will be replaced. Former monitoring well MW7 will be replaced. MW10, which was destroyed during recent Site work, is not proposed for replacement at this time. Approximate well locations are shown on **Figure 2.**

3.3.3 Groundwater Sampling

The PLPs will collect groundwater samples on the Taylor Way Property from monitoring wells MW1 through MW14, except MW10. In addition, the PLPs will collect groundwater samples from selected monitoring wells on the adjacent Port of Tacoma Property (including new wells installed as described in 3.3.2.) and Atofina Property. Historical monitoring wells on the Port of Tacoma Property that will be sampled for this investigation include MW18 through MW21 as shown on **Figure 2.** On the Atofina Property, historical nearby wells that will be sampled include surface aquifer wells 1C3-1, 1B4-1, 1B2-1, 2D-1, and second aquifer well 1B3-2 as shown on **Figure 2.**

Groundwater samples will be analyzed for the following metals on the total and dissolved basis: antimony, arsenic, chromium, copper, nickel, lead, and zinc by EPA Method EPA Method 200.8 (ICP-MS) and for diesel-range petroleum hydrocarbons by Northwest Method WTPH-Dx.

3.3.4 Groundwater - Resurvey of Monitoring Wells

A licensed surveyor, on behalf of the PLPs, will survey the elevations and locations of each of the existing monitoring wells, newly installed monitoring wells, and accessed monitoring wells located off of the Taylor Way Property to ensure that current water elevation data are correct. The surveyor will also check the survey of the existing staff gauge on the adjacent 5-pile Dolphin in the Hylebos Waterway. If necessary, the PLPS will replace the staff gauge and resurvey it.

3.3.5 Groundwater - Water Level Monitoring

The PLPs will measure water levels in all Taylor Way Property monitoring wells and accessed monitoring wells located off of the Taylor Way Property during periods of high and low tide. Offsite wells include those identified for sampling as described in Section 3.3.3 and MW16 and MW17 on the Port of Tacoma Property. At least two full sets each of high and low tide water level data will be collected. The PLPs will use these data to generate groundwater contour maps both for the surface aquifer and the second aquifer. Continuous 24-hour water level monitoring will be conducted in

surface aquifer wells MW2, MW5, and MW6 and second aquifer wells MW8 and MW14.

3.3.6 Groundwater - Evaluation of Hydrogeologic Characteristics

The PLPs will determine Site-specific hydraulic characteristics by conducting slug tests in order to determine hydraulic conductivities and transmissivity. Slug tests will be conducted on four monitoring wells; MW2, MW3B, MW9, and MW19 (on Port of Tacoma property).

3.3.7 Stormwater Sampling

Similar to the groundwater, there are no recent stormwater data and it is necessary to conduct additional sampling in order to determine current conditions and to evaluate effects of interim actions.

The Port of Tacoma plans to install a new stormwater system at the Taylor Way property in the Fall of 2005. The PLPs will check the storm drain outfall for dry weather flow after the new stormwater system is installed and the system will be sampled if dry weather flow is observed. The PLPs will collect at least one wet weather sample at the appropriate timing. Turbidity, specific conductance, pH, and temperature of the stormwater will be measured in the field at the time of sampling. The samples will be analyzed for total antimony, arsenic, chromium, copper, lead, nickel, and zinc by the same methods as described for the groundwater samples and screened for petroleum hydrocarbons by NWTPH-HCID. Additional hydrocarbon analysis will be conducted as appropriate (i.e., NWTPH-Gx and/or NWTPH-Dx), if hydrocarbons are identified in the sample.

3.4 Soil Sampling

3.4.1 Scoping

Based on the review of existing data and results from the groundwater sampling under this work plan, the PLPs will present recommendations and a scope of work to Ecology for additional soil sampling to further refine the knowledge of the extent and depth of chemicals in soils across the site. Once Ecology approves the scope of work, the PLPs will develop a work plan for the soil sampling. The work plan will be subject to Ecology review and approval, and the work will be completed as a part of the Phase I investigation activities.

3.4.2 Soil Sampling in Drilled Borings

As discussed above, at least one monitoring well (MW7) will be installed on the Taylor Way Property during this supplemental RI. Additional replacement wells may also be installed if existing wells cannot be repaired. The PLPs will submit selected soil samples collected from drilled borings at the Taylor Way Property for analysis of total arsenic and lead. Sample intervals will begin at 2 ft below ground surface and

continue at 2 ft intervals until the groundwater interface is reached. Soil samples will be analyzed for total arsenic and lead by EPA Method 6010B (ICP).

Section 4
Documentation and Reporting

The PLPs, or their authorized agents, will document supplemental RI activities using field investigation daily reports, soil sampling records, groundwater sampling records, chain-of-custody forms, and additional forms as appropriate. Examples of these forms are included in the Sampling and Analysis Plan (SAP), **Appendix A** to this work plan.

4.1 Soil Sampling Plan

Within 30 days of submitting the final laboratory results from the groundwater sampling to Ecology, the PLPs will submit recommendations and a scope of work for further soil sampling. The scope of work will include supporting maps, tables, and summaries of relevant existing data and a rationale for the recommended sampling. The PLPs will prepare a draft work plan after Ecology has approved the scope of work. The draft work plan will be consistent with the scope of work outlined in Section 1.3 and will be subject to Ecology's approval. The PLPs will submit a final work plan and, after Ecology's approval of this work plan, implement the work plan. The PLPs will submit these documents according to the schedule set forth in Section 5.

4.2 Draft Supplemental RI Phase I Report

The PLPs, or their authorized representatives, will prepare a Supplemental RI Phase I Report as described below, in accordance with the schedule set forth in Section 5. The report is subject to Ecology's approval. If Ecology determines that no other sampling or investigations are necessary, upon Ecology's approval, this RI report will be the final RI report for the Site.

The Phase I report will include:

- Presentation of historical and current soil and groundwater data.
- Evaluation of contaminants of concern.
- Evaluation of lateral and vertical extent and concentrations of soil and groundwater contamination.
- Assessment of COC migration potential and affected media.
- Discussion of exclusion from the terrestrial ecological evaluation (TEE) in accordance with WAC 173-340-7491.
- Discussion of data gaps and identification of additional sampling needed prior to producing a feasibility study report.

The report will include figures showing current, historical, and planned Site features, including structures and the storm drainage system. Current and historical chemical data will be presented in summary tables, and where appropriate, in summary figures. Groundwater contour maps at high and low tides, both in the shallow and

deep aquifers will be provided, as well as graphical depictions from continuous monitoring. Laboratory reports and boring logs will be included in appendices.

A draft outline and schedule for a Feasibility Study (FS) Report will be submitted at the same time as the Supplemental RI Phase I draft report. The FS Report outline will include the elements of a Feasibility Study as described in WAC 173-340-350(8).

4.3 Supplemental RI Phase II

If Ecology determines that additional investigations are necessary for completing the feasibility study, the PLPs will submit a plan and schedule to conduct further work, consistent with the scope of work outlined in Section 1.3. The plan will be submitted to Ecology within 30 days of a written request from Ecology to create a plan. The plan and schedule will be subject to Ecology's approval.

Within 90 days of Ecology's approval of the Phase II work plan, the PLPs, or an authorized representative on their behalf, will submit a report summarizing the Phase I sampling results, , and explaining the results of the Phase II sampling. The report shall be subject to Ecology's approval. Upon Ecology's approval, this RI report will be considered the final RI report for the Site.

4.4 Electronic Data Submittal

Environmental data generated under this work plan and any subsequent work plans will be submitted to Ecology's Environmental Information Management System database, according to Ecology Toxics Cleanup Program Policy #840. (http://www.ecy.wa.gov/programs/tcp/policies/tcppoly.html)

Section 5
Schedule

The estimated schedule to complete the Supplemental RI is summarized as follows:

- Supplemental RI Phase I Groundwater Sampling - Mobilization and field work will be completed within 150 days of the effective date of the Agreed Order.

- Soil and Groundwater Analytical Data - The PLPs, or their authorized representatives will provide Ecology with soil and groundwater laboratory results throughout the Phase I sampling. The PLPs will provide Ecology the results within 14 days of the PLPs receipt of the final results from the laboratory.

- Soil Sampling Plan
  - Scope of Work: within 30 days of submitting the final groundwater sampling laboratory results to Ecology
  - Draft Work Plan: within 45 days of Ecology's approval of the scope of work
  - Final Work Plan: within 15 days of Ecology's comments on the draft work plan

- Hydrogeologic Monitoring - The PLPs, or their authorized representatives, will provide Ecology with the results of water level monitoring and slug tests within 14 days of conducting said monitoring.

- Supplemental RI Phase I report
  - Draft: Within 100 days from Ecology's approval of the final Soil Sampling Work Plan.

  - Final: The report will be subject to Ecology's review. Ecology will provide comments on the Draft RI Phase I report to the PLPs and the parties will establish a mutually agreed upon date for the PLP's resubmittal of the RI report. If Ecology determines that no further action is necessary, upon Ecology's approval, this RI report will be the final RI report for the Site.

- Outline and Schedule for Feasibility Study Report
  - Draft: Draft outline and schedule for Feasibility Study Report will be submitted with the Draft Supplemental RI Phase I report.

  - Final: Final outline and schedule for Feasibility Study report will be submitted within 30 days of receiving Ecology's comments on the draft FS outline and schedule.

- Supplemental RI Phase II: The PLPs will submit a Phase II work plan to Ecology within 30 days of a written request by Ecology. The plan is subject to Ecology's approval, and will include a schedule for completion of the work and submittal of

the RI Phase II report. The Phase II report will summarize the results of the Phase I sampling and explain the results of the Phase II sampling.

- Electronic Data Submittal: The PLPs will submit electronic data for each required phase of the Supplemental RI according to the same schedule as the final written reports.

Section 6
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Agreed Order No. DE 3405

EXHIBIT D

Substantive Requirements of State and Local Laws and Regulations

Pursuant to RCW 70.105D.090(1), remedial actions under this order are exempt from the procedural requirements of Chapters 70.94, 70.95, 70 105, 75.20, 90.48, 90.58 RCW, and from any laws requiring or authorizing local government permits or approvals for the remedial action. However, remedial actions under this order must still comply with the substantive requirements of these laws. Ecology has consulted with state and local agencies and has identified the following substantive requirements that may be applicable to the actions to be performed under this order.

- RCW 70.95 - Solid Waste Management – Reduction and Recycling; RCW 70.105 - Hazardous Waste Management; Chapter 173-303 WAC Dangerous Waste Regulations; Local County Health Department (Waste Disposal Authorization)

  Substantive requirements: Designate all solid and liquid investigation derived wastes to determine if they are dangerous wastes. For all solid wastes that are not designated dangerous waste, dispose of at a permitted Subtitle D landfill facility, after completing the county health department requirements for waste screening and disposal authorization, of any county where waste will be disposed. For any wastes designated as hazardous or dangerous wastes, obtain a Hazardous Waste Identification number from Ecology, dispose of at a permitted Subtitle C landfill, and document the disposal according to the hazardous waste manifest requirements of Chapter 173-303 WAC. Provide documentation to Ecology for the disposition of all wastes generated under the activites in this order.

- Chapter 90.48 RCW - Water Pollution Control; City of Tacoma Municipal Code – Chapter 12.08 City Code (Provisions for Acceptance for Discharges to Sewer System);

  Substantive Requirements: No waters generated from the Remedial Investigation shall be discharged to the ground, surface waters, or storm sewer systems. For any investigation derived water waste generated from the Remedial Investigation, dispose of at a facility which is permitted under the Clean Water Act to accept the waste water. Any discharges to the City of Tacoma sewer system must meet all requirements of the Special Approved Discharge Authorization, City of Tacoma Municipal Code, Chapter 12.08.365. Provide documentation to Ecology for the disposition of all wastes generated under the activites in this order.