

**PORT OF TACOMA
TACOMA, WASHINGTON
MAINTENANCE DREDGING AT PIERS 3 & 4 AND
WASHINGTON UNITED TERMINALS 2026**

**PROJECT NO. 202066 AND 202067
PROCUREMENT NO. 092026-1061**

**Thais Howard, PE
Sr. Director, Engineering**

**Mathew Busch, PE
Project Manager**

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The undersigned Engineer of Record hereby certifies that the Technical Specifications for the following portions of this project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington, and hereby affix my Professional Seal and signature.

Those Sections prepared under my direct supervision and being certified by my seal and signature below are as follows:

<u>SEAL & SIGNATURE</u>	<u>SECTION(S)</u>
	35 20 23 - Dredging

END OF SECTION

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END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Contract Drawings: The following drawings are a part of the Contract Documents:

Sheet No.	Drawing Title
1	G1.1 - COVER SHEET, AREA MAP, VICINITY MAP, & DRAWING LIST
2	G1.2 - GENERAL NOTES, SYMBOLS, & ABBREVIATIONS
3	G2.1 - OVERALL SITE PLAN
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MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026

PROJECT NO. 202066 AND 202067 | PROCUREMENT NO. 092026-1061

- Scope of Work: The Work required for this Project includes:
Maintenance dredging to address high spots impacting the berthing areas of Washington United Terminals (WUT) and Piers 3&4 (Husky). All dredge material is anticipated to be disposed of at the Commencement Bay open-water dredge material disposal site. Debris will be disposed of upland.
- Bid Estimate: Estimated cost range is \$800,000 to \$900,000, plus Washington State Sales Tax (WSST).
- Sealed Bid Date/ Time/Location: Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until **2:00 P.M. on October 27, 2026**, at which time they will be publicly opened and read aloud and the apparent low bid will be determined.
- Pre-Bid Conference and Site Tour: A pre-Bid conference has been set for **October 15, 2026 at 9:00AM**.
The conference will convene at the Port's Administrative building, located at One Sitcum Plaza.
- Bid Security: Each Bid must be accompanied by a Bid security in an amount equal to five (5) percent of the Base Bid in a form allowed by the Instructions to Bidders.
- Contact Information: Any questions to the Port may be submitted to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.
Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).
Questions will not be accepted after seven (7) days prior to the Bid Date.
- Bidding Documents: Plans, Specifications, Addenda, and Plan Holders List for this Project are available on-line through The Port of Tacoma's Website portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number 092026-1061. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List.
Holder's Lists will be updated regularly and posted to the specific procurements page. Additional Instructions available in Section 00 21 00 - Instructions to Bidders.

Public Works Training Requirements: Effective July 1, 2019, all businesses are required to have training before bidding on public works projects and prevailing wage under RCW 39.04.359 and RCW 39.12, or is on the list of exempt businesses maintained by the Department of Labor and Industries. The bidder must designate a person or persons to be trained on these requirements. The training will be provided by the Department of Labor and Industries or by a training provider whose curriculum is approved by the Department of Labor and Industries. Please refer to Labor and Industries' web site (https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm_medium=email&utm_source=govdelivery) for more information and training dates, requirements, and exemptions. Failure to attend this training could result in a determination of "not responsible" and the bidder not being awarded a public works contract.

END OF SECTION

PART 1 - SUMMARY

1.01 DEFINITIONS

All definitions set forth in the Agreement, the General Conditions of the Contract for Construction, and in other Contract Documents are applicable to the Bidding Documents.

- A. "Addenda" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections. The contents of an Addendum are issued in no particular order and therefore should be carefully and completely reviewed.
- B. An "Alternate Bid" (or "Alternate") is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- C. An "Apprentice" is a worker for whom an apprenticeship agreement has been registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).
- D. "Award" means the formal decision by the Port of Tacoma ("Port") notifying a Responsible Bidder with the lowest responsive Bid of the Port's acceptance of their Bid and intent to enter into a Contract with the Bidder.
- E. The "Award Requirements" include the statutory requirements as a condition precedent to Award.
- F. The "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- G. A "Bid" is a complete and properly signed proposal to do the Work, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- H. The "Bid Date" is the day and hour specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Port.
- I. The "Bid Form" is the form(s) included with the Bidding Documents, with Specification Section 00 41 00, through which a Bidder submits a Bid.
- J. A "Bidder" is a person or entity who submits a Bid.
- K. The "Bidding Documents" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, including those provided by reference, the Bid security, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.
- L. The "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

- M. The "Schedule of Unit Prices" is a separate schedule on the Bid Form for Unit Pricing as an all-inclusive price per unit of measurement for materials, equipment, or services as described in the Bidding Documents or in the proposed Contract Documents for the optional use of the Port. Quantities are not predictions of amounts anticipated. The Port may, but is not obligated to, accept a Schedule of Unit Price if it accepts the Base Bid. The Schedule of Unit Prices are not factored into the evaluation of determining the low bid amount and are not included as part of the bid award amount.
- N. A "Sub-Bidder" is a person or entity of any tier who submits a bid or proposal to or through the Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. **BIDDING DOCUMENTS.** The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- B. **PRE-BID MEETING.** The Bidder has attended pre-Bid meeting(s) required by the Bidding Documents. Attendance at a mandatory meeting or training session means that, in the sole opinion of the Port, a Project representative of a Bidder has attended all or substantially all of such meeting or session.
- C. **BASIS.** Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception.
- D. **EXAMINATION.** The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents including, but not limited to, any liquidated damages, insurance provisions, and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed, has correlated its observations with the requirements of the proposed Contract Documents, and it has satisfied itself as to the nature, location, character, quality, and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or that may affect performance of the Work or the cost or difficulty thereof, including, but not limited to, those conditions and matters affecting transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to, and at all times during, the performance of the Work. The failure of the Bidder to fully acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- E. **PROJECT MANUAL.** The Bidder has checked its copies of the Project Manual (if any) with the table of contents bound therein to ensure the Project Manual is complete.
- F. **SEPARATE WORK.** The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being Bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the Contract being Bid upon.
- G. **LICENSE REQUIREMENTS.** The Bidders and Sub-Bidders are registered and hold all licenses required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.

- H. CERTIFICATION. The Bidder verifies under penalty of perjury that the Bidder has not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three (3) year period immediately preceding the Bid Date.
- I. NO EXCEPTIONS. Bids must be based upon the materials, systems, and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

- 1. Bidders may obtain complete sets of the Bidding Documents from The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts" then "Procurement."
- 2. Complete Sets. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for obtaining updated information. The Port does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.
- 3. Conditions. The Port makes copies of the Bidding Documents available only for the purpose of obtaining Bids on the Work and does not confer a license or grant permission for any other use.
- 4. Legible Documents. To the extent any Drawings, Specifications, or other Bidding Documents are not legible, it is the Bidder's responsibility to obtain legible documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 1. Format. The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in, or phases of the Project.
- 2. Duty to Notify. Bidders shall promptly notify the Port in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions.
- 3. Products and Installation. All Bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Port any objections (in writing) no later than seven (7) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.
- 4. Written Request. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Procurement Department through the Procurement and Question Submission Portal at least seven (7) days prior to the Bid Date (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

5. Request to Modify Responsibility Criteria. No later than seven (7) days prior to the Bid Date, a potential Bidder may request in writing that the Port modify the Responsibility Criteria. The Port will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the Criteria, the Port will issue an Addendum identifying the new Criteria.
6. Addenda. The Bidder shall not rely on oral information provided at any pre-Bid meetings or during site visits. Verbal statements made by representatives of the Port are for informational purposes only. Any interpretation, correction, or change of the Bidding Documents will be made solely by written Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any manner other than by written Addendum, including but not limited to, oral statements will not be binding, and Bidders shall not rely upon such statements, interpretations, corrections, or changes. The Port is not responsible for explanations or interpretations of the Bidding Documents other than in a written Addendum.
7. Site Visits. Any site visits are provided as a courtesy to potential Bidders to assist them in becoming familiar with the Project site conditions. However, only the Bidding Documents, including any issued Addenda, may be relied upon by Bidders.
8. Singular References. Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
9. Utilities and Runs. The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. For substitutions during bidding, refer to Section 00 26 00 – Substitution Procedures.

D. ADDENDA

1. Distribution. All Addenda will be written and will be made available on the Port's website or any other source specified by the Port for the Project.
2. Copies. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Verification and Acknowledgment of Receipt. Prior to submitting a Bid, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt and consideration of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Form. Bids (including required attachments) shall be submitted on forms identical to the Bid Form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.
2. Entries on the Bid Form. All blanks on the Bid Form shall be filled in by typewriter, printer, or manually in ink.
3. Figures. All sums shall be expressed in figures, not words. Portions of the Bid Form may require the addition or multiplication of component bids to a total or the identification of component amounts within a total. In case of discrepancy between unit prices listed and their sum(s), the unit prices listed shall govern (rather than the sum).

4. Initial Changes. Any interlineation, alteration, or erasure shall be initialed by an authorized representative of the Bidder.
5. Bid Breakdown. The Bid Form may contain, for the Port's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.
 - a. For lump-sum Bids, the total Contract Sum shall be submitted.
 - b. For unit-price Bids, a price shall be submitted for each item of the Work, an extension thereof, and, if requested, the total Contract Sum.
6. Alternates. All Alternates should be Bid. The Port reserves the right, but is not obligated, to reject any Bid on which all requested Alternates are not Bid. If no change in the Base Bid is required for an Alternate, enter "Zero" or "0." If there is no entry, the Bidder will be presumed to have made no offer to perform the Alternate. If it is not otherwise clear from the Bid or the nature of the Alternate, it will be presumed that the amount listed for an Alternate is additive rather than deductive.
7. Schedule of Unit Prices. All Unit Prices under this schedule shall be bid. The Port reserves the right, but is not obligated, to reject any Bid on which all requested Schedule of Unit Prices are not Bid.
8. No Conditions. The Bidder shall make no conditions or stipulations on the Bid Form, nor qualify its Bid in any manner.
9. Identity of Bidder. The Bidder shall include in the specified location on the Bid Form, the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. The Port verifies signature authority on the Labor and Industries website under the contractor registration business owner information. If the business owner information is not current, the Bidder shall show proof of authority to sign at the request of the Port. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
10. Bid Amounts Do Not Include Sales Tax. The Work to be performed constitutes a "retail sale" as this term is defined in RCW 82.04.050. Thus, the Base Bid amount shall include in the sum stated all taxes imposed by law, EXCEPT WASHINGTON STATE AND LOCAL SALES TAX due on the Base Bid. The engaged Contractor will pay retail sales tax on all consumables used during the performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Base Bid price and in any other prices set forth on the Bid Form. The Port will pay state and local retail sales tax due on each progress payment and final payment to the engaged Contractor for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local government.

B. BID SECURITY

1. Purpose and Procedure. Each Bid shall be accompanied by Bid security payable to the Port in the form required by the Bidding Documents and equal to five (5) percent of the Base Bid only (i.e., not including any Alternates or Unit Prices). The Bid security constitutes a pledge by the Bidder to the Port that the Bidder will enter into the Contract with the Port in the form provided, in a timely manner, and on the terms stated in its Bid, and will furnish in a timely manner, the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Port as liquidated damages, not as a penalty. By submitting a Bid, each Bidder represents and agrees that the Bid security, if forfeited, is a reasonable prediction on the Bid Date of future damages to the Port. Failure of the Bidder to provide Bid Security as required shall render the bid non-responsive.
2. Form. The Bid security shall be in the form of a certified or bank cashier's check payable to the Port or a Bid bond executed by a bonding company reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, possess an A.M. Best rating of "A-," Fiscal Size Category (FSC) six (6) or better, and be authorized by the U.S. Department of the Treasury. The Bid security shall be signed by the person or persons legally authorized to bind the Bidder. Bid bonds shall be submitted using the form included with the Bidding Documents.
3. Retaining Bid Security. The Port will have the right to retain the Bid security of Bidders to whom an Award is being considered until the earliest of either: (a) mutual execution of the Contract, and the Port's receipt of payment and performance bonds, (b) the specified time has elapsed so that Bids may be withdrawn, or (c) when all Bids have been rejected.
4. Return of Bid Security. Within sixty (60) days after the Bid Date, the Port will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all un-forfeited Bid securities will be returned. Bid security may be returned in the form provided or by separate payment.

C. SUBMISSION OF BIDS

1. Procedure. The Bid, the Bid security, and other documents required to be submitted with the Bid, shall be enclosed in a sealed envelope identified with the Project name and number and the Bidder's name and address. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of the mailing envelope.
 - a. If a Bid is mailed, it shall be addressed to the Port of Tacoma, Contracts Department, 1 Sitcum Plaza, Tacoma, WA 98421.
 - b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, 1 Sitcum Plaza, Tacoma, WA 98421.
 - c. The time stamp clock at the Front Reception Desk at 1 Sitcum Plaza is the Port's official clock.
2. Deposit. Bids shall be deposited at the designated location prior to the Bid Date indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the Bid Date and time specified shall be returned without consideration at the discretion of the Port, or rejected at the time of receipt.
3. Delivery. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.

4. Form. Oral, facsimile, telephonic, electronic, or email Bids are invalid and will not be considered.

D. MODIFICATION OR WITHDRAWAL OF BID

1. After the Bid Date. A Bid may not be modified, withdrawn, or canceled by the Bidder during a ninety (90) day period following the Bid Date, and each Bidder so agrees by virtue of submitting its Bid.
2. Before the Bid Date. Prior to the Bid Date, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing, with the signature of the Bidder, and shall be worded so as not to reveal the amount of the original Bid. Email notice will not be accepted. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Port in time to be withdrawn before the Bid opening.
3. Resubmittal. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids, provided that they are then fully in conformance with these Instructions to Bidders.
4. Bid Security with Resubmission. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

E. COMMUNICATIONS

1. Communications from a Bidder related to these Instructions to Bidders must be in writing to the Procurement Department through the Procurement and Question Submission Portal (Portal link is accessible via this specific procurements website. See left side of page.). A direct link is also available here: [Procurement and Question Portal Link](#). Communications, including but not limited to, notices and requests by Sub-Bidders shall be made through the Bidder and not directly by a Sub-Bidder to the Port. No oral responses will be binding by the Port.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

1.05 CONSIDERATION OF BIDS

- A. OPENING OF BIDS. Unless stated otherwise in the Advertisement or Invitation to Bid or an Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and any Alternate Bids will promptly (and generally within twenty-four (24) hours) be made available to Bidders and other interested parties.
- B. REJECTION OF BIDS. The Port shall have the right, but not the obligation, to reject any or all Bids for any reason, or for no reason, to reject a Bid not accompanied by the required Bid security, or to reject a Bid which is in any way incomplete or irregular.
- C. BIDDING MISTAKES. The Port will not be obligated to consider notice of claimed Bid mistakes received more than twenty-four (24) hours after the Bid Date. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from Bidding on the Project if a subsequent call for Bids is made for the Project.
- D. ACCEPTANCE OF BID (AWARD)
 1. Intent to Accept. The Port intends, but is not bound, to Award a Contract to the Responsible Bidder with the lowest responsive Bid, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Port has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.

2. Alternates. The Port shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. Failure to submit Bids on all Alternates may be cause for rejecting the Bidder's entire Bid. The Port retains the right to accept Alternate Bid items at the price Bid within ninety (90) days after the Contract is executed.
3. Requirements for Award. Before the Award, the lowest responsive Bidder must be deemed Responsible by the Port and must satisfy all Award Requirements.

E. BID PROTEST PROCEDURES

1. Procedure. A Bidder protesting, for any reason, the Bidding Documents, a Bidding procedure, the Port's objection to a Bidder or a person or entity proposed by the Bidder, including but not limited to, a finding of non-Responsibility, the Award of the Contract or any other aspect arising from, or relating in any way to, the Bidding, shall cause a written protest to be filed with the Port within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting Bidder, the bid solicitation number and title under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to procurement@portoftacoma.com.
2. Consideration. Upon receipt of the written protest, the Port will consider the protest. The Port may, within three (3) business days of the Port's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Port, the Contracts Director of the Port, or his or her designee, will review the issues and promptly furnish a final and binding written decision to the protesting Bidder, and any other affected Bidder(s), within six (6) business days of the Port's receipt of the protest. (If more than one (1) protest is filed, the Port's decision will be provided within six (6) business days of the Port's receipt of the last protest.) If no reply is received from the Port during the six (6) business-day period, the protest will be deemed rejected.
3. Waiver. Failure to comply with these protest procedures will render a protest waived.
4. Condition Precedent. Timely and proper compliance with, and exhaustion of, these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. THE LOWEST RESPONSIVE BIDDER SHALL:

1. Responsibility Detail Form. Within 24 hours of the Low Responsive Bidder Selection Notification, the apparent low Bidder shall submit to the Port the Responsibility Detail Form and other required documents (Section 00 45 13) executed by an authorized company officer. As requested from the Port, the low responsive Bidder shall provide written confirmation that the person signing the Bid on behalf of the Bidder was duly authorized at the time of bid, a detailed breakdown of the Bid in a form acceptable to the Port, and other information required by the Port.
2. The apparent low Bidder shall submit to the Port upon request:

- a. Additional information regarding the use of the Bidder's own forces and the use of subcontractors and suppliers;
 - b. The names of the persons or entities (including a designation of the Work to be performed with the Bidder's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work (i.e., either a listed Sub-Bidder or a Sub-Bidder performing Work valued at least ten (10) percent of the Base Bid), consistent with the listing required with the Bid; and
 - c. The proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.
 3. Failure to provide any of the above information in a timely manner will constitute an event of breach permitting forfeiture of the Bid security.
 4. Bidder Responsibility. The Bidder will be required to establish, to the satisfaction of the Port, the reliability and responsibility of itself and the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. If requested, the Bidder shall meet with the Port to discuss the Bid, including any pricing, the Bid components, and any assumptions made by the Bidder.
 5. Objection. Prior to an Award of the Contract, the Port will notify the Bidder in writing if the Port, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. Upon receiving such objection, the Bidder may, at Bidder's option: (a) withdraw their Bid, (b) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by such substitution, or (c) file a protest in accordance with the Bidding Documents.
 6. Change. Persons and entities proposed by the Bidder to whom the Port has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed, except with the written consent of the Port.
 7. Right to Terminate. The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. If a Bidder makes a material misrepresentation on a Qualification Statement, the Port has the right to terminate the Contract for cause and may then pursue any remedies that exist under the Contract or that are otherwise available.
- B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Port as under consideration for Award of a Contract shall also provide a properly executed Qualification Statement, if so requested by the Port.

1.07 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND INSURANCE

- A. BOND REQUIREMENTS. Within ten (10) days after the Port's Notice of Award of the Contract, the successful Bidder shall obtain and furnish statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. Bonds shall be written for one hundred (100) percent of the contract award amount, plus Washington State Sales Tax and Change Orders. The cost of such bonds shall be included in the Base Bid.

1. On contracts of one hundred fifty thousand dollars (\$150,000) or less, at the option of the Contractor or the General Contractor/Construction Manager as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten (10) percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under RCW 60.28, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.
 2. On contracts of one hundred fifty thousand dollars (\$150,000) or less, the Port may accept a full payment and performance bond from an individual surety or sureties.
- B. TIME OF DELIVERY AND FORM OF BONDS. The successful Bidder shall deliver an original copy of the required bonds to the Port, 1 Sitcum Plaza, Tacoma, WA 98421, within the time specified in the Contract Documents.
- C. INSURANCE. The successful Bidder shall deliver a certificate of insurance from the Bidder's insurance company that meets or exceeds all requirements of the Contract Documents.
- D. GOVERNMENTAL REQUIREMENTS. Notwithstanding anything in the Bidding or Contract Documents to the contrary, the Bidder shall provide all bonding, insurance, and permit documentation as required by governmental authorities having jurisdiction for any portions of the Project.

1.08 FORM OF AGREEMENT

- A. FORM TO BE USED. The Contract for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental, or Special Conditions, and the other Contract Documents included with the project manual.
- B. CONFLICTS. In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.
- C. CONTRACT DELIVERY. Within ten (10) days after Notice of Award, the Bidder shall submit a signed Contract to the Port in the form tendered to the Bidder and without modification.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS/CLARIFICATIONS

- A. Substitutions. Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. The Contract Documents include performance specifications for products and equipment which meet Project requirements. In those cases where a representative item or manufacturer is named in the specification, it is provided for the sole purpose of identifying a product meeting the required functional performance, and where the words "or equal" are used, a substitution request as further described, is not required.
- C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words "or approved equal," or "Engineer approved equal," or "as approved by the Engineer" are used, they shall be taken to mean "or approved equal." In these cases a substitution request as further described in this Section, is required.

1.03 SUBMITTALS

- A. Substitution Request Form. Use copy of form located at the end of this Section.
- B. Pre-Bid Substitution Requests. Submit one (1) PDF of the Substitution Request Form along with all supporting documentation for consideration of each request. Identify product, fabrication, or installation method to be replaced. Include Drawing numbers and titles. Substitution requests prior to the Bid Date may originate directly from a prime Bidder, or from a prospective Sub-Bidder.
1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product, fabrication, or installation cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Product Data, including drawings and descriptions of products, fabrication, and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. Research reports evidencing compliance with building code in effect for the Project.
 2. Engineer's Action. Engineer will review substitution requests if received through the Procurement and Question Submission Portal at least seven (7) days prior to the Bid Date (Portal link is accessible via this specific procurements website. See left side of page.) A direct link is also available here: [Procurement and Question Portal Link](#). No oral responses will be binding by the Port.
 - a. Forms of Acceptance. Substitution requests will be formally accepted via written addendum prior to the Bid Date. Bidders shall not rely upon approvals made in any other manner.

- b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
- c. The Port's decision of approval or disapproval of a proposed substitution shall be final.

Instructions for utilizing the portal can be found here: [Procurement and Question Submission Portal Instructions](#).

- C. Post-Award Substitution Requests must be submitted by the Contractor and not a Subcontractor nor Supplier.
- 1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification Section. Significant qualities may include, but are not limited to, attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified. ·
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses. Also provide names and addresses of the applicable architect, engineer, and owner.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for the Project.
 - j. Comparison of the approved Baseline Project Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

2. Engineer's Action. If necessary, Engineer will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
 - a. Forms of Acceptance. Change Order or Minor Change in Work.
 - b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
3. Substitutions for Cause. Submit requests for substitution immediately upon discovery of need for change, but not later than fourteen (14) days prior to date required for preparation and review of related submittals.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 2) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 3) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 4) Requested substitution is compatible with other portions of the Work.
 - 5) Requested substitution has been coordinated with other portions of the Work.
 - 6) Requested substitution provides specified warranty.
 - 7) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
4. Substitutions for Convenience. Engineer will consider Contractor's requests for substitution if received within fourteen (14) days after the Notice of Award.
 - a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - 1) Requested substitution offers Port a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Port must assume. Port's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Port, and similar considerations.
 - 2) Requested substitution does not require extensive revisions to the Contract Documents.
 - 3) Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 4) Requested substitution will not adversely affect the Baseline Project Schedule.
 - 5) Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 6) Requested substitution is compatible with other portions of the Work.

- 7) Requested substitution has been coordinated with other portions of the Work.
- 8) Requested substitution provides specified warranty.
- 9) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

D. Substitutions will not be considered when:

1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
2. Acceptance will require substantial revision of Contract Documents or other items of the Work.
3. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.04 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

**PROJECT TITLE: MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED
TERMINALS 2026 PROJECT NO.: 202066 AND 202067**

SUBMITTED BY: _____ CONTRACT NO.: PA000000153
PRIME/SUB/SUPPLIER: _____ DATE: _____

Specification Title: _____ Section No.: _____
Description: _____ Paragraph: _____
_____ Page No.: _____

Proposed Substitution: _____
Trade Name: _____ Model No.: _____
Manufacturer: _____
Address: _____ Phone No.: _____
Installer: _____
Address: _____ Phone No.: _____
Differences between proposed substitution and specified product: _____

☐ Point-by-Point comparative data attached - REQUIRED

Reason for not providing specified item: _____

Similar Installation:

Project: _____ A/E: _____
Address: _____
Owner: _____ Date Installed: _____
Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other: _____

Applicable to Substitution Requests During Construction:

Proposed to Port for accepting substitution: \$ _____
Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ # days.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.

- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____
Signed By: _____ Firm: _____
Address: _____
Telephone: _____ Email: _____
Attachments: _____

A/E's REVIEW AND RECOMMENDATION

- ☐ Approved Substitution
- ☐ Approved Substitution as Noted
- ☐ Reject Substitution - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

ENGINEER'S REVIEW AND ACTION

- ☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.
- ☐ Substitution Rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

1.02 HAZARDOUS MATERIALS NOTICE

- A. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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BIDDER'S NAME: _____

PROJECT TITLE: MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026 _

The undersigned Bidder declares that it has read the Contract Documents (including documents provided by reference), understands the conditions under which the Work will be performed, has examined the Project site, and has determined for itself all situations affecting the Work herein Bid upon. Bidder proposes and agrees, if this Bid is accepted, to provide at Bidder's own expense, all labor, machinery, tools, materials, etc., including all Work incidental to, or described or implied as incidental to such items, according to the Contract Documents, and that the Bidder will complete the Work within the time stated, and that Bidder will accept in full the lump sum or unit price(s) set forth below:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE (QTY. x UNIT PRICE)
1	Mobilization and Demobilization	1	LS		
2	Project Administration - Piers 3&4	1	LS		
3	Field Engineering - Piers 3&4	1	LS		
4	Dredging - Piers 3&4	4,960	CY		
5	Project Administration - WUT	1	LS		
6	Field Engineering - WUT	1	LS		
7	Dredging - WUT	12,870	CY		
8	Dredge Debris Allowance	1	LS	\$10,000.00	\$10,000.00
9	Dredging Standby	6	Days		

TOTAL BID AMOUNT	
10.5% WASHINGTON STATE SALES TAX (WSST) ON BASE BID SUBTOTAL	
BID TOTAL (WITH WSST)	

Note: Show prices in figures only.

Evaluation of Bids. In accordance with the provisions of the Contract Documents, Bids will be evaluated to determine the lowest Base Bid Subtotal offered by a responsible Bidder submitting a responsive Bid.

Schedule of Unit Prices. The unit prices are proposed to apply only in the event of additions to, or deletions from, the work required and ordered. All prices shall include complete installation without Washington State Sales Tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The Port reserves the right to accept or reject the unit prices proposed.

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further represents that the Bidder has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or encouraged any other person or corporation to refrain from bidding; and that the Bidder has not in any manner sought by collusion to secure to the Bidder an advantage over any other bidder or bidders.

RCW 39.04.350 Certification. The Bidder represents and certifies, under penalty of perjury, that within the three- (3-) year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, nor through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, nor 49.52 RCW.

Addenda. Bidder acknowledges receipt and acceptance of all Addenda through No. ____ (Identify Last Addenda By Number)

Name of Firm

Date

Signature

Printed Name and Title

Mailing Address

City, State Zip Code

Telephone Number

Email Address

WA State Contractor's License No.

Employment Security Department No.

Identification of Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

END OF SECTION

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and
_____, as Surety, are held and firmly bound unto
the PORT OF TACOMA as Obligee, in the penal sum of _____
Dollars, for the payment of which the Principal and Surety bind themselves, their heirs, executors,
administrators, successors and assigned, jointly and severally, by these present.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for
_____, according to the terms of the proposal or bid
made by the Principal therefor, and the Principal shall duly make and enter into a contract with the
Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the
faithful performance thereof, with Surety or Sureties approved by the Obligee; or, if the principal shall, in
case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the
call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and
effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages,
the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20__

BY _____
PRINCIPAL

BY _____
SURETY

AGENT AND ADDRESS

Note: Bidder may submit Surety's bid bond form, provided it is similar in substance, made out in the
name of the Port of Tacoma, and that the agent's name and address appear as specified. Bonds
containing riders limiting responsibility for toxic waste or limiting the term of responsibility will be rejected.

END OF SECTION

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THIS IS NOT TO BE SUBMITTED WITH A BID.

THE LOW RESPONSIVE BIDDER SHALL BE REQUIRED TO COMPLETE THIS RESPONSIBILITY DETAIL FORM AS SPECIFIED IN SECTION 00 21 00 - INSTRUCTIONS TO BIDDERS. **THIS COMPLETED RESPONSIBILITY DETAIL FORM SHALL BE SUBMITTED ELECTRONICALLY (PDF) VIA EMAIL TO THE CONTACT(S) IDENTIFIED IN THE LOW RESPONSIVE BIDDER SELECTION NOTIFICATION.**

BIDDER'S COMPANY NAME: _____

For the below Mandatory Bidder Responsibility Criteria, please mark the appropriate choice.

1.01 MANDATORY BIDDER RESPONSIBILITY CRITERIA

A. The Bidder shall meet the following mandatory responsibility criteria as described in RCW 39.04.350(1). The Bidder shall be rejected as not responsible if any answer to questions 1 through 6 is "No" or any answer to questions 7 through 11 is "Yes."

1. Does the Bidder have a Certificate of Registration in compliance with RCW 18.27?
☐ Yes ☐ No
2. Does the Bidder have a current Washington State Unified Business Identifier number?
☐ Yes ☐ No
3. Does the Bidder have Industrial Insurance Coverage for the Bidder's employees working in Washington State as required in RCW 51?
☐ Yes ☐ No
4. Does the Bidder have an Employment Security Department number as required in RCW 50?

****Attach** letter dated within six (6) months of Bid Date.*

**Request a letter electronically by clicking on the following link
<https://fortress.wa.gov/esd/twt/pwcinternet/> or by emailing a request to
publicworks@esd.wa.gov.*
☐ Yes ☐ No
5. Does the Bidder have a Washington State Excise Tax Registration number as required in RCW 82?
☐ Yes ☐ No
6. Has the Bidder completed the training required by RCW 39.04.350, or is the Bidder on the list of exempt businesses maintained by the Department of Labor and Industries?
☐ Yes ☐ No
7. Has the Bidder been disqualified from bidding on any public works project under RCW 39.06.010 or 39.12.065(3)?
☐ Yes ☐ No

8. Has the Bidder violated RCW 39.04.370 more than one (1) time as determined by the Washington State Department of Labor and Industries?
- ☐ Yes ☐ No
9. Has the Bidder ever been found to be out of compliance with Apprenticeship Utilization requirements of RCW 39.04.320?
- ☐ Yes ☐ No
10. Has the Bidder ever been found to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three- (3-) year period immediately preceding the date of this bid solicitation?
- ☐ Yes ☐ No
11. Has the bidder been subject to a revocation of a minor work permit under RCW 49.12.390.(4)?
- ☐ Yes ☐ No

If any answer to questions 1 through 6 is "No" or any answer to questions 7 through 11 is "Yes" - **STOP HERE** and contact the Contract Administrator. The Bidder is not responsible for this Work. Otherwise proceed to 1.02. **Provide attached to this completed form documentation to confirm responsibility criteria.**

For remaining criteria below, check or fill-out the appropriate item. Based upon the answer provided by the Bidder, the Port may request additional information or seek further explanation. As needed, provide backup documentation for any explanations listed below.

1.02 CONTRACT AND REGULATORY HISTORY

- A. The Port will evaluate whether the Bidder's contract and regulatory history demonstrates an acceptable record of past project performance and consistent responsibility. The Bidder shall answer the following questions. The Bidder may be rejected as not responsible if any answer to questions 1 through 5 below is "Yes."

1. Has the Bidder had a contract terminated for cause or default in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

2. Has the Bidder required a Surety to take over all, or a portion of, a project to cure or respond to an asserted default or material breach of contract on the part of the Bidder on any public works project in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

3. Have the Bidder and major Sub-Bidders been in bankruptcy, reorganization, and/or receivership on any public works project in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

4. Have the Bidder and major Sub-Bidders been disqualified by any state or local agency from being awarded and/or participating on any public works project in the last five (5) years?

☐ Yes, **If YES, explain below.** ☐ No

5. Are the Bidder and major Sub-Bidders currently a party to a formal dispute resolution process with the Port (i.e., a pending mediation, arbitration, or litigation)?

☐ Yes, **If YES, explain below.** ☐ No

1.03 ACCIDENT/INJURY EXPERIENCE

- A. The Port will evaluate the Bidder's accident/injury Experience Modification Factor ("EMF") from the Washington State Department of Labor and Industries to assess whether the Bidder has an acceptable safety record preventing personal injuries on projects.
- B. List the Bidder's accident/injury EMF for the last five (5) years. An experience factor is calculated annually by the Washington State Department of Labor and Industries.

Year	Effective Year	Experience Factor
1		
2		
3		
4		
5		

If the Bidder has received an EMF of greater than 1.0 for any year, explain the cause(s) of the designation and what remedial steps were taken to correct the EMF. The Bidder may be rejected as not responsible if the Bidder's EMF is greater than 1.0 and sufficient remedial steps have not been implemented.

1.04 WORK PERFORMED BY BIDDER

- A. The Bidder shall state the amount of the Work, as an equivalent to the Base Bid, excluding taxes, insurance, and bonding, the Bidder will execute with its own forces.

%

1.05 ADDITIONAL CONTRACTOR INFORMATION

- A. As part of completing this Responsibility Detail Form, **submit the following information with the completed Responsibility Detail Form:**
- Bidder's recent job resume, including a list of similar projects performed and contact information for the similar project owner(s), a brief description of work, start and end dates, and contract amount.

2. Resumes of Bidder's proposed project manager and job superintendent.
- B. The Bidder's failure to provide the required project information may result in a determination of the Bidder being declared non-responsible by the Port.
- C. The Bidder shall submit this completed, **SIGNED** Responsibility Detail Form electronically (PDF), with all requested backup documentation, via email to the contact(s) noted on the Low Responsive Bidder Selection Notification.
- D. The Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and 39.04.350.
 1. Bidder shall verify major subcontractors meet the responsibility criteria required. Fill out one Port of Tacoma Public Works Project Bidder Evaluation Checklist for Subcontractors for each major subcontractor and submit to the Port with this form. Backup documentation is not required to be submitted.

PROJECT: MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026

PROJECT NO.: 202066 AND 202067

PROCUREMENT NO.: 092026-1061

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation, and submit to the Port within twenty-four (24) hours following receipt of the Low Responsive Bidder Selection Notification. All forms shall be submitted electronically (PDF) via email to the contact(s) listed on the Selection Notice. Note, the same project may be used to demonstrate experience across multiple categories if applicable.

By completing and signing this Responsibility Detail Form, the Bidder is certifying that the information contained within the Form, the backup documentation, and any additional information requested by the Port is true and complete. The Bidder's failure to disclose the required information or the submittal of false or misleading information may result in the rejection of the Bidder's Bid, revocation of award, or contract termination.

The information provided herein is true and complete.

Signature of Authorized Representative

Date

Print Name and Title

**PORT OF TACOMA PUBLIC WORKS PROJECT BIDDER EVALUATION CHECKLIST FOR
SUBCONTRACTORS**

**PROJECT TITLE: MAINTENANCE DREDGING AT PIERS 3 & 4 AND
WASHINGTON UNITED TERMINALS 2026**

BIDDER: _____

CONTRACT AND PROJECT NUMBER: PA000000153/ 202066 AND 202067 _____

This checklist shall be completed by the Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and RCW 39.04.350.

This checklist should be submitted to the Port of Tacoma Contracts Administrator within twenty-four (24) hours of request.

Document verification information or backup data is not to be submitted to the Port, this information should remain on file with the Contractor and be presented to the Port if requested at a later date.

Item No.	Item	Initials/ Comments
1.	At the time of Bid submittal, have a certificate of registration in compliance with RCW 18.27: Check the Department of Labor & Industries web site https://secure.lni.wa.gov/verify/ Verify that a subcontractor has an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.	
2.	While reviewing registration information above, also check contractor's Employer Liability Certificate to verify workers' comp (industrial insurance) premium status – current account. Complete a "Submit Contractor Tracking Request" to be notified if the contractor fails to pay workers' comp premiums or renew their contractor registration or if their electrical contractor license is suspended or revoked within one year.	
3.	State excise tax registration number (Department of Revenue). (contractor's Washington State Unified Business Identifier and tax registration number) http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/ .	
4.	Not disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3) . Check the Department of Labor and Industries https://secure.lni.wa.gov/verify/	
5.	Verify subcontractors are registered with the Washington State Employment Security Department (ESD) and have an account number. Request a letter to be sent from the subcontractor electronically by clicking on the following link https://esd.wa.gov/ or by emailing a request to	

Item No.	Item	Initials/ Comments
	publicworks@esd.wa.gov. Include ESD#, UBI#, and business name in the email. Certificate of Coverage letter issued/dated within the last six (6) months. Document if subcontractor confirms in writing, under penalty of perjury, that it has no employees and this requirement does not apply.	

END OF SECTION

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THIS AGREEMENT is made and entered into by and between the PORT OF TACOMA, a State of Washington municipal corporation, hereinafter designated as the "Port," and:

The "Contractor" is: _____ (Legal Name)

_____ (Address)

_____ (Address 2)

_____ (Phone No.)

The "Project" is: MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED
TERMINALS 2026 _____ (Title)

202066 AND 202067 | PA000000153 _____ (Project/Contract No.)

One Sitcum Plaza _____ (Project Address)

Tacoma, WA 98421 _____ (Project Address 2)

The "Engineer" is: Thais Howard, PE _____ (Engineer)

Sr. Director, Engineering _____ (Title)

thoward@portoftacoma.com _____ (Email)

(253) 888-4718 _____ (Phone No.)

The "Contractor's Representative" is: _____ (Representative)

_____ (Title)

_____ (Email)

_____ (Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port publicly solicited bids on the Contract Documents. The Contractor submitted a Bid to the Port on the _____ day of _____, 20____ to perform the Work.

The Contractor represents that it has the personnel, experience, qualifications, capabilities, and means to accomplish the Work in strict accordance with the Contract Documents, within the Contract Time and for the Contract Price, and that it and its Subcontractors satisfy the responsibility criteria set forth in the Contract Documents, including any supplemental responsibility criteria.

The Contractor further represents that it has carefully examined, and is fully familiar with, all provisions of the Contract Documents, including any Addenda, that it has fully satisfied itself as to the nature, location, difficulty, character, quality, and quantity of the Work required by the Contract Documents and the conditions and other matters that may be encountered at or near the Project site(s), or that may affect performance of the Work or the cost or difficulty thereof, including all applicable safety and site responsibilities, and that it understands and can satisfy all scheduling and coordination requirements and interim milestones.

AGREEMENT:

The Port and the Contractor agree as follows:

1.0 CONTRACTOR TO FULLY PERFORM THE WORK

The Contractor shall fully execute and complete the entire Work for the Project described in the Contract Documents, except to the extent specifically indicated in the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

2.0 DATE OF COMMENCEMENT

The date of commencement of the Work, which is the date from which the Contract Time is measured, shall be fixed as the date of execution of the Contract.

3.0 CONTRACT TIME AND LIQUIDATED DAMAGES

The Contractor shall achieve all interim milestones as set forth in the Contract Documents and Substantial Completion of the entire Work not later than 365 calendar days from execution of the Contract, subject to adjustments of this Contract Time as provided in the Contract Documents. The Contractor shall achieve Final Completion of the entire Work within 30 calendar days of the date on which Substantial Completion is achieved.

Provisions for liquidated damages as a reasonable estimate of future loss, as of the date of this Agreement, are included in the Contract Documents. The parties agree that the stated liquidated damages are reasonable and not penalties individually nor cumulatively.

The liquidated damages for failure to achieve Substantial Completion by the required date shall be \$250 per calendar day. After the required Final Completion date, the liquidated damages for failure to achieve Final Completion shall be \$100 per calendar day.

Liquidated damages assessed by the Port will be deducted from monies due to the Contractor, or from monies that will become due to the Contractor. The liquidated damages, as specified and calculated herein, shall be levied, cumulatively if applicable, for each and every calendar day that Substantial Completion and/or Final Completion of the Work is delayed beyond the required completion dates, or the completion dates modified by the Port for extensions of the Contract Time.

4.0 CONTRACT PRICE

In accordance with the Contractor's Bid dated _____, the Port shall pay the Contractor in current funds for the Contractor's performance of the Contract, the Contract Price of _____ Dollars (\$_____), subject to additions and deductions as provided in the Contract Documents. State and local sales tax is not included in the Contract Price, but will be due and paid by the Port with each progress payment.

5.0 ALTERNATES

6.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

This Agreement is entered into as of the Execution Date written below:

CONTRACTOR

PORT OF TACOMA

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Execution _____
Date: _____

END OF SECTION

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PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA
P.O. BOX 1837
TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026, Project No. 202066 AND 202067/Contract No. _____, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, all alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed and issued pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

FURTHER:

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.
- C. Whenever Contractor has been declared by the Port to be in default, and the Port has given Surety notice of the Port's determination of such default, Surety shall promptly (in no event more than fifteen (15) days following receipt of such notice) advise the Port of its intended action to:
 1. Remedy the default within fifteen (15) days following its advice to the Port as set forth above, or

2. Assume within fifteen (15) days, following its advice to the Port as set forth above, completion of the Contract in accordance with the Contract Documents and become entitled to payment of the balance of the Contract Sum, or
 3. Pay the Port upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by the Port as a result of the Contractor's default, including but not limited to, those reasonable costs and expenses incurred by the Port in its efforts to mitigate its losses, which may include, but are not limited to, attorney's fees and efforts to complete the Work prior to the Surety exercising the options available to it as set forth herein.
- D. If the Port shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment, shall pay all costs and attorney's fees incurred by the Port in enforcement of its rights hereunder. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.
- E. No right or action shall accrue on this bond to, or for the use of, any person or corporation other than the Port of Tacoma.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Surety Company Name

Contractor Company Name

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

LABOR AND MATERIAL PAYMENT BOND # _____**CONTRACTOR (NAME AND ADDRESS)**_____

_____**SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)**_____

_____**OWNER (NAME AND ADDRESS)**

PORT OF TACOMA

P.O. BOX 1837

TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)_____

_____**KNOW ALL MEN BY THESE PRESENTS:**

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, and all others entitled to recovery hereunder, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026, Project No. 202066 AND 202067/Contract No. _____, a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payment to all claimants, as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and shall indemnify and save the Port harmless from all cost and damage by reason of Contractor's default, then this obligation shall be null and void; otherwise, it shall remain in full force and effect, subject to the following conditions.

- A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.

- C. Surety hereby agrees that every person protected under the provisions of RCW 39.08.010 who has not been paid as provided under the Contract, and pursuant to RCW 39.08.010, less any amounts withheld pursuant to statute, and less retainage withheld pursuant to RCW 60.28, after the expiration of a period of thirty (30) days after the date on which the completion of the Contract in accordance with RCW 39.08, may sue on this bond, prosecute the suit to final judgment as may be due claimant, and have execution thereon including recovery of reasonable costs and attorney's fees as provided by RCW 39.08. The Port shall not be liable for the payment of any costs or expenses of any such suit.
- D. No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the Port, and where required, the Contractor, in accordance with RCW 39.08.030.
- E. The amount of this bond shall be reduced by, and to the extent of, any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.
- F. If any Claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the Port as a result of such suit. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

Surety Company Name

Signature

Printed Name and Title

Power of Attorney attached.

CONTRACTOR

Construction Company Name

Signature

Printed Name and Title

END OF SECTION

BOND NO.: _____

PROJECT TITLE: MAINTENANCE DREDGING AT PIERS
3 & 4 AND WASHINGTON UNITED TERMINALS 2026

PROJECT NO.: 202066 AND 202067

CONTRACT NO.: _____

KNOW ALL MEN BY THESE PRESENTS: That we, _____
_____ a corporation existing under and by virtue of the laws of the State of
Washington and authorized to do business in the State of Washington, as Principal, and
_____, a corporation organized and existing under the
laws of the State of _____ and authorized to transact the business of
surety in the State of Washington, as Surety, are jointly and severally held and bound unto the PORT OF
TACOMA, hereinafter called Port, as Obligee, and are similarly held and bound unto the beneficiaries of
the trust fund created by RCW 60.28 as their heirs, executors, administrators, successors, and assigns in
the penal sum of _____ (\$_____) plus five (5) percent of any increases in the Contract Price that have occurred or may occur, due to
change orders, increases in the quantities, or the addition of any new item of work.

WHEREAS, on the _____ day of _____, the said Principal herein executed Contract
No. _____ with the Port for MAINTENANCE DREDGING AT PIERS 3 & 4 AND
WASHINGTON UNITED TERMINALS 2026, Project No. 202066 AND 202067.

WHEREAS, said Contract and RCW 60.28 require the Port to withhold from the Principal the sum of five
(5) percent from monies earned by the Principal on estimates during the progress of the work, hereinafter
referred to as earned retained funds.

WHEREAS, the Principal has requested that the Port accept a bond in lieu of earned retained funds as
allowed under RCW 60.28.

NOW THEREFORE, this obligation is such that the Surety, its successors, and assigns are held and
bound unto the Port and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the
aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the
same manner and priority as set forth for retained percentages in RCW 60.28. The condition of this
obligation is also that if the Principal shall satisfy all payment obligations to persons who may lawfully
claim under the trust fund created pursuant to RCW 60.28, to the Port, and indemnify and hold the Port
harmless from any and all loss, costs, and damages that the Port may sustain by release of said
retainage to Principal, then this obligation shall be null and void, provided the Surety is notified by the
Port that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by
the Port.

IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as Principal. The Surety will not be discharged or released from liability for any act, omission, or defenses of any kind or nature that would not also discharge the Principal.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety, the Port, the beneficiaries of the trust fund created by RCW 60.28 and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

By: _____
Principal

Address: _____

City/ST/Zip: _____

Phone: _____

Surety Name: _____

By: _____
Attorney-In-Fact

Address: _____

City/ST/Zip: _____

Phone: _____

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, and be authorized to transact business in the State of Washington.

END OF SECTION

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ARTICLE 1 - THE CONTRACT DOCUMENTS

1.01 GENERAL

- A. Contract Documents form the Contract. The Contract Documents are enumerated in the Agreement between the Port and Contractor ("Agreement"). Together, the Contract Documents form the Contract. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only in writing and only as set forth in the Contract Documents.
- B. Headings only for convenience. The titles or headings of the sections, divisions, parts, articles, paragraphs, and subparagraphs of the Contract Documents are intended only for convenience.

1.02 DEFINITIONS

- A. "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- B. "Contractor" means the person or entity contracting to perform the Work under these Contract Documents. The term Contractor includes the Contractor's authorized representative for purposes of identifying obligations and responsibilities under the Contract Documents, including the ability to receive notice and direction from the Port.
- C. "Day" means a calendar day unless otherwise specifically designated.
- D. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, including plans, elevations, sections, details, and diagrams.
- E. "Engineer" is the Port employee generally tasked with administering the Project on the Port's behalf and the person with overall responsibility for managing, for the Port, the Project scope, budget, and schedule. To the extent empowered, the Engineer may delegate to others at the Port (such as a Project Manager or Inspector) the responsibility for performing delegated responsibilities of the Engineer's under this Contract.
- F. "Port" means the Port of Tacoma. The Port will designate in writing a representative (usually the Engineer) who shall have the authority to act on the Port's behalf related to the Project. The "Port" does not include staff, maintenance, or safety workers, or other Port employees or consultants that may contact the Contractor or be present at the Project site.
- G. "Project" is identified in the Agreement and is the total construction to be performed by or through the Port, of which the Work performed under the Contract Documents may be only a part.
- H. "Specifications" are those portions of the Contract Documents that specify the written requirements for materials, equipment, systems, standards, and workmanship for the Work and for the performance of related services.
- I. "Subcontractor" means a person or entity that contracts directly with the Contractor to perform any Work under the Contract Documents. "Subcontractor of any tier" includes Subcontractors as well as any other person or entity, including suppliers, that contracts with a Subcontractor or a lower-tier Subcontractor (also referred to as "Sub-subcontractors") to perform any of the Work.

- J. "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, tools, equipment, materials, services, and incidentals necessary to complete all obligations under the Contract Documents. The Work may constitute only a part of the Project, and may interface and need to be coordinated with the work of others.

1.03 INTENT OF THE CONTRACT DOCUMENTS

- A. Intent of Contract Documents. The intent of the Contract Documents is to describe the complete Work and to include all items and information necessary for the proper execution and completion of the Work by the Contractor.
- B. Contract Documents are complementary. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- C. No third party contract rights. The Contract Documents shall not create a contractual relationship of any kind (1) between the Port and a Subcontractor of any tier (although the Port does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (2) between the Contractor and the Engineer or other Port employees or consultants, or (3) between any persons or entities other than the Port and Contractor.

1.04 CORRELATION OF THE CONTRACT DOCUMENTS

- A. Precedence. In the event of a conflict or discrepancy between or among the Contract Documents, the conflict or discrepancy will be resolved by the following order of precedence: with an addendum or Change Order having precedence over an earlier document, and computed dimensions having precedence over scaled dimensions, and large scale drawings take precedence over small scale drawings:
1. The signed Agreement
 - a. Supplemental Conditions
 - b. Division 00 General Conditions
 - c. Division 01 General Requirements of Specifications
 - d. All other Specifications, including all remaining divisions, material and system schedules and attachments, and Drawings
 - e. All other sections in Division 00 not specifically identified herein by Section
- B. Inconsistency between or among Contract Documents. If there is any inconsistency between the Drawings, schedules, or Specifications, or any attachments, the Contractor will make an inquiry to the Engineer to determine how to proceed, and, unless otherwise directed, the Contractor will provide the better quality or greater quantity of any work or materials, as reasonably interpreted by the Port, at no change in the Contract Sum or Contract Time. Thus, if Work is shown on Drawings, but not contained in Specifications or schedules, or contained in Specifications or schedules, but not shown on the Drawings, the Work as shown or contained will be provided at no change in the Contract Sum or Contract Time, according to Specifications or Drawings to be issued by the Port.
- C. Inconsistency with law. In the event of a conflict between the Contract Documents and applicable laws, codes, ordinances, regulations, or orders of governmental authorities having jurisdiction over the Work, or in the event of any conflict between such laws, the most stringent requirements govern.

- D. Organization of Contract Documents. The organization of the Specifications and Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed. The Port assumes no responsibility for the division and proper coordination of Work between particular Subcontractors.
- E. Bid quantities are estimates only. Any "bid quantities" set forth in the Contract Documents are estimates only. The Port does not warrant that the actual amount of Work will correspond to any estimates. The basis of payment will be the actual quantities performed in accordance with the Contract Documents.

1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS

- A. Port owns all Contract Documents. All Drawings, Specifications, and other Contract Documents furnished to the Contractor are Port property, and the Port retains all intellectual property rights, including copyrights. The Contract Documents are to be used only with respect to the Project.

ARTICLE 2 - PORT OF TACOMA

2.01 AUTHORITY OF THE ENGINEER

- A. Engineer will be Port's representative. The Engineer or the Engineer's designee will be the Port's representative during the Project and will administer the Project on the Port's behalf.
- B. Engineer may enforce all obligations. The Engineer has the authority to enforce all requirements imposed on the Contractor by the Contract Documents.
- C. Only Engineer is agent of Port. Other than the Engineer, no other Port employee or consultant is an agent of the Port, and none are authorized to agree on behalf of the Port to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time, nor to accept notice of protests or claims on behalf of the Port.

2.02 ADMINISTRATION OF THE CONTRACT

- A. Port will administer Contract. The Port will provide administration of the Contract through the Engineer or the Engineer's designee. All communications with the Port or its consultants related to the Contract will be through the designated representative.
- B. Port not responsible for means and methods. The Port is not responsible for, and will have no control or charge of, the means, methods, techniques, sequences, or procedures of construction, or for safety precautions or programs incidental thereto, because these are the sole responsibility of the Contractor. If the Port makes any suggestion of means, methods, techniques, sequences, or procedures, the Contractor will exercise its independent judgment in deciding whether to adopt the suggestion, except as otherwise provided in the Contract Documents.
- C. Port not responsible for acts or omissions of Contractor or Subcontractors. The Port is not responsible for, and will have no control or charge of, the acts or omissions of the Contractor, Subcontractors of any tier, suppliers, or any of their agents or employees, or any other persons performing a portion of the Work.
- D. Port not responsible for the Work. The Port is not responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The presence of the Engineer or others at the Project site at any time does not relieve the Contractor from its responsibility for non-conforming Work.
- E. Port will have access to the Work. The Port and its representatives will at all times have access to the Work in progress, and the Contractor will provide proper facilities for such access and for inspection.

2.03 INFORMATION PROVIDED BY THE PORT

- A. Port to furnish information with reasonable promptness. The Port shall furnish information and services required of the Port by the Contract Documents with reasonable promptness.
- B. Subsurface investigation. The Port may have undertaken a limited investigation of the soil and other subsurface conditions at the Project site for design purposes only. The results of these investigations will be available for the convenience of the Contractor, but they are not Contract Documents. There is no warranty or guarantee, express or implied, that the conditions indicated are representative of those existing at the site or that unforeseen developments may not occur. The Contractor is solely responsible for interpreting the information.

2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION

- A. Contractor to familiarize itself with site and conditions of Work. Prior to executing the Contract, the Contractor shall visit the site, become generally familiar with local conditions under which the Work is to be performed, and correlate personal observations with the requirements of the Contract Documents and all information provided with the Bid Documents. By signing the Contract, the Contractor confirms that the Contract Sum is reasonable compensation for the Work; that the Contract Time is adequate; that it has carefully examined the Contract Documents and the Project site; and that it has satisfied itself as to the nature, location, and character of the Work, the labor, materials, equipment, and other items required and all other requirements of the Contract Documents. The Contractor's failure fully to acquaint itself with any such condition does not relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents, within the Contract Time, and for the Contract Sum.
- B. Contractor to review Contract Documents. Because the Contract Documents are complementary, the Contractor will, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents, as well as all information furnished by the Port.
- C. Contractor to confirm field conditions. Before starting each portion of the Work, the Contractor shall take field measurements of and verify any existing conditions, including all Work in place, and all general reference points; shall observe any conditions at the site affecting the Contractor; and shall carefully compare field measurements, conditions and other information known to the Contractor with the Contract Documents.

2.05 PORT'S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK

- A. Port may reject Work. The Port has the authority, but not the obligation, to reject work, materials, and equipment that is defective or that otherwise does not conform to the Contract Documents, and to decide questions concerning the Contract Documents. However, the failure to so reject, or the presence of the Port at the site, shall not be construed as assurance that the Work is acceptable or being completed in compliance with the Contract Documents.
- B. Port may stop Work. If the Contractor fails to correct Work that does not comply with the requirements of the Contract Documents, or repeatedly or materially fails to properly carry out the Work, the Port may issue an order to stop all or a portion of the Work until the cause for the order has been eliminated. The Port's right to stop the Work shall not impose a duty on the Port to exercise this right for the benefit of the Contractor or any third party.

- C. Port may carry-out Work. If the Contractor fails to perform the Work properly, fails to perform any provision of this Contract, or fails to maintain the Baseline Project Schedule, or if the Port reasonably concludes that the Work will not be completed in the specified manner or within the Contract Time, then the Port may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy the Port may have, perform itself or have performed any or all of the Work and may deduct the cost thereof from any payment then or later due the Contractor.

2.06 SEPARATE CONTRACTORS

- A. Port may engage separate contractors or perform work with its own forces. The Port may contract with other contractors ("Separate Contractor") in connection with the Project or perform work with its own forces. The Contractor shall coordinate and cooperate with any Port forces or Separate Contractors, as applicable. The Contractor shall provide reasonable opportunity for the introduction and storage of materials and the execution of work by others.
- B. Contractor to inspect work of others. If any part of the Contractor's Work depends on the work of the Port or any Separate Contractor, the Contractor shall inspect and promptly report to the Port, in writing, any defects that impact the Contractor. Failure of the Contractor to so inspect and report defects in writing shall constitute an acceptance by Contractor of the work of the Port or Separate Contractor.
- C. Contractor to resolve claims of others. Should the Contractor, or any of its Subcontractors of any tier, cause damage of any kind, including but not limited to delay, to any Separate Contractor, the Contractor shall promptly, and using its best efforts, settle or otherwise resolve the dispute with the Separate Contractor. The Contractor shall also promptly remedy damage caused to completed or partially completed construction.

2.07 OFFICERS AND EMPLOYEES OF THE PORT

- A. No personal liability. Officers, employees, and representatives of the Port, including the Commissioners, acting within the scope of their employment, shall not be personally liable to Contractor for any acts or omissions arising out of the Project.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 DUTY TO PERFORM THE ENTIRE WORK

- A. Contractor must perform entire Work in accordance with Contract Documents. The Contractor shall perform the entire Work required by the Contract in accordance with the Contract Documents. Unless otherwise specifically provided, the Contractor shall provide and pay for all labor, tools, equipment, materials, electricity, power, water, other utilities, transportation, and other facilities necessary for the execution and completion of the Work.
- B. Contractor shall be independent contractor. The Contractor shall be, and operate as, an independent contractor in the performance of the Work. The Contractor is not authorized to enter into any agreements or undertakings for, or on behalf of, the Port and is not an agent or employee of the Port.

3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS, OR VARIANCES IN THE CONTRACT DOCUMENTS

- A. Contractor to notify Port of any discrepancy. The Contractor's obligations to review and carefully study the Contract Documents and field conditions are for the purpose of facilitating coordination and construction. If the Contractor at any time observes that the Contract Documents, including Drawings and Specifications, vary from the conditions of the Project site, are in error, or omit any necessary detail, the Contractor shall promptly notify the Engineer in writing through a Request for Information. Any Work done after such observation, until authorized by the Engineer, shall be at Contractor's risk. The Contractor shall also promptly report to the Engineer any observed error, inconsistency, omission, or variance with applicable laws through a Request for Information. If the Contractor fails either to carefully study and compare the Contract Documents, or to promptly report any observed error, inconsistency, omission, or variance, the Contractor shall assume full responsibility and shall bear all costs, liabilities, and damages attributable to the error, inconsistency, omission, or variance.
- B. Requests for Information. The Contractor shall submit Requests for Information concerning the Contract Documents by following the procedure and using such form as the Port may require. The Contractor shall minimize Requests for Information by thoroughly studying the Contract Documents and reviewing all Subcontractor requests. The Contractor shall allow adequate time in its planning and scheduling for a response from the Port to a Request for Information.
- C. Port may provide information to supplement Drawings and Specifications. Minor items of work or detail that are omitted from the Drawings and Specifications, but inferable from the information presented and normally provided by accepted good practice, shall be provided and/or performed by the Contractor as part of the Contract Sum and within the Contract Time. Similarly, the Engineer may furnish to the Contractor additional Drawings and clarifications, consistent with the Contract Documents, as necessary to detail and illustrate the Work. The Contractor shall conform its Work to such additional Drawings and clarifications at no increase in the Contract Sum or Contract Time.

3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS

- A. Contractor responsible for Work and workers. The Contractor shall have complete control of the means, methods, techniques, sequences, or procedures related to the Work, and for all safety precautions or programs. The Contractor shall have complete control over, and responsibility for, all personnel performing the Work. The Contractor is also responsible for the acts and omissions of the Contractor's principals, employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors of any tier.
- B. Contractor to supervise the Work. The Contractor shall continuously supervise and direct the Work using competent and skilled personnel and the Contractor's best skill and attention.
- C. Contractor to enforce discipline and good order. The Contractor shall enforce strict discipline and good order among all workers on the Project, and shall not employ any unfit person or anyone not skilled in the work to which they are assigned. Incompetent, careless, or negligent workers shall immediately be removed from the Work. The Port may, but is not obligated to, require the Contractor to remove from the Work, at no change in the Contract Sum or Contract Time, anyone whom the Port considers objectionable.

3.04 MATERIALS AND EQUIPMENT

- A. Material and equipment to be new. All materials and equipment to be incorporated into the Work shall be new, unless specifically provided otherwise in the Contract Documents. The Contractor shall, if required in writing by the Port, furnish satisfactory evidence regarding the kind and quality of any materials, identify the source, and warrant compliance with the Contract Documents. The Contractor shall ensure that all materials and equipment are protected, kept dry, and stored under cover in a manner to protect such materials and equipment.

- B. Material and equipment shall conform to manufacturer instructions. All materials and equipment shall conform, and shall be applied, installed, used, maintained, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, unless otherwise specifically provided by the Engineer.

3.05 CONTRACTOR WARRANTIES

- A. Work will be of good quality and performed in workmanlike manner. In addition to any specific warranties set forth in the Contract Documents, the Contractor warrants that the Work, including all materials and equipment furnished under the Contract, will be of good quality and new, will be performed in a skillful and workmanlike manner, and will conform to the requirements of the Contract Documents. Any Work not conforming to this warranty, including unapproved or unauthorized substitutions, shall be considered defective.
- B. Work will be free from defects. The Contractor warrants that the Work will be free from defects for a period of one (1) year from the date of Substantial Completion of the Project.
- C. Contractor to collect and deliver warranties to Port. The Contractor shall collect and deliver to the Port any written warranties required by the Contract Documents. These warranties shall be obtained and enforced by the Contractor for the benefit of the Port without the necessity of separate assignment. These warranties shall extend to the Port all rights, claims, benefits, and interests that the Contractor may have under express or implied warranties or guarantees against a Subcontractor of any tier, supplier, or manufacturer for defective or non-conforming Work. Warranty provisions that purport to limit or alter the Port's rights under the Contract Documents, or the laws of the State of Washington, are null and void.
- D. General requirements. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance, and final payment.

3.06 REQUIRED WAGES

- A. Contractor will pay required wages. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project. See Specification Section 00 73 46.
- B. The Contractor shall defend (at Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct or indirect, and including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses of litigation, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance").

3.07 STATE AND LOCAL TAXES

- A. Contractor will pay taxes on consumables. The Contractor will pay the retail sales tax on all consumables used during performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Contract Sum.
- B. Port will pay taxes on the Contract Sum. The Port will pay state and local retail sales tax on the Contract Sum with each progress payment, and on final payment, for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local taxing authority. Rule 170: WAC 458-20-170.
- C. Direct all tax questions to the Department of Revenue. The Contractor should direct all questions concerning taxes on any portion of the Work to the State of Washington Department of Revenue or to the local taxing authority.

- D. State Sales Tax - Rule 171: WAC 458-20-171. For work performed related to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used, primarily, for foot or vehicular traffic, the Contractor shall include Washington State Retail Sales Taxes in the various schedule prices, or other contract amounts, including those that the Contractor pays on the purchase of materials, equipment, or supplies used or consumed in doing the Work.

1. The bid form will indicate which bid items are subject to Rule 171. Any such identification by the Port is not binding upon the Department of Revenue.

3.08 PERMITS, LICENSES, FEES, AND ROYALTIES

- A. Contractor to provide and pay for permits unless otherwise specified. Unless otherwise specified, the Contractor shall procure and pay for all permits, licenses, and governmental inspection fees necessary or incidental to the performance of the Work. All costs related to these permits, licenses, and inspections shall be included in the Contract Sum. Any action taken by the Port to assist the Contractor in obtaining permits or licenses shall not relieve the Contractor of its sole responsibility to obtain and pay for permits, licenses, and inspections as part of the Contract Sum.
- B. Contractor's obligations when permit must be in Port's name. When applicable law or agency requires a permit to be issued to a public agency, the Port will support the Contractor's request for the permit and accept the permit in the Port's name, if:
1. The Contractor takes all necessary steps required for the permit to be issued;
 2. The permit applies to Work performed in connection with the Project; and
 3. The Contractor agrees in writing to abide by all requirements of the permit and to defend and hold harmless the Port from any liability in connection with the permit.
- C. Contractor to pay royalties. The Contractor shall pay all royalties and license fees required for the Work unless otherwise specified in the Contract Documents.

3.09 SAFETY

- A. Contractor solely responsible for safety. The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work and the performance of the Contract.
- B. Port not responsible for safety. The Port may identify safety concerns to the Contractor; however, no action or inaction of the Port or any third party relating to safety will: (1) relieve the Contractor of its sole and complete responsibility for safety and sole liability for any consequences, (2) impose any obligation on the Port or a third party to inspect or review the Contractor's safety program or precautions, (3) impose any continuing obligation on the Port or a third party to ensure the Contractor performs the Work safely, or (4) affect the Contractor's responsibility for the protection of property, workers, and the general public.
- C. Contractor to maintain a safe Work site. The Project site may be occupied during performance of the Work. The safety of these site occupants is of paramount importance to the Port. The Contractor shall maintain the Work site and perform the Work in a safe manner and in accordance with the Washington Industrial Safety and Health Act (WISHA) and all other applicable safety laws, rules, and regulations. This requirement shall apply continuously and not be limited to working hours.

- D. Contractor to protect Work site and adjacent property until Final Completion. The Contractor shall continuously protect the Work and adjacent property from damage. At all times until Final Completion, the Contractor shall be responsible for, and protect from damage, weather, deterioration, theft, and vandalism, the Work and all materials, equipment, tools, and other items incorporated or to be incorporated in the Work, and shall repair any damage, injury, or loss.

3.10 CORRECTION OF WORK

- A. Contractor to correct defective Work. The Contractor shall, at no cost to the Port, promptly correct Work that is defective or that otherwise fails to conform to the requirements of the Contract Documents. Such Work shall be corrected, whether before or after Substantial Completion, and even if it was previously inspected or observed by the Port.
- B. One-year correction period. The Contractor shall correct all defects in the Work appearing within one (1) year of Substantial Completion or within any longer period prescribed by law or by the Contract Documents. The Contractor shall initiate remedial action within fourteen (14) days of receipt of notice from the Port and shall complete remedial work within a reasonable time. Work corrected by the Contractor shall be subject to the provisions of this Section 3.10 for an additional one-year period following the Port's acceptance of the corrected Work.
- C. Contractor responsible for defects and failures to correct. The Contractor shall be responsible for any expenses incurred by the Port resulting from defects in the Work. If the Contractor refuses or neglects to correct the defects, or does not timely accomplish corrections, the Port may correct the Work and charge the Contractor the cost of the corrections. If damage or loss of service may result from a delay in correction, the corrections may be made by the Port and reimbursed by the Contractor.
- D. Port may accept defective work. The Port may, at its sole option, elect to retain defective or nonconforming Work. In such a case, the Port shall reduce the Contract Sum by a reasonable amount to account for the defect or non-conformance.
- E. No period of limitation established. Nothing contained in this Section 3.10 establishes a period of limitation with respect to any obligations under the Contract Documents or law. The establishment of the one (1) year correction period relates only to the specific obligation of the Contractor to correct defective or non-conforming Work.

3.11 UNCOVERING OF WORK

- A. Contractor to uncover work covered prior to inspection. If any portion of the Work is covered prior to inspection and approval, the Contractor shall, at its expense, uncover or remove the Work for inspection by the Port or others, and replace the Work to the standard required by the Contract Documents.
- B. Contractor to uncover work at Port's request. After initial inspection and observation, the Port may order a reexamination of Work, and the Work must be uncovered by the Contractor. If the uncovered Work complies with the Contract Documents, the Port shall pay the cost of reexamination and replacement. If the Work is found not to comply with the Contract Documents, the Contractor shall pay the cost of replacement, unless the Contractor demonstrates that it did not cause the defect in the Work.

3.12 RELOCATION OF UTILITIES

- A. Contractor should assume underground utilities are in approximate locations. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, and plumbing or electrical runs indicated in surveys or the Contract Documents are shown in approximate locations. The accuracy of this information is not guaranteed by the Port and shall be verified by the Contractor. The Contractor shall comply with RCW 19.122.030 and utilize a utility locator service to locate utilities on Port property. The Contractor shall bear the risk of loss if any of its Work directly or indirectly damages or interrupts any utility service or causes or contributes to damages of any nature.
- B. Utility relocation or removal. Where relocation or removal of utilities is necessary or required, it shall be performed at the Contractor's sole expense, unless the Contract Documents specify otherwise. If a utility owner is identified as being responsible for relocating or removing utilities, the work will be accomplished at the utility owner's convenience, either during, or in advance of, construction. Unless otherwise specified, it shall be the Contractor's sole responsibility to coordinate, schedule, and pay for work performed by a utility owner.
- C. Contractor to notify Port of unknown utilities. If the Contractor discovers the presence of any unknown utilities, it shall immediately notify the Engineer in writing.

3.13 LABOR

- A. Contractor responsible for labor peace. The Contractor is responsible for labor peace relating to the Work and shall cooperate in maintaining Project-wide labor harmony. The Contractor shall use its best efforts as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes.
- B. Contractor to minimize impact of labor disputes. The Contractor will take all necessary steps to prevent labor disputes from disrupting or otherwise interfering with access to Port property. If a labor dispute disrupts the progress of the Work or interferes with access, the Contractor shall promptly and expeditiously take all necessary action to eliminate or minimize the disruption or interference.

3.14 INDEMNIFICATION

- A. Duty to defend, indemnify, and hold harmless. To the fullest extent permitted by law and subject to this Section 3.14, the Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port and the Northwest Seaport Alliance, including their respective Commissions, officers, managers, and employees, the Engineer, any consultants, and the agents and employees, successors and assigns of any of them (the "Indemnified Parties") from and against claims, damages, lawsuits, losses (including loss of use), disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct and indirect or consequential, including but not limited to, consultants' fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of, or resulting from, the acts or omissions of the Contractor, a Subcontractor of any tier, their agents, and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable (individually and collectively, the "Indemnitor").
- B. Duty to defend, indemnify, and hold harmless for sole negligence. The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.
- C. Duty to defend, indemnify, and hold harmless for concurrent negligence. Where Claims arise from the concurrent negligence of (1) the Port; and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.14 shall be effective only to the extent of the Indemnitor's negligence.

- D. Duty to indemnify not limited by workers' compensation or similar employee benefit acts. In claims against any of the Indemnified Parties by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.14 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable under workers' compensation acts, disability benefit acts, or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Indemnified Parties under Title 51 RCW, "Industrial Insurance."
- E. Intellectual property indemnification. The Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Indemnified Parties harmless for Claims for infringement by the Contractor of copyrights or patent rights arising out of, or relating to, the Project.
- F. Labor peace indemnification. If the Contractor fails to satisfy its labor peace obligations under the Contract, the Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Indemnified Parties for Claims brought against the Port by third parties (including but not limited to lessees, tenants, contractors, customers, licensees, and invitees of the Port) for injunctive relief or monetary loss.
- G. Cyber risk indemnification. Contractor shall defend, indemnify, and hold harmless the Indemnified Parties from and against any liability, expense, fines, penalties, cost, demand, or other obligation, resulting from or out of any cyber-related risk that includes theft, loss or misuse of data, release of private information as result of a network breach, penetration, compromise, or loss of IT systems control.
- H. Joinder. The Contractor agrees to being added by the Port as a party to any arbitration or litigation with third parties in which the Port alleges indemnification or seeks contribution from the Indemnitor. The Contractor shall cause each of its Subcontractors of any tier to similarly stipulate in their subcontracts; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.
- I. Other. To the extent that any portion of this Section 3.14 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.14 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist. To the extent the wording of this Section 3.14 would reduce or eliminate an available insurance coverage, it shall be considered modified to the extent necessary so that the insurance coverage is not affected. This Section 3.14 shall survive completion, acceptance, final payment, and termination of the Contract.

3.15 WAIVER OF CONSEQUENTIAL DAMAGES

- A. Mutual waiver of consequential damages. The Contractor and Port waive claims against each other for consequential damages arising out of, or relating to, this Contract. This mutual waiver includes, but is not limited to: (1) damages incurred by the Port for rental expenses, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons, and (2) damages incurred by the Contractor for principal and home office overhead and expenses including, but not limited to, the compensation of personnel stationed there, for losses of financing, business, and reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver includes, but is not limited to, all consequential damages due to either party's termination.

- B. Limitation. Nothing contained in this Section 3.15; however, shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, to preclude damages specified in the Agreement, or to affect the Contractor's obligation to indemnify the Port for direct, indirect, or consequential damages alleged by a third party.

ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS

4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS.

- A. Contractor responsible for Subcontractors. The Contractor is fully responsible to the Port for the acts and omissions of its Subcontractors of any tier and all persons either directly or indirectly employed by the Contractor or its Subcontractors.

4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS

- A. Contractor to provide proposed Subcontractor information. The Contractor, within ten (10) days after the Port's notice of award of the Contract, shall provide the Engineer with the names of the persons or entities proposed to perform each of the principal portions of the Work (i.e., either a Subcontractor listed in a bid or proposal or a Subcontractor performing Work valued at least ten percent (10%) of the Contract Sum) and the proprietary names, and the suppliers of, the principal items or systems of materials and equipment proposed for the Work. No progress payment will become due until after this information has been furnished.
- B. Port to respond promptly with objections. The Port may respond promptly to the Contractor in writing stating: (1) whether the Port has reasonable objection to any proposed person or entity, or (2) whether the Port requires additional time for review. If the Port makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.
- C. Reasonable objection defined. "Reasonable objection" as used in this Section 4.02 includes, but is not limited to: (1) a proposed Subcontractor of any tier different from the entity listed with the bid, (2) lack of "responsibility" of the proposed Subcontractor, as defined by Washington law and the Bidding Documents, or lack of qualification or responsibility of the proposed Subcontractor based on the Contract or Bidding Documents, or (3) failure of the Subcontractor to perform satisfactorily in the Port's opinion (such as causing a material delay or submitting a claim that the Port considers inappropriate) on one or more projects for the Port within five (5) years of the bid date.
- D. No substitution allowed without permission. The Contractor shall not substitute a Subcontractor, person, or organization without the Engineer's written consent.

4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS

- A. Contractor to schedule, supervise, and coordinate Subcontractors. The Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors of any tier, including suppliers. The Contractor shall ensure that appropriate Subcontractors coordinate the Work of lower-tier Subcontractors.

- B. Subcontractors to be bound to Contract Documents. By appropriate agreement, the Contractor shall require each Subcontractor and supplier to be bound to the terms of the Contract Documents and to assume toward the Contractor, to the extent of their Work, all of the obligations that the Contractor assumes toward the Port under the Contract Documents. Each subcontract shall preserve and protect the rights of the Port and shall allow to the Subcontractor, unless specifically provided in the subcontract, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Port. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with lower-tier Subcontractors.
- C. Contractor to correct deficiencies in Subcontractor performance. When a portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, or if such subcontracted Work is otherwise being performed in an unsatisfactory manner in the Port's opinion, the Contractor shall, on its own initiative or upon the written request of the Port, take immediate steps to correct the deficiency or remove the non-performing party from the Project. The Contractor shall replace inadequately performing Subcontractors upon request of the Port at no change in the Contract Sum or Contract Time.
- D. Contractor to provide subcontracts. Upon request, the Contractor will provide the Port copies of written agreements between the Contractor and any Subcontractor.

ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS

5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS

- A. Contractor to comply with non-discrimination laws. The Contractor shall fully comply with all applicable laws, regulations, and ordinances pertaining to non-discrimination.
- B. Nondiscrimination Provision
 - 1. Nondiscrimination Requirement. During the term of this Contract, Contractor, including any subcontractor, shall not discriminate on the bases enumerated at RCW 49.60.530(3). In addition, Contractor, including any subcontractor, shall give written notice of this nondiscrimination requirement to any labor organizations with which Contractor, or subcontractor, has a collective bargaining or other agreement.
 - 2. Obligation to Cooperate. Contractor, including any subcontractor, shall cooperate and comply with any Washington state agency investigation regarding any allegation that Contractor, including any subcontractor, has engaged in discrimination prohibited by this Contract pursuant to RCW 49.60.530(3).
 - 3. Default. Notwithstanding any provision to the contrary, POT may suspend Contractor, including any subcontractor, upon notice of a failure to participate and cooperate with any state agency investigation into alleged discrimination prohibited by this Contract, pursuant to RCW 49.60.530(3). Any such suspension will remain in place until POT receives notification that Contractor, including any subcontractor, is cooperating with the investigating state agency. In the event Contractor, or subcontractor, is determined to have engaged in discrimination identified at RCW 49.60.530(3), POT may terminate this Contract in whole or in part, and Contractor, subcontractor, or both, may be referred for debarment as provided in RCW 39.26.200. Contractor or subcontractor may be given a reasonable time in which to cure this noncompliance, including implementing conditions consistent with any court-ordered injunctive relief or settlement agreement.

4. Remedies for Breach. Notwithstanding any provision to the contrary, in the event of Contract termination or suspension for engaging in discrimination, Contractor, subcontractor, or both, shall be liable for contract damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, which damages are distinct from any penalties imposed under Chapter 49.60, RCW. POT shall have the right to deduct from any monies due to Contractor or subcontractor, or that thereafter become due, an amount for damages Contractor or subcontractor will owe POT for default under this provision.

5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION.

- A. In accordance with the legislative findings and policies set forth in RCW 39.19, the Port encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a Bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the Contract Documents, no preference will be included in the evaluation of Bids, no minimum level of MWBE participation shall be required as a condition for receiving an award, and Bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the Contract Documents will apply.

The Port encourages participation in all of its contracts by Veteran-owned businesses (defined in RCW 43.60.010) and located at <http://www.dva.wa.gov/program/certified-veteran--and-servicemember-owned-businesses> and Small, Mini, and Micro businesses (defined in RCW 39.26.010)

5.03 APPRENTICESHIP PARTICIPATION

- A. In accordance with RCW 39.04.320, fifteen (15) percent Apprenticeship Participation is required for all projects estimated to cost one million (\$1,000,000) dollars or more.
- B. Apprentice participation, under this contract, may be counted towards the required percentage (%) only if the apprentices are from an apprenticeship program registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).
- C. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530 by phone at (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.
- D. For each project that has apprentice requirements, the contractor shall submit a "Statement of Apprentice and Journeyman Participation" on forms provided by the Port of Tacoma, with every request for project payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor. The data to be collected and submitted includes the following:
 1. Contractor name and address
 2. Contract number
 3. Project name
 4. Contract value
 5. Reporting period "Beginning Date" through "End Date"
 6. Name and registration number of each apprentice by contractor

7. Total number of apprentices and labor hours worked by them, categorized by trade or craft.
 8. Total number of journeymen and labor hours worked by them, categorized by trade or craft
 9. Cumulative combined total of apprentice and journeymen labor hours
 10. Total percentage of apprentice hours worked
- E. No changes to the required percentage (%) of apprentice participation shall be allowed without written approval of the Port. In any request for the change, the Contractor shall clearly demonstrate a good faith effort to comply with the requirements for apprentice participation.
- F. Labor hours used in the 15% labor hour calculation will include all employees working on the project who are subject to prevailing wage laws. The definition of Labor Hours is further clarified to include working supervisor and foreman hours if they are covered under prevailing wage laws based on the time spent performing laborious activities. Simply adding supervisor or foreman to the employee's title does not exempt their hours from the calculation.
- G. During the life of the project, Apprentice Utilization is actively monitored through LNIs Prevailing Wage Intents and Affidavits (PWIA) system using the certified payroll calculated percentage. In addition, the affidavit calculated percentage shown in PWIA must be at least 15.0% to be compliant. All affidavits must be filed before determining if the Apprentice Utilization Requirement was met. Failure to achieve at least 15.0% apprentice Utilization as shown in PWIA for certified payrolls and affidavits will cause a penalty of \$500.00

ARTICLE 6 - CONTRACT TIME AND COMPLETION

6.01 CONTRACT TIME

- A. Contract Time is measured from Contract execution. Unless otherwise provided in the Agreement, the Contract Time is the period of time, including authorized adjustments, specified in the Contract Documents from the date the Contract is executed to the date Substantial Completion of the Work is achieved.
- B. Commencement of the Work. The Contractor shall begin Work in accordance with the notice of award and the notice to proceed and shall complete all Work within the Contract Time. When the Contractor's signed Agreement, required insurance certificate with endorsements, bonds, and other submittals required by the notice of award have been accepted by the Port, the Port will execute the Contract and, following receipt of other required pre-work submittals, will issue a notice to proceed to allow the Contractor to mobilize and commence physical Work at the Project site, as further described in these contract documents. No Work at the Project site may commence until the Port issues a notice to proceed.
- C. Contractor shall achieve specified completion dates. The Contractor shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time period thereafter stated in the Contract Documents.
- D. Time is of the essence. Time limits stated in the Contract Documents, including any interim milestones, are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

6.02 PROGRESS AND COMPLETION

- A. Contractor to maintain schedule. The Contractor's sequence and method of operations, application of effort, and work force shall at all times be created and implemented to ensure the orderly, expeditious, and timely completion of the Work and performance of the Contract. The Contractor shall furnish sufficient forces and shall work such hours, including extra shifts, overtime operations, and weekend and holiday work as may be necessary to ensure completion of the Work within the Contract Time and the approved Baseline Project Schedule.
- B. Contractor to take necessary steps to meet schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier, fails to meet the Baseline Project Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations, or days of work, or by other means and methods, all without additional cost to the Port. If the Contractor believes that any action or inaction of the Port constitutes acceleration, the Contractor shall immediately notify the Port in writing and shall not accelerate the Work until the Port either directs the acceleration in writing or denies the constructive acceleration.
- C. Liquidated damages not exclusive. Any provisions in the Contract Documents for liquidated damages shall not preclude other damages due to breaches of Contract of the Contractor.

6.03 SUBSTANTIAL COMPLETION

- A. Substantial Completion defined. Substantial Completion is the stage in the progress of the Work, or portion or phase thereof, when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Port can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, all requirements in the Contract Documents for Substantial Completion have been achieved, and all required documentation has been properly submitted to the Port in accordance with the Contract Documents. All Work, other than incidental corrective or punch list Work and final cleaning, must be completed. The fact that the Port may occupy the Work or a designated portion thereof does not indicate that Substantial Completion has occurred or that the Work is acceptable in whole or in part.
- B. Work not Substantially Complete unless Final Completion attainable. The Work is not Substantially Complete unless the Port reasonably judges that the Work can achieve Final Completion within the period of time specified in the Contract Documents.
- C. Notice of Substantial Completion. When the Work or designated portion has achieved Substantial Completion, the Port will provide a notice to establish the date of Substantial Completion. The notice shall establish responsibilities of the Port and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all remaining Work. If the notice of Substantial Completion does not so state, all responsibility for the foregoing items shall remain with the Contractor until Final Completion.

6.04 COMPLETION OF PUNCH LIST

- A. Contractor shall complete punch list items prior to Final Completion. The Contractor shall cause punch list items to be completed prior to Final Completion. If, after Substantial Completion, the Contractor does not expeditiously proceed to correct punch list items or if the Port considers that the punch list items, are unlikely to be completed prior to the date established for Final Completion (or such other period of time as is specified in the Contract Documents), the Port may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. The Port may also take over and complete any portion of the Work at any time following Substantial Completion and deduct the actual cost of performing the Work (including direct and indirect costs) from the Contract Sum. The Port's rights under this Section 6.04 are not obligations and shall not relieve the Contractor of its responsibilities under any other provisions of the Contract Documents.

6.05 FINAL COMPLETION

- A. Final Completion. Upon receipt of written notice from the Contractor that all punch list items and other Contract requirements are completed, the Contractor will notify the Port, and the Port will perform a final inspection. If the Port determines that some or all of the punch list items have not been addressed, the Contractor shall be responsible to the Port for all costs, including re-inspection fees, for any subsequent reviews to determine completion of the punch list. When the Port determines that all punch list items have been satisfactorily addressed, that the Work is acceptable under the Contract Documents, and that the Work has fully been performed, the Port will promptly notify the Contractor of Final Completion.
- B. Contractor responsible for costs if Final Completion is not timely achieved. In addition to any liquidated damages, the Contractor is liable for, and the Port may deduct from any amounts due the Contractor, all costs incurred by the Port for services performed after the contractual date of Final Completion, whether or not those services would have been performed prior to that date had Final Completion been timely achieved.
- C. Final Completion submittals. The Port is not obligated to accept the Project as complete until the Contractor has submitted all required submittals to the Port.
- D. Contractor responsible for the Work until Final Completion. The Contractor shall assume the sole risk of loss and responsibility for all Work under the Contract, and all materials to be incorporated in the Work, whether in storage or at the Project site, until Final Completion. Damage from any cause to either permanent or temporary Work, utilities, materials, equipment, existing structures, the site, or other property owned by the Port or others, shall be repaired by the Contractor to the reasonable satisfaction of the Port at no change in the Contract Sum.

6.06 FINAL ACCEPTANCE

- A. Final Acceptance. Final Acceptance is the formal action of the Port accepting the Project as complete.
- B. Final Acceptance not an acceptance of defective Work. Final Acceptance shall not constitute acceptance by the Port of unauthorized or defective Work, and the Port shall not be prevented from requiring the Contractor to remove, replace, repair, or dispose of unauthorized or defective Work or recovering damages due to the same.
- C. Completion of Work under RCW 60.28. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

6.07 PORT'S RIGHT TO USE THE PREMISES

- A. Port has right to use and occupy Work. The Port reserves the right to occupy or use any part of the Work before or after Substantial Completion of some or all of the Work without relieving the Contractor of any of its obligations under the Contract. Such occupancy or use shall not constitute acceptance by the Port of any of the Work, and shall not cause any insurance to be canceled or lapse.
- B. No compensation due if Port elects to use and occupy Work. No additional compensation shall be due to the Contractor as a result of the Port's use or occupancy of the Work or a designated portion.

ARTICLE 7 - PAYMENT

7.01 ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES

- A. Payment of the Contract Sum. The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Port to the Contractor for performance of the Work under the Contract Documents. Payments made to the Contractor are subject to all laws applicable to the Port and the Contractor. Payment of the Contract Sum constitutes full compensation to the Contractor for performance of the Work, including all risk, loss, damages, or expense of whatever character arising out of the nature or prosecution of the Work. The Port is not obligated to pay for extra work or materials furnished without prior written approval of the Port.
- B. Schedule of Values. All payments will be based upon an approved Schedule of Values. Prior to submitting its first Application for Payment, the Contractor shall submit a Schedule of Values to the Port allocating the entire Contract Sum to the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Port may require. This schedule, unless objected to by the Port, shall be used as a basis for reviewing the Contractor's applications for payment.

7.02 APPLICATIONS FOR PAYMENT

- A. Applications for Payment. Progress payments will be made monthly for Work duly certified, approved by the Engineer, and performed (based on the Schedule of Values and actual quantities of Work performed) during the calendar month preceding the Application for Payment. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent, and in accordance with, the approved Application for Payment.

7.03 PROGRESS PAYMENTS

- A. Progress payments. Following receipt of a complete Application for Payment, the Engineer will either authorize payment or indicate in writing to the Contractor the specific reasons why the payment request is being denied, in whole or in part, and the remedial action the Contractor must take to receive the withheld amount. After a complete Application for Payment has been received and approved by the Port, payment will be made within thirty (30) days. Any payments made by, or through, or following receipt of, payment from third parties will be made in accordance with the third party's policies and procedures.
- B. Port may withhold payment. The Port may withhold payment in whole or in part as provided in the Contract Documents or to the extent reasonably necessary to protect the Port from loss or potential loss for which the Contractor is responsible, including loss resulting from the Contractor's acts and omissions.

7.04 PAYMENT BY CONTRACTOR TO SUBCONTRACTORS

- A. Payment to Subcontractors. With each Application for Payment, the Contractor shall provide a list of Subcontractors to be paid by the Contractor. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, however, after submitting an Application for Payment, but before paying a Subcontractor, the Contractor discovers that part or all of a payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Port written notice of the remedial actions that must be taken and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.
- B. Payment certification to be provided upon request. The Contractor shall provide, with each Application for Payment, a certification signed by Contractor attesting that all payments by the Contractor to Subcontractors from the last Application for Payment were made within ten (10) days of the Contractor's receipt of payment. The certification will also attest that the Contractor will make payment to Subcontractors for the current Application for Payment within ten (10) days of receipt of payment from the Port.

7.05 FINAL PAYMENT

- A. Final payment. Final applications for payment are due within seven (7) days following Final Completion. Final payment of the unpaid balance of the Contract Sum, except retainage, will be made following Final Completion and within thirty (30) days of the Contractor's submission of an approved final Application for Payment.
- B. Releases required for final payment. The final payment shall not become due until the Contractor delivers to the Port a complete release of all liens arising out of the Contract, as well as an affidavit stating that, to the best of Contractor's knowledge, its release includes all labor and materials for which a lien could be filed. If a Subcontractor of any tier refuses to furnish a release or waiver required by the Port, the Port may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Port, to indemnify the Port against the lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Port all moneys that the Port may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
- C. Contractor to hold Port harmless from liens. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port from any liens, claims, demands, lawsuits, losses, damages, disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct or indirect, including but not limited to, attorneys' fees and consultants' fees and other costs and expenses, except to the extent a lien has been filed because of the failure of the Port to make a contractually required payment.

7.06 RETAINAGE

- A. Retainage to be withheld. In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, the Contractor shall exercise one of the options listed below:
 - 1. Retained percentages will be retained by the Port in a fund; or

2. Deposited by the Port in an interest-bearing account or escrow account in a bank, mutual savings bank, or savings and loan association designated by the Contractor, not subject to withdrawal until after the final acceptance of said improvement or work as completed, or until agreed to by both parties; provided that interest on such account shall be paid to the Contractor. Contractor to complete and submit Port provided Retainage Escrow Agreement (Section 00 61 23.13); or
 3. If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall be based on the form furnished in Section 00 61 23 or otherwise acceptable to the Port and duly completed and signed by a licensed surety or sureties registered with the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner. The surety or sureties must be rated at least "A-, FSC(6)" or higher by A.M. Best Rating Guide and be authorized by the Federal Department of the Treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement.
- B. Contractor may withhold retainage from Subcontractors. The Contractor or a Subcontractor may withhold not more than five percent (5%) retainage from the monies earned by any Subcontractor or lower-tier Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Port, the Contractor shall specify the amount of retainage and interest due a Subcontractor.
- C. Release of retainage. Retainage will be withheld and applied by the Port in a manner required by RCW 60.28 and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by the Port provided that no notice of lien has been given as provided in RCW 60.28, that no claims have been brought to the attention of the Port, that the Port has no claims under this Contract, and that release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for the Contractor and each subcontractor.

7.07 DISPUTED AMOUNTS

- A. Disputed amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may submit to the Port, along with the approved Application for Payment, a separate written payment request specifying the exact additional amount claimed to be due, the category in the Schedule of Values to which the payment would apply, the specific Work for which additional payment is sought, and an explanation of why the Contractor believes additional payment is due.

7.08 EFFECT OF PAYMENT

- A. Payment does not relieve Contractor of obligations. Payment to the Contractor of progress payments or final payment does not relieve the Contractor from its responsibility for the Work or its responsibility to repair, replace, or otherwise make good defective Work, materials, or equipment. Likewise, the making of a payment does not constitute a waiver of the Port's right to reject defective or non-conforming Work, materials, or equipment (even though they are covered by the payment), nor is it a waiver of any other rights of the Port.

- B. Acceptance of final payment waives claims. Acceptance of final payment by the Contractor, a Subcontractor of any tier, or a supplier shall constitute a waiver of claims except those previously made in writing and identified as unsettled in Contractor's final Application for Payment.
- C. Execution of Change Order waives claims. The execution of a Change Order shall constitute a waiver of claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

7.09 LIENS

- A. Contractor to discharge liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials, or other items in connection with the performance of the Work including, but not limited to, any Subcontractors of any tier.

ARTICLE 8 - CHANGES IN THE WORK

8.01 CHANGES IN THE WORK

- A. Changes in the Work authorized. Without invalidating the Contract and without notice to the Contractor's surety, the Port may authorize changes in the Work after execution of the Contract, including changes in the Contract Sum or Contract Time. Changes shall occur solely by Change Order, Unilateral Change Directive, or Minor Change in Work. All changes in the Work are effective immediately, and the Contractor shall proceed promptly to perform the change, unless otherwise provided in the Change Order or Directive.
- B. Changes in the Work Defined.
 - 1. A Change Order is a written instrument signed by the Port and Contractor stating their agreement to a change in the Work and the adjustment, if any, in the Contract Sum and/or Contract Time.
 - 2. A Unilateral Change Directive is a written instrument issued by the Port to transmit new or revised Drawings, issue additions or modifications to the Contract, furnish other direction and documents adjustment, if any, to the Contract Sum and/or Contract Time. A Unilateral Change Directive is signed only by the Port, without requiring the consent or signature of the Contractor.
 - 3. A Minor Change in the Work is a written order from the Port directing a change that does not involve an adjustment to the Contract Sum or the Contract Time.
- C. Request for Proposal: At any time, the Port may issue a Proposal Request directing the Contractor to propose a change to the Contract Sum and/or Contract Time, if any, based on a proposed change in the Work. The Contractor shall submit a responsive Change Order proposal as soon as possible, and no later than fourteen (14) days after receipt, in which the Contractor specifies in good faith the extent to which the Contract Sum and/or Contract Time would change. All cost components shall be limited to the manner described in Section 8.02(B). If the Contractor fails to timely respond to a Proposal Request, the Port may issue the change as a Unilateral Change Directive.

1. Fixed price method is default for Contractor Change Order proposal. When the Port has requested that the Contractor submit a Change Order proposal, the Port may specify the basis on which the Contract Sum will be adjusted by the Contractor. The Engineer's preference, unless otherwise indicated, is for changes in the Work to be priced using Lump Sums or Unit Prices or on a time and material (Force Account) basis if unit pricing or lump sums cannot be negotiated or determined. In all instances, however, proposed changes shall include a not-to-exceed price for the change and shall be itemized for evaluation purposes in accordance with Section 8.02(B), as requested by the Engineer.
 2. The Port may accept or reject the Contractor's Change Order proposal, request further documentation, or negotiate acceptable terms with the Contractor. If The Port and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order.
 3. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment. The Port may reject a proposal, in which case the Port may either not effectuate the change or issue a Unilateral Change Directive. The Port will not make payment to the Contractor for any work until that work has been incorporated into an executed Change Order.
- D. Unforeseen Conditions: If the Contractor encounters conditions at the site that are: (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or any soils reports made available by the Port to the Contractor, or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall immediately provide oral notice to the Engineer before conditions are disturbed, followed within 24 hours by an initial written notice. The Contractor shall submit a detailed proposal no later than seven (7) days following discovery of differing site conditions. The Engineer will promptly investigate these conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for performance of any part of the Work, will establish a change in the Contract Sum or Contract Time, or both, consistent with the requirements of the Contract Documents. If the Contractor disputes the Engineer's determination, the Contractor may proceed as provided in the dispute resolution procedure (Article 11). No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor does not comply with the contractual requirements or if the Contractor knew, or reasonably should have known, of the concealed conditions prior to executing the Contract.
- E. Proceed Immediately: Pending agreement on the terms of the Change Order or upon determination of a differing site condition as defined in 8.01(D), the Engineer may direct Contractor to proceed immediately with the change in the Work. Contractor shall not proceed with any change in the Work until it has obtained the Engineer's written approval and documentation of the following:
1. The scope of work
 2. An agreed upon maximum not-to-exceed amount
 3. The method of final cost determination
 4. Estimated time to complete the changed work

5. As a change in the Work is performed, unless the parties have signed a written Change Order to establish the cost of the change, the Contractor shall maintain an itemized accounting of all costs related to the change based on the categories in Section 8.02(B) and provide such data to the Port upon request. This includes, without limitation, invoices, including freight and express bills, and other support for all material, equipment, Subcontractor, and other charges related to the change and, for material furnished from the Contractor's own inventory, a sworn affidavit certifying the actual cost of such material. Failure to provide data to the Port within seven (7) days of a request constitutes a waiver of any claim. The Port may furnish any material or equipment to the Contractor that it deems advisable, and the Contractor shall have no claim for any costs or fee on such material or equipment.
- F. Procedure for Unilateral Change Directive. Whether or not the Port has rejected a Contractor's proposal, the Port may issue a Unilateral Change Directive and the Contractor shall promptly proceed with the specified Work. If the Contractor disagrees with a Unilateral Change Directive, the Contractor shall advise the Port in writing through a Change Order proposal within seven (7) days of receipt. The Contractor's Change Order proposal shall reasonably specify the reasons for any disagreement and the adjustment it proposes. Without this timely Change Order proposal, the Contractor shall conclusively be deemed to have accepted the Port's proposal.
- G. Payment pending final determination of Force Account work. Pending final determination of the total cost of Force Account Work, and provided that the Work to be performed under Force Account is complete and any reservations of rights have been signed by the Port, the Contractor may request payment for amounts not in dispute in the next Application for Payment accompanied by documentation indicating the parties' agreement. Work done on a Force Account basis must be approved in writing on a daily basis by the Engineer or the Engineer's designee and invoices shall be submitted with an Application for Payment within sixty (60) days of performance of the Work.

8.02 CHANGES IN THE CONTRACT SUM

- A. Port to Decide How Changes are Measured. The Port may elect, in its sole discretion, how changes in the Work will be measured for payment. Change in the Work may be priced on a lump sum basis, through Unit Prices, as Force Account, or by another method documented in the executed Change Order, Unilateral Change Directive, or Minor Change in the Work.
- B. Determination of Cost of Change. The total cost of any change in the Work, including a claim under Article 11, shall not exceed the prevailing cost for the Work in the locality of the Project. In all circumstances, the change in the Work shall be limited to the reasonable, actual cost of the following components:
 1. Direct labor costs: These are the actual labor costs determined by the number of additional craft hours at their normal hourly rate necessary to perform a change in the Work. The hourly cost of labor will be based upon the following:

- a. Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage," for the laborers, apprentices, journeymen, and foremen performing or directly supervising the change in the Work on site. These wages do not include the cost of Contractor's project manager or superintendent or above, and the premium portion of overtime wages is not included unless pre-approved in writing by the Port. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide to the Port copies of payroll records, including certified payroll statements for itself and Subcontractors of any tier, upon the Port's request.
 - b. Workers' insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
 - c. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).
2. Direct material costs: This is an itemization, including material invoices, of the quantity and actual cost of additional materials necessary to perform the change in the Work. The cost will be the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed unless approved in advance by the Port.
3. Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on the changed Work times the applicable rental cost as established by the lower of the local prevailing rates published in www.equipmentwatch.com, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Port's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design, and in good working condition, and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges are payable. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost.
4. Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.

5. Service provider costs: These are payments the Contractor makes to service providers for changed Work performed by service providers. The service providers' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02.
6. Markup: This is the maximum total amount for overhead, profit, and other costs, including office, home office and site overhead (including purchasing, project manager, superintendent, project engineer, estimator, and their vehicles and clerical assistants), taxes (except for sales tax on the Contract Sum), warranty, safety costs, printing and copying, layout and control, quality control/assurance, small or hand tools (a tool that costs \$500 or less and is normally furnished by the performing contractor), preparation of as-built drawings, impact on unchanged Work, Change Order and/or claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise), added to the total cost to the Port of any Change Order work. No markup shall be due, however, for direct settlements of Subcontractor claims by the Port after Substantial Completion. The markup shall be limited in all cases to the following schedule:
 - a. Direct labor costs -- 20% markup on the direct cost of labor for the party (Contractor or Subcontractor) providing labor related to the change in the Work;
 - b. Direct material costs -- 20% markup on the direct cost of material for the party (Contractor or Subcontractor) providing material related to the change in the Work;
 - c. Construction equipment usage costs -- 10% markup on the direct cost of equipment for the party (Contractor or Subcontractor) providing equipment related to the change in the Work;
 - d. Contractor markup on Subcontractor costs -- 10% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by Subcontractors (and for Subcontractors, for a change in the Work performed by lower-tier Subcontractors); and
 - e. Service provider costs -- 5% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by service providers.

The total summed markup of the Contractor and all Subcontractors of any tier shall not exceed 30% of the direct costs of the change in the Work. If the markup would otherwise exceed 30%, the Contractor shall proportionately reduce the markup for the Contractor and all Subcontractors of any tier.
7. Cost of change in insurance or bond premium. This is defined as:
 - a. Contractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under the Contract Documents and subject to audit) of the Contractor's liability insurance arising directly from the changed Work; and
 - b. Public works bond: The actual cost (expressed as a percentage submitted under the Contract Documents and subject to audit) of the Contractor's performance and payment bond arising directly from the changed Work.

Upon request, the Contractor shall provide the Port with supporting documentation from its insurer or surety of any associated cost incurred. The cost of the insurance or bond premium together shall not exceed 2.0% of the cost of the changed Work.

8. Unit Prices. If Unit Prices are specified in the Contract Documents or established by agreement of the parties for certain Work, the Port may apply them to the changed Work. Unit Prices shall include pre-agreed rates for material quantities and shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs arising out of, or related to, the Unit Priced item. Quantities must be supported by field measurement statements signed by the Port, and the Port shall have access as necessary for quantity measurement. The Port shall not be responsible for not-to-exceed limit(s) without its prior written approval.

8.03 CHANGES IN THE CONTRACT TIME

- A. Extension of the Contract Time. If the Contractor is delayed at any time in the commencement or progress of the Work by events for which the Port is responsible, by unanticipated abnormal weather (subject to Section 8.03(E) below), or by other causes not the fault or responsibility of the Contractor that the Port determines may justify a delay in the Contract Time, then the Contract Time shall be extended by Change Order for such reasonable time as the Port may determine. In no event, however, shall the Contractor be entitled to any extension of time absent proof of: (1) delay to an activity on the critical path of the Project, or (2) delay transforming an activity to the critical path, so as to actually delay the anticipated date of Substantial Completion.
- B. Allocation of responsibility for delay not caused by Port or Contractor. If a delay was not caused by the Port, the Contractor, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time but not an increase in the Contract Sum.
- C. Allocation of responsibility for delay caused by Port. If a delay was caused by the Port or someone acting on behalf of the Port and affected the critical path, the Contractor shall be entitled to a change in the Contract Time and Contract Sum in accordance with Section 8.02. The Contractor shall not recover damages, an equitable adjustment, or an increase in the Contract Sum or Contract Time from the Port; however, where the Contractor could reasonably have avoided the delay. The Port is not obligated directly or indirectly for damages for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- D. Allocation of responsibility for delay caused by Contractor. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.
- E. Adverse weather. If adverse weather is identified as the basis for a claim for additional time, the claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not reasonably have been anticipated and had an adverse effect on the critical path of construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. For a claim based on adverse weather, the Contractor shall be eligible only for a change in the Contract Time (but not a change in the Contract Sum) if the Contractor can substantiate that there was significantly greater than normal inclement weather considering the full term of the Contract Time.
- F. Damages for delay. In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Port for delay beyond the amount permitted in Section 8.02(B), the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the reasonable, actual costs of the delay for which the Port is wholly responsible. The limitation on damages set forth in this Section does not apply to any damages arising exclusively from delay to which the Contractor is entitled to recover under Section 8.03(F).

- G. Limitation on damages. The Contractor shall not be entitled to damages arising out of loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant under run; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the markup on Change Orders paid through Section 8.02(B).

8.04 RESERVATION OF RIGHTS

- A. Reservations of rights void unless signed by Port. Reservations of rights will be deemed waived and are void unless any reserved rights are described in detail and are signed by the Contractor and the Port.
- B. Procedure for unsigned reservations of rights. If the Contractor adds a reservation of rights not signed by the Port to any Change Order, Unilateral Change Directive, Change Order proposal, Application for Payment, or any other document, all amounts and all Work therein shall be considered disputed and not payable until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to, and signed by, the Port. If the Port makes payment based on a document that contains a reservation of rights not signed by the Port, and if the Contractor cashes such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

8.05 UNIT PRICES

- A. Adjustment to Unit Prices. If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (less than eighty percent (80%) or more than one hundred and twenty percent (120%) of the quantity estimated) so that application of a Unit Price would be substantially unfair, the applicable Unit Price but not the Contract Time, shall be adjusted if the Port prospectively approves a Change Order revising the Unit Price.
- B. Procedure to change Unit Prices. The Contractor or Port may request a Change Order revising a Unit Price by submitting information to support the change. A proposed change to a Unit Price will be evaluated by the Port based on the change in cost resulting solely from the change in quantity, any change in production rate or method as compared to the original plan, and the share, if any, of fixed expenses properly chargeable to the item. If the Port and Contractor agree on the change, a Change Order will be executed. If the parties cannot agree, the Contractor shall comply with the dispute resolution procedures (Article 11).

ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT

9.01 PORT'S RIGHT TO SUSPEND WORK

- A. Port may suspend the Work. The Port may at any time suspend the Work, or any part thereof, by giving notice to the Contractor. The Work shall be resumed by the Contractor as soon as possible, but no later than fourteen (14) days after the date fixed in a notice to resume the Work. The Port shall reimburse the Contractor for appropriate and reasonable expenses consistent with Section 8.02 incurred by the Contractor as a result of the suspension, except where a suspension is the result of the Contractor repeatedly or materially failing to carry out or correct the Work in accordance with the Contract Documents, and the Contractor shall take all necessary steps to minimize expenses.

- B. Contractor obligations. During any suspension of Work, the Contractor shall take every precaution to prevent damage to, or deterioration of, the Work. The Contractor shall be responsible for all damage or deterioration to the Work during the period of suspension and shall, at its sole expense, correct or restore the Work to a condition acceptable to the Port prior to resuming Work.

9.02 TERMINATION OF CONTRACT FOR CAUSE BY THE PORT

- A. Port may terminate for cause. If the Contractor is adjudged bankrupt or makes a general assignment for the benefit of the Contractor's creditors, if a receiver is appointed due to the Contractor's insolvency, or if the Contractor, in the opinion of the Port, persistently or materially refuses or fails to supply enough properly skilled workmen or materials for proper completion of the Contract, fails to make prompt payment to Subcontractors or suppliers for material or labor, disregards laws, ordinances, or the instructions of the Port, fails to prosecute the Work continuously with promptness and diligence, or otherwise materially violates any provision of the Contract, then the Port, without prejudice to any other right or remedy, may terminate the Contractor after giving the Contractor seven (7) days' written notice (during which period the Contractor shall have the right to cure).
- B. Procedure following termination for cause. Following a termination for cause, the Port may take possession of the Project site and all materials and equipment, and utilize such materials and equipment to finish the Work. The Port may also exclude the Contractor from the Project site(s). If the Port elects to complete all or a portion of the Work, it may do so as it sees fit. The Port shall not be required to accept the lowest bid for completion of the Work and may choose to complete all or a portion of the Work using its own work force. If the Port elects to complete all or a portion of the Work, the Contractor shall not be entitled to any further payment until the Work is finished. If the expense of finishing the Work, including compensation for additional managerial and administrative services of the Port, exceeds the unpaid balance of the Contract Sum, the excess shall be paid by the Contractor.
- C. Port's remedies following termination for cause. The Port may exercise any rights, claims, or demands that the Contractor may have against third persons in connection with the Contract, and for this purpose the Contractor assigns and transfers to the Port all such rights, claims, and demands.
- D. Inadequate termination for cause converted to termination for convenience. If, after the Contractor has been terminated for cause, it is determined that inadequate "cause" for such termination exists, then the termination shall be considered a termination for convenience pursuant to Section 9.03.

9.03 TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT

- A. Port may terminate for convenience. The Port may, at any time (without prejudice to any right or remedy of the Port), terminate all, or any portion of, the Contract for the Port's convenience and without cause. The Contractor shall be entitled to receive payment consistent with the Contract Documents only for Work properly executed through the date of termination, and costs necessarily incurred by reason of the termination (such as the cost of settling and paying claims arising out of the termination under subcontracts or orders), along with a fee of one percent (1%) of the Contract Sum not yet earned on the whole or part of the Work. The total amount to be paid to the Contractor shall not exceed the Contract Sum as reduced by the amount of payments otherwise made. The Port shall have title to all Work performed through the date of termination.

9.04 TERMINATION OF CONTRACT BY THE CONTRACTOR

- A. Contractor may terminate for cause. The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor of any tier, for either of the following reasons:
 - 1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or
 - 2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped.
- B. Procedure for Contractor termination. If one of the reasons described in Section 9.04A exists, the Contractor may, upon seven (7) days' written notice to the Port (during which period the Port has the opportunity to cure), terminate the Contract and recover from the Port payment for Work executed through the date of termination in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed and direct costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.
- C. Contractor may stop the Work for failure of Port to pay undisputed amounts. The Contractor may stop Work under the Contract if the Port does not pay undisputed amounts due and owing to the Contractor within fifteen (15) days of the date established in the Contract Documents. If the Port fails to pay undisputed amounts, the Contractor may, upon fifteen (15) additional days' written notice to the Port, during which the Port can cure, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay, and start-up.

9.05 SUBCONTRACT ASSIGNMENT UPON TERMINATION

- A. Subcontracts assigned upon termination. Each subcontract is hereby assigned by the Contractor to the Port provided that:
 - 1. The Port requests that the subcontract be assigned.
 - 2. The assignment is effective only after termination by the Port and only for those subcontracts that the Port accepts in writing.
 - 3. The assignment is subject to the prior rights of the surety, if any, under any bond issued in accordance with the Contract Documents.

When the Port accepts the assignment of a subcontract, the Port assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that arise after the date of the assignment.

ARTICLE 10 - BONDS

10.01 CONTRACTOR PERFORMANCE AND PAYMENT BONDS

- A. Contractor to furnish performance and payment bonds. Within ten (10) days following its receipt of a notice of award, and as part of the Contract Sum, the Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by the Port. The bonds shall be executed by a surety (or sureties) reasonably acceptable to the Port, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better and be authorized by the U.S. Department of the Treasury. Pursuant to RCW 39.08, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by the Contractor within the Contract Time and upon the payment by the Contractor of all taxes, fees, and penalties to the State of Washington and all laborers, Subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Contract. The bonds shall be signed by the person or persons legally authorized to bind the Contractor.
- B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the Employment Security Department, and the Department of Labor and Industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.

For contracts of one hundred fifty thousand dollars or less, the Port may accept a full payment and performance bond from an individual surety or sureties.
- C. Port may notify surety. If the Port makes or receives a claim against the Contractor, the Port may, but is not obligated to, notify the Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor's default, the Port may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 11 - DISPUTE RESOLUTION

11.01 NOTICE OF PROTEST AND CLAIM

- A. Dispute resolution procedure mandatory. All claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, shall be decided exclusively by the following alternative dispute resolution procedure, unless the parties mutually agree otherwise. If the Port and Contractor agree to a partnering process to assist in the resolution of disputes, the partnering process shall occur prior to, and not be in place of, the mandatory dispute resolution procedures set forth below.
- B. Notice of protest defined. Except for claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall provide immediate oral notice of protest to the Engineer prior to performing any disputed Work and shall submit a written notice of protest to the Port within seven (7) days of the occurrence of the event giving rise to the protest that includes a clear description of the event(s). The protest shall identify any point of disagreement, those portions of the Contract Documents believed to be applicable, and an estimate of quantities and costs involved. When a protest relates to cost, the Contractor shall keep full and complete records and shall permit the Port to have access to those records at any time as requested by the Port.

- C. Claim defined. A claim is a demand by one of the parties seeking adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract Documents. The term "claim" also includes all disputes and matters in question between the Port and Contractor arising out of, or relating to, the Contract Documents. Claims must be initiated in writing and include a detailed factual statement and clear description of the claim providing all necessary dates, locations, and items of Work, the date or dates on which the events occurred that give rise to the claim, the names of employees or representatives knowledgeable about the claim, the specific provisions of the Contract Documents that support the claim, any documents or oral communications that support the claim, any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path), and all other data supporting the claim. Claims shall also be submitted with a statement certifying, under penalty of perjury, that the claim as submitted is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the claim is fully supported, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes the Port is liable. A claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor and Subcontractors of any tier are entitled and may not contain reservations of rights without the Port's written approval; any unapproved reservations of rights shall be without effect.
- D. Claim procedure. The Contractor shall submit a written claim within thirty (30) days of providing written notice of protest. The Contractor may delay submitting supporting data by an additional thirty (30) days if it notifies the Port in its claim that substantial data must be assembled. Any claim of a Subcontractor of any tier may be brought only through, and after review by and concurrence of, the Contractor.
- E. Failure to comply with notice of protest and claim requirements waives claims. Any notice of protest by the Contractor and any claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to, and in strict accordance with, the applicable provisions of the Contract. Failure to properly and timely submit a notice of protest or to timely submit a claim shall waive the claim. No act, omission, or knowledge, actual or constructive, of the Port shall waive the requirement for timely written notice of protest and a timely written claim, unless the Port and the Contractor sign an explicit, unequivocal written waiver approved by the Port. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices of protest and/or timely submit claims has a substantial impact upon, and prejudices, the Port. For the purpose of calculating time periods, an "event giving rise to a claim," among other things, is not a Request for Information, but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.
- F. False claims. The Contractor shall not make any fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Port in the formation or performance of the Contract. If the Contractor or a Subcontractor of any tier submits a false or frivolous claim to the Port, which for purposes of this Section 11.01(F) is defined as a claim based in whole or in part on a materially incorrect fact, statement, representation, assertion, or record, the Port shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Port) any and all costs and expenses, including investigation and consultant costs, incurred by the Port in investigating, responding to, and defending against the false or frivolous claim.
- G. Compliance with lien and retainage statutes required. If a claim relates to, or is the subject of, a lien or retainage claim, the party asserting the claim may proceed in accordance with applicable law to comply with the notice and filing deadlines prior to resolution of the claim by mediation or by litigation.

- H. Performance required pending claim resolution. Pending final resolution of a claim, the Contractor shall continue to perform the Contract and maintain the Baseline Project Schedule, and the Port shall continue to make payments of undisputed amounts due in accordance with the Contract Documents.

11.02 MEDIATION

- A. Claims must be subject to mediation. At any time following the Port's receipt of a written claim, the Port may require that an officer of the Contractor and the Port's designee (all with authority to settle) meet, confer, and attempt to resolve a claim. If the claim is not resolved during this meeting, the claim shall be subject to mandatory mediation as a condition precedent to the initiation of litigation. This requirement can be waived only by an explicit, written waiver signed by the Port and the Contractor.
- B. Mediation procedure. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to agree upon a mediator. If the parties have not reached agreement within thirty (30) days of the request, either party may file the request with the American Arbitration Association, or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service). The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in Pierce County, Washington, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. Unless the Port and the Contractor mutually agree in writing otherwise, all claims shall be considered at a mediation session that shall occur prior to Final Completion.

11.03 LITIGATION

- A. Claims not resolved by mediation are subject to litigation. Claims not resolved through mediation shall be resolved by litigation, unless the parties mutually agree otherwise. The venue for any litigation shall be Pierce County, Washington. The Contractor may bring no litigation on claims, unless such claims have been properly raised and considered in the procedures of this Article 11. The Contractor must demonstrate in any litigation that it complied with all requirements of this Article.
- B. Litigation must be commenced promptly. All unresolved claims of the Contractor shall be waived and released, unless the Contractor has complied with the requirements of the Contract Documents, and litigation is served and filed within 180 days of the date of Substantial Completion approved in writing by the Port or termination of the Contract. The pendency of mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse, or thirty (30) days after the date of the mediation session.
- C. Port not responsible for attorneys' fees. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Port (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).
- D. Port may join Contractor in dispute. The Port may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

ARTICLE 12 - MISCELLANEOUS

12.01 GENERAL

- A. Rights and remedies are cumulative. The rights and remedies of the Port set forth in the Contract Documents are cumulative, and in addition to and not in limitation of, any rights and remedies otherwise available to the Port. The pursuit of any remedy by the Port shall not be construed to bar the Port from the pursuit of any other remedy in the event of similar, different, or subsequent breaches of this Contract. All such rights of the Port shall survive completion of the Project or termination of the Contractor.
- B. Reserved rights do not give rise to duty. The rights reserved or possessed by the Port to take any action shall not give rise to a duty for the Port to exercise any such right.

12.02 WAIVER

- A. Waiver must be in writing and authorized by Port. Waiver of any provisions of the Contract Documents must be in writing and authorized by the Port. No other waiver is valid on behalf of the Port.
- B. Inaction or delay not a waiver. No action, delay in acting, or failure to act by the Port shall constitute a waiver of any right or remedy of the Port, or constitute an approval or acquiescence of any breach or defect in the Work, nor shall any delay or failure of the Port to act waive or otherwise prejudice the right of the Port to enforce a right or remedy at any subsequent time.
- C. Claim negotiation not a waiver. The fact that the Port and the Contractor may consider, discuss, or negotiate a claim that has or may have been defective or untimely under the Contract, shall not constitute a waiver of the provisions of the Contract Documents, unless the Port and the Contractor sign an explicit, unequivocal waiver.

12.03 GOVERNING LAW

- A. Washington law governs. This Contract and the rights and duties of the parties hereunder shall be governed by the internal laws of the State of Washington, without regard to its conflict of law principles.

12.04 COMPLIANCE WITH LAW

- A. Contractor to comply with applicable laws. The Contractor shall at all times comply with all applicable Federal, State and local laws, ordinances, and regulations. This compliance shall include, but is not limited to, the payment of all applicable taxes, royalties, license fees, penalties, and duties.
- B. Contractor to provide required notices. The Contractor shall give notices required by all applicable Federal, State and local laws, ordinances, and regulations bearing on the Work.
- C. Contractor to confine operations at site to permitted areas. The Contractor shall confine operations at the Project site to areas permitted by applicable laws, ordinances, permits, rules and regulations, and lawful orders of public authorities and the Contract Documents.

12.05 ASSIGNMENT

- A. Assignment. The Port and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party and to the partners, successors, assigns, and legal representatives of such other party. The Contractor may not assign, transfer, or novate all or any portion of the Contract, including but not limited to, any claim or right to the Contract Sum, without the Port's prior written consent. If the Contractor attempts to make an assignment, transfer, or novation without the Port's consent, the assignment shall be of no effect, and Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor also shall not assign or transfer, to any third party, any claims it may have against the Port arising under the Contract or otherwise related to the Project.

12.06 TIME LIMIT ON CAUSES OF ACTION

- A. Time limit on causes of action. The Port and Contractor shall commence all causes of action, whether in contract, tort, breach of warranty, or otherwise, against the other arising out of, or related to, the Contract in accordance with the requirements of the dispute resolution procedure set forth in Article 11 of these General Conditions, within the time period specified by applicable law, and within the time limits identified in the Contract Documents. The Contractor waives all claims and causes of action not commenced in accordance with this Section 12.06.

12.07 SERVICE OF NOTICE

- A. Notice. Written notice under the Contract Documents by either the Contractor or Port may be served on the other party by personal service, electronic or facsimile transmission, or delivery service to the last address provided in writing to the other party. For the purpose of measuring time, notice shall be deemed to be received by the other party on the next business day following the sender's electronic or facsimile transmittal or delivery by delivery service.

12.08 RECORDS

- A. Contractor and Subcontractors to maintain records and cooperate with Port audit. The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract ("records") to such extent, and in such detail, as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges, and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Final Acceptance under the Contract. Within seven (7) days of the Port's request, both during the Project and for six (6) years following Final Acceptance, the Contractor and Subcontractors of any tier shall make available, at their office during normal business hours, all records for inspection, audit, and reproduction (including electronic reproduction) by the Port or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract and a waiver of all claims by the Contractor and Subcontractors of any tier.
- B. Rights under RCW 42.56. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Port.

12.09 STATUTES

- A. Contractor to comply with Washington statutes. The Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be, and are not, a complete list.
1. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors," and shall satisfy all State of Washington bonding and insurance requirements. The Contractor shall also have a current state Unified Business Identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required by Title 51 RCW; have an Employment Security Department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
 2. The Contractor shall comply with all applicable provisions of RCW 49.28, "Hours of Labor."

3. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."
4. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.
5. Pursuant to RCW 50.24, "Contributions by Employers," in general, and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for an acceptable bond.
6. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."
7. Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-62-054 et seq., the Contractor shall provide to the Port, and have copies available at the Project site, a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier.
8. All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, the Contractor shall submit certifications of asbestos-free and of lead-free materials certifying that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for the Contractor's insurance.

1.02 SUBMITTAL REQUIREMENTS

- A. Evidence of the required insurance within ten (10) days of the issued Notice of Award to the Contractor.
- B. Updated evidence of insurance as required until final completion.

1.03 COMMERCIAL GENERAL LIABILITY (CGL) INSURANCE

- A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC six (6)" or better.
- B. The Port of Tacoma (Port) and the Northwest Seaport Alliance (NWSA) will be included as additional insureds for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 04 13 and CG 20 37 04 13 (or equivalent coverage endorsements). The inclusion of the Port and the NWSA as additional insureds shall not create premium liability for either the Port nor the NWSA.

Also, by endorsement to the policy, there shall be:

1. An express waiver of subrogation in favor of the Port;
 2. A cross liabilities clause; and
 3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.
- C. If the Contractor, Supplier, or Subcontractors will perform any work requiring the use of a licensed professional, per RCW 18, the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than \$1,000,000.
- D. This insurance shall cover all of the Contractor's operations, of whatever nature, connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port and the NWSA as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide, or the Port's acceptance of, the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:
1. Marine General Liability Insurance on an Occurrence Form Basis including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Contractual Liability;
 - d. Products - Completed Operations Liability;

- e. Personal Injury Liability;
- f. Marine coverages as appropriate for the scope of work.

Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.

2. Marine Protection and Indemnity/Vessel Pollution Liability: Contractor shall obtain, at Contractor's expense and keep in effect during the term of the Contract, Marine Protection and Indemnity insurance which shall include Collision Liability and Jones Act coverages, including coverage for all masters, crew, and passengers. The limit of liability shall not be less than \$5,000,000. If Collision Liability is part of the Hull and Machinery coverage for the vessel, evidence of Hull and Machinery coverage in amounts not less than the actual cash value of the vessel shall also be provided.
 - a. Vessel Pollution Liability: Contractor shall obtain, at Contractor's expense and keep in effect during the term of the Contract, Vessel Pollution Liability on all vessels used under this Contract. Vessel Pollution Liability limits shall be the same as the Protection and Indemnity (P&I) limits called for in Section 2.
3. Comprehensive Automobile Liability including, but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Personal Injury Liability;
 - d. Owned and Non-Owned Automobile Liability; and
 - e. Hired and Borrowed Automobile Liability.
4. Contractor's Pollution Liability (CPL) covering claims for bodily injury, property damage and cleanup costs, and environmental damages from pollution conditions arising from the performance of covered operations.
 - a. If the Work involves remediation or abatement of regulated waste to include, but not limited to asbestos containing materials, lead containing products, mercury, PCB, underground storage tanks, or other hazardous materials or substances, the CPL policy shall not exclude such coverage, or a specific policy covering such exposure shall be required from the Contractor and all Subcontractors performing such Work.
 - b. If the Work involves transporting regulated materials or substances or waste, a separate policy or endorsement to the CPL policy specifically providing coverage for liability and cleanup arising from an upset or collision during transportation of hazardous materials or substances shall be required from the Contractor and all Subcontractors performing such Work.
 - c. It is preferred that CPL insurance shall be on a true occurrence form without a sunset clause. However, if CPL insurance is provided on a Claims Made basis, the policy shall have a retroactive date prior to the start of this project, and this insurance shall be kept in force for at least three years after the final completion of this project. Alternatively, the contractor, at its option, may provide evidence of extended reporting period of not less than three (3) years in its place. The Contractor shall be responsible for providing the Port with certificates of insurance each year evidencing this coverage.
 - d. The Port and the NWSA shall be named as an additional insured(s) on the CPL policy.

5. Technology Professional Liability Errors and Omissions Insurance appropriate to the Consultant's profession and work hereunder, with limits not less than \$2,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by the Vendor in this agreement and shall include, but not be limited to, claims involving infringement of intellectual property, copyright, trademark, invasion of privacy violations, information theft, release of private information, extortion and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties as well as credit monitoring expenses with limits sufficient to respond to these obligations.

The policy shall include, or be endorsed to include, **property damage liability coverage** for damage to, alteration of, loss of, or destruction of electronic data and/or information "property" of the Agency in the care, custody, or control of the Vendor.

- E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence. If the coverage is aggregated, the coverage shall be no less than two times the per occurrence or per claim limit. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. Any additional insured endorsement shall NOT be limited to the amounts specified by this Contract, unless expressly waived in writing by the Port.
- F. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.
- G. The Contractor shall furnish, within ten (10) days following issuance of the Notice of Award, a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port and the NWSA are named as additional insured(s).
- H. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change, or ten (10) day's-notice in the case of non-payment of premium(s).
- I. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

- A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.

- B. To the extent the Work provided under this Contract does not include the construction, rehabilitation or repair of any dam, road or bridge, and whenever the estimated cost of the Work is less than \$5,000,000, the Port and Contractor acknowledge that the Port will purchase, or has purchased, from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (including Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Without further endorsement, the coverage afforded by this insurance includes the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation (including but not limited to Contractor's equipment and tools) will NOT be covered by the policy.
- C. To the extent the Work provided under this Contract involves any dam, roadway or bridge, the value of which exceeds \$250,000, or whenever the estimated cost of the Work is equal to or greater than \$5,000,000, Contractor will purchase from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (excluding Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Contractor shall provide evidence satisfactory to the Port confirming the coverage afforded by this insurance shall include the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy purchased by the Contractor. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor.

In all instances, the Contractor shall obtain property insurance for all Contractor-owned equipment and tools and, in the event of loss, payment of any deductible amount shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED**PART 3 - PRODUCTS - NOT USED****END OF SECTION**

PART 1 - GENERAL

1.01 PREVAILING AND OTHER REQUIRED WAGES

- A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.
- B. Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" in effect as of the date that bids are due.
 - 1. Based on the Bid Date, the applicable effective date for prevailing wages for this Project is Required MMMM DD, 2020.
- C. The State of Washington prevailing wage rates applicable for this public works Project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

<https://www.lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/>
- D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein, and a printed copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at 1 Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at procurement@portoftacoma.com, the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this Project.
- E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.
 - Mailing Address: Washington State Department of Labor and Industries
Prevailing Wage Office
P.O. Box 44540
Olympia, WA 98504
 - Telephone: (360) 902-5335
 - Facsimile: (360) 902-5300
 - 1. If there is any discrepancy between the provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid.
- F. Statement to Pay Prevailing Wages
 - 1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries for approval.
 - 2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor's contractor registration number and other information required by the Department of Labor and Industries.
 - 3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.

- G. The Contractor shall post, in a location readily visible to workers, at the Project site: (i) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (ii) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.
- H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.
- I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.
- J. Immediately following the end of all Work completed under this Contract, the Contractor and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the Department of Labor and Industries.
- K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct, indirect, including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or RCW Title 51 ("Industrial Insurance"), including, but not limited to, RCW 51.12.050.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 REQUIREMENTS APPLICABLE PORT-WIDE

- A. The Contractor shall submit, prior to the start of Work, a list of emergency contact numbers for itself and its Subcontractors, Suppliers, and manufacturer representatives. Each person on the Project site shall have a valid identification card that is tamper proof with laminated photo identification, such as one (1) of the following:
 - 1. State-issued Driver's license (also required if driving a vehicle)
 - 2. Card issued by a governmental agency
 - 3. Passport
 - 4. Pacific Maritime Association card
 - 5. Labor organization identification card
- B. Identification cards shall be visible while on the Project site or easily displayed when requested.

1.02 TRANSPORTATION WORKER IDENTIFICATION CARD (TWIC) SUMMARY

- A. TWIC is required for all personnel needing unescorted access to secure and restricted areas of Port facilities subject to 33 CFR 105, including truckers, surveyors, construction personnel, and delivery personnel. Secure areas are those areas with security measures for access control in accordance with a Coast Guard approved security plan. Restricted areas are those areas within a secure area that require increased limited access and a higher degree of security protection. New terminals under construction prior to terminal operations may not be designated secure areas. Construction on existing maritime transportation facilities and punchlist or other type of work requirements on facilities that have been certified under 33 CFR will require a TWIC.
- B. Contractors should allow for application and enrollment for the security threat assessment and issuance of TWIC when submitting a bid.

1.03 ESCORTING

- A. To access restricted Port facilities, all un-credentialed individuals must be accompanied by a person who has been issued a TWIC and trained as an escort at that specific facility. Each restricted facility has their own guidelines for escorting. Having escort training at one facility does not qualify you to escort at other facilities. Prior to conducting escort services for non-TWIC personnel, the escorts are required to contact the Facility Security Officer at the gate for verification they are on the escort list and to document who is being escorted. For required documentation, upon completion of escorting, the escort is to inform the Security officer that the escort is complete. It is the Contractor's responsibility to schedule escort training with the Facility Security Officer.
- B. For more information, refer to the Port Security website at:
<http://www.portoftacoma.com/shipping/security>
- C. For Project specific information, refer to Section 01 14 00 - Work Restrictions.

1.04 ELIGIBILITY FOR TWIC

- A. Refer to the Transportation Worker Identification Credential website at: <https://www.tsa.gov/for-industry/twic> for information on eligibility and applying for TWIC.

1.05 TWIC USE AND DISPLAY

- A. Each worker granted unescorted access to secure areas of a facility or vessel must present their cards to authorized personnel, who will compare the holder to his or her photo, inspect security features on the TWIC, and evaluate the card for signs of tampering. The Coast Guard will verify TWIC's when conducting vessel and facility inspections and during spot checks using hand-held scanners, ensuring credentials are valid.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.
 - 1. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in these documents.
 - 2. The MAINTENANCE DREDGING AT PIERS 3 & 4 AND WASHINGTON UNITED TERMINALS 2026 consists of: Maintenance dredging to address high spots impacting the berthing areas of Washington United Terminals (WUT) and Piers 3&4 (Husky). All dredge material is anticipated to be disposed of at the Commencement Bay open-water dredge material disposal site. Debris will be disposed of upland.

1.02 LOCATION

- A. The work is located at:
 - Piers 3 & 4 (Husky Terminal)
 - 1101 Port of Tacoma Road
 - AND
 - Washington United Terminals (WUT)
 - 1815 Port of Tacoma Rd.
 - Tacoma, WA 98421

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
 - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
 - 2. The Contractor shall have access to the construction site by Contractor's boat. Contractor may use Port of Tacoma's access float located at the Port's Administration Building, 1 Sitcum Plaza, Tacoma, WA 98421 and park employee vehicles in the adjacent parking lot.
- B. Waterway Restrictions
 - 1. The Work is in a congested waterway and is surrounded by active terminals. The Contractor shall make themselves aware of the shipping schedules in the waterway and shall adjust their work accordingly; in particular the Contractor shall review the placement of equipment, anchors, anchor lines, bouys, etc. to avoid interruption or interference with marine vessel traffic in the waterway. The operations of commercial business shall have precedence. The Contractor shall coordinate with Port Operations at (253) 383-9420 on a daily basis to confirm Contractor's work and scheduled ship traffic.
- C. Working Facility
 - 1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.
 - 2. Washington United Terminals and Piers 3&4 are active shipping terminals. Terminal operations shall not be impacted by dredging activities.
- D. Work Site Regulations
 - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
 - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.
 - b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.

- c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

1.03 DREDGING SEQUENCE AND RESTRICTIONS

- A. Contractor to complete dredging activities in a single berth before moving to a new location.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Procedures for preparation and submittal of applications for progress payments.

1.02 PAYMENT PROCEDURES

- A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.
1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.
- B. For each pay estimate the Contractor shall submit the following:
1. Completed Contractor invoice and updated Schedule of Values tracking sheet as required by Division 01 or as established by the Engineer.
 2. Baseline Project Schedule and narrative updated as required by Section 01 32 16 of the Project Manual.
 3. Completed "Amounts Paid to Subcontracts and Suppliers" showing total contract amount, amount paid this estimate, total paid to date, and balance owing.
 4. Completed "Conditional Release and Waiver of Liens and Claims."
 5. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.
- C. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.
1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.
 2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.
 3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.
 4. The Contractor shall submit the updated baseline project schedule for review prior to submitting the payment application to ensure the payment processing is not held up due to necessary schedule revisions.
- D. Following the Engineers' review, the Contractor shall submit the agreed upon pay estimate electronically, with complete supporting documentation attached, using PDF file format to cpinvoices@portoftacoma.com.

1.03 PAYMENT PRICING

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.
- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

1.04 LUMP SUM MEASUREMENT

- A. Lump sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.
 - 1. If the Contractor requests progress payments for lump sum items, such progress payments will be made in accordance with an approved Schedule of Values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

1.05 MEASUREMENT OF QUANTITIES FOR UNIT PRICES

- A. Measurement Standards:
 - 1. All Work to be paid for at a contract price per unit measurement, as indicated in the Contractor's submitted bid, will be measured by the Engineer in accordance with United States Standard Measures.
- B. Measurement by Volume:
 - 1. Measurement by volume will be by the cubic dimension indicated in the Contractor's submitted bid. Method of volume measurement will be by the unit volume in place or removed as shown on the Contract Drawings or as specified.
- C. Field Measurement for Payment:
 - 1. The Contractor shall take all measurements by providing equipment, workers, and survey crews as required to measure quantities in accordance with the provisions for measurement specified herein. No allowance will be made for specified tolerances.
 - 2. The Engineer will verify all quantities of Work performed by the Contractor on a unit-price basis, for progress payment purposes.

1.06 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.07 MEASUREMENT AND PAYMENT

A. Item #1: Mobilization and Demobilization

- 1. Payment for Mobilization and Demobilization shall be for preparatory work and operations performed by the Contractor including, but not limited to, those necessary for the movement of its personnel, equipment, supplies and incidentals to and from the project site; temporary facilities and controls; for the establishment and removal of its offices, buildings and other facilities necessary for work on the project; for other work and operations which it must perform or costs it must incur before beginning production work on the various items on the project site, and for removal of personnel, equipment, supplies, offices, building facilities, sheds, fencing, and other incidentals from the site.
- 2. Mobilization and Demobilization shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:
 - a. 40% after completion of 5% of the total contract amount of other bid items have been earned.
 - b. 40% after completion of 20% of the total contract amount of other bid items have been earned.
 - c. 20% after completion of all work on the project has been completed, including cleanup and acceptance of the project by the Port.

B. Item #2: Project Administration

- 1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.
- 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
- 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

C. Item #3: Field Engineering - Piers 3&4

- 1. Item Description: The Work of this item includes all work necessary for Field Engineering, verifying survey reference points, in-process surveys, completion of pre and post-dredge surveys, installation and removal of tide boards, as described in these Specifications.
- 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.
- D. Item #4: Dredging - Piers 3&4
1. Item Description: The Work of this item includes: implementation of required best management practices associated with dredging operations; dredging of material as noted on the Drawings; loading into dump barges; transport and disposal of material in open water; and compliance, coordination and reporting requirements associated with open water disposal.
 2. Measurement: This item will be measured by the cubic yard based on a neat-line dredge cut volume calculation comparing the pre-dredge survey to the post-dredge survey performed after the removal of dredge material.
 3. Payment: This item will be paid for based on actual quantities for the period being billed.
- E. Item #5: Project Administration - WUT
1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.
 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.
- F. Item #6: Field Engineering - Piers 3&4
1. Item Description: The Work of this item includes all work necessary for Field Engineering, verifying survey reference points, in-process surveys, completion of pre and post-dredge surveys, installation and removal of tide boards, as described in these Specifications.
 2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.
 3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.
- G. Item #7: Dredging - WUT
1. Item Description: The Work of this item includes: implementation of required best management practices associated with dredging operations; dredging of material as noted on the Drawings; loading into dump barges; transport and disposal of material in open water; and compliance, coordination and reporting requirements associated with open water disposal.
 2. Measurement: This item will be measured by the cubic yard based on a neat-line dredge cut volume calculation comparing the pre-dredge survey to the post-dredge survey performed after the removal of dredge material.
 3. Payment: This item will be paid for based on calculated quantities for the period being billed.
- H. Item #8: Dredge Debris Allowance

1. Item Description: The allowance will be for compensation of costs associated with removal and disposal of regulated and non-regulated materials/waste encountered during dredging. Regulated materials/waste consists of creosote timber and piles, batteries, PCB's and the like. Non-regulated materials consist of concrete, pipes, riprap, logs, wire, cable, steel bands, anchors, lumber, trash, etc. This bid item will be paid preferably as negotiated unit price(s) or lump sum price(s). If unit prices or lump sums cannot be established, work will be paid on time and materials basis per Section 00 72 00 General Conditions Article 8.0. Work under this bid item shall be accomplished upon written direction from the Engineer as a Minor Change in Work. This entire bid item may not be used.
 2. Measurement: This item will be measured based upon the method agreed upon for each Minor Change in Work issued.
 3. Payment: This item will be paid for at the price agreed upon for each Change in Work issued by the Engineer in accordance with procedures noted in Section 01 26 00 - Change Management Procedures.
- I. Item #9: Dredging Standby
1. Item Description: This work will be for compensation of costs associated with the idle time created by Port or Tenant operations that prevent the Contractor from working as planned. This does not include inherent delays identified in Section 35 20 23 - Dredging.
 2. Measurement: This item will be measured on a daily rate for all labor and equipment.
 3. Payment: This item will be paid for at the Contract daily price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.02 SUBMITTALS

- A. The Contractor shall submit for approval the following documentation to the Port for force account change orders:
 - 1. List of Labor Rates
 - a. For the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance, and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead, or profit. Rates shall be submitted for straight time, overtime, and double time in a form acceptable to the Engineer. Contractor shall provide proof of all labor rate costs as required by the Engineer, including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment Security Department.
 - 1) If labor rates change during the course of the project or additional labor rates become required to complete the work, the Contractor shall submit new rates for approval.
 - 2. List of Equipment.
 - a. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown on Equipment Watch. A separate page from equipment watch detailing the hourly rate shall be submitted as backup documentation for each piece of equipment.
 - 1) If the list of equipment and/or equipment rates changes during the course of the project or additional equipment becomes required to complete the work, the Contractor shall submit a new list and rates for approval.

1.03 METHOD TO CALCULATE ADJUSTMENTS TO CONTRACT PRICE

- A. One of the following methods shall be used:
 - 1. Unit Price Method;
 - 2. Firm Fixed Price Method (Lump Sum); or,
 - 3. Time and Materials Method (Force Account).
- B. The Port preferred methods are firm fixed price or unit prices.

1.04 MINOR CHANGES IN THE WORK

- A. Engineer will issue a written directive authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.05 PROPOSAL REQUESTS

- A. Port-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 2. Contractor shall submit a written proposal within the time specified in the General Conditions. The proposal shall represent the Contractor's offer to perform the requested work, and the pricing set forth within the proposal shall represent full, complete, and final compensation for the proposed change and any impacts to any other Contract Work, including any adjustments in the Contract Time.
 - a. Include a breakdown of the changed work in sufficient detail that permits the Engineer to substantiate the costs.
 - 1) Generally, the cost breakdown should be divided into the time and materials categories listed in the General Conditions under Article 8.02.B for either Lump Sum Proposals or Force Account Proposals.
 - 2) For Unit Price Proposals, include the quantity and description of all work involved in the unit pricing being proposed, along with a not to exceed total cost.
 - b. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or differing site conditions require modifications to the Contract, the Contractor may initiate a claim by submitting a request for a change to the Engineer.
1. Notify the Engineer immediately upon finding differing conditions prior to disturbing the site.
 2. Provide follow-up written notification and differing site conditions proposal within the time frames set forth in the General Conditions.
 3. Provide the differing site condition change proposal in the same or similar manner as described above under 1.05.A.
 4. Comply with requirements in Section 00 26 00 Substitution Procedures if the proposed change requires substitution of one product or system for product or system specified.
 5. Proposal Request Form: Use form acceptable to Engineer.

1.06 PROCEEDING WITH CHANGED WORK

- A. The Engineer may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order per the General Conditions, Article 8.01.E.
1. The directive will contain a description of change in the Work and a not-to-exceed amount. It will designate the method to be followed to determine the change in the Contract Sum or the Contract Time.

1.07 CHANGE ORDER PROCEDURES

- A. Issuance of Change Order

1. On approval of the Contractor's proposal, and following successful negotiations, the Engineer will issue a Change Order for signature by the Contractor and execution by the Engineer.
 - a. The Contractor shall sign and return the Change Order to the Engineer within **four (4) days** following receipt of the Change Order from the Engineer. If the Contractor fails to return the signed Change Order within the allotted time, the Engineer may issue a Unilateral Change Directive.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes specifications for preparation, format, and submittal of Schedule of Values.
- B. The Schedule of Values will establish unit prices for individual items of work.
- C. The Schedule of Values will be the basis for payment of contract work.

1.02 PREPARATION

- A. To facilitate monthly pay requests, develop the Schedule of Values based on the Contractor's submitted Bid Items. The Schedule of Values shall be used to provide an allocation of the Work for measurement and payment to a level of detail to ensure accurate payment for the Work accomplished. The Schedule of Values is based on unit priced bid items and a breakdown of each lump-sum bid item. The total dollars for the Schedule of Values shall total the bid amount.
- B. Obtain the agreement of the Contract Administrator and Engineer on the Schedule of Values. No payment will be made prior to an agreed upon Schedule of Values.
- C. Include an updated version of the Schedule of Values as changes occur. Update the Schedule of Values to include:
 - 1. Dollars earned and percent complete for the current progress payment period,
 - 2. Dollars earned and percent complete to-date, excluding the current progress payment period,
 - 3. Total dollars earned and percent complete to-date,
 - 4. Total dollars remaining, and
 - 5. Changes resulting from Change Orders.
- D. The total value of the line items in the Schedule of Values plus any approved Change Orders shall be equal to the current approved contract price.
- E. The value of stored material shall be identified in the Schedule of Values with both a material-purchase activity and a separate corresponding installation activity in the Construction Schedule(s).
- F. Include as exhibits, drawings or sketches as necessary, to better define the limits of pay items that are in close proximity and that have no clear boundary in the Contract Drawings.

1.03 SUBMITTAL

- A. Submit preliminary Schedule of Values within 10 days of the effective date of the Notice to Proceed.
- B. Submit corrected Schedule of Values within 10 days upon receipt of reviewed Schedule of Values.
- C. At the Contract administrator or Engineer's request, submit documentation substantiating the cost allocations for line items within the Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SCHEDULE OF VALUES

- A. Submit the Schedule of Values in a form acceptable to the Contract Administrator and Engineer.
- B. Provide updated Schedule of Values as required by the Contract Administrator or Engineer, and as indicated in the Contract Documents.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The purpose of this section is to provide the framework for communication between the Port and the Contractor by defining the types and timing of administrative tasks, including meetings and other items related to communications.

1.02 NOTICE TO PROCEED

- A. Contract execution will be made per the requirements of the Contract Documents. Once the contract has been executed and all pre-work submittals have been received, the Engineer will issue a Notice to Proceed (NTP).
 - 1. In certain instances, the Engineer may issue to the Contractor a Limited NTP for specified elements of the work described in these Contract Documents.
- B. The Contractor shall submit all pre-work submittals within DD days of contract execution.
 - 1. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required by the Contract Documents.

1.03 COORDINATION

- A. The Contractor shall coordinate all its activities through the Engineer.
- B. The Contractor shall coordinate construction operations as required to execute the Work efficiently, to obtain the best results where installation of one part of the Work depends on other portions.

1.04 PROJECT MEETINGS

- A. Pre-Construction Meeting
 - 1. After execution of the contract, but prior to commencement of any work at the site, a mandatory one time meeting will be scheduled by the Engineer to discuss and develop a mutual understanding relative to the administration of the safety program, preparation of the Schedule of Values, change orders, RFI's, submittals, scheduling prosecution of the work. Major subcontractors who will engage in the work shall attend.
 - 2. Suggested Agenda: The agenda will include items of significance to the project.
 - 3. Pre-Construction Meeting will be held at the Port of Tacoma Administration Building, or virtually, as scheduled by the Engineer.
- B. Weekly Progress Meetings – Progress meetings include the Contractor, Engineer, consultants and others affected by decisions made.
 - 1. The Engineer will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distribute copies within ten working days to the Contractor, meeting participants, and others affected by decisions made.
 - a. The Engineer will approve submitted meeting minutes in writing within 10 working days.
 - 2. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Engineer, and representatives of the Port as appropriate to the agenda topics for each meeting.
 - 3. Standard Agenda

- a. Review minutes of previous meeting
- b. Review of work progress
- c. Field observations, problems, and decisions
- d. Identification of problems that impede planned progress
- e. Maintenance of Progress Schedule (3 weeks ahead; 1 week back)
- f. Corrective measures to regain projected schedules
- g. Planned progress during succeeding work period
- h. Coordination of projected progress
- i. Maintenance of quality and work standards
- j. Effect of proposed changes on progress schedule and coordination
- k. Demonstration that the project record drawings are up-to-date
- l. Other business relating to the work

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. The Port and Contractor shall use the Port's provided Project Management applications for electronic information exchange throughout the duration of the Contract, as later described. The joint use of these systems is to facilitate and coordinate the electronic exchange of Requests for Information, Submittals, Change Order Proposals, and project specific correspondence.

1.02 USER ACCESS LIMITATIONS

- A. Contractor's access to Port provided applications is granted and controlled by the Engineer.
 - 1. The users assigned by the Contractor shall be competent and experienced with the practices commonly employed in the industry for electronically submitting requests for information, submittals, product data, shop drawings and related items as required by the contract and the methods commonly used for project correspondence transmission and filing.
 - 2. Any users assigned by the Contractor whom the Engineer determines is incapable of performing the prescribed tasks in an accurate, competent and efficient manner will be removed upon request from the Engineer. The qualifications and identity of a replacement user shall be submitted within 24 hours for consideration by the Engineer. Once accepted by the Engineer, the user account will be modified accordingly.
 - 3. Each user must have their own account. Sharing accounts or login credentials is not allowed.

1.03 CONTRACTOR TECHNOLOGY REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining web enabled devices capable of operating the Trimble Unity Construct web based application and any additional project specific software required by the Engineer effectively.

1.04 CONTRACTOR SOFTWARE REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining the following:
 - 1. An office suite that is Microsoft Office 2013 compatible for generation and manipulation of correspondence.
 - 2. A program capable of editing, annotating and manipulating Adobe pdf files for inserting the Contractor's review stamp, clouding and adding notation to the files as necessary for review by the Engineer.

1.05 CONTRACTOR RESPONSIBILITY

- A. Provide all the equipment, internet connections, software, personnel and expertise required to support the use of Trimble Unity Construct as described in the contract documents.
 - 1. User account creation. Submit the full name and email of each requested user to the Engineer, or their designee. Trimble User Accounts cannot be shared and require a unique email for each user.

1.06 PORT RESPONSIBILITY

- A. Provide the Contractor with the following:
 - 1. Two (2) User Accounts to access Trimble Unity Construct as described above. Additional user accounts may be assigned at the Engineer's discretion.

2. Information, basic user guides and requirements on methods for using Trimble Unity Construct.
3. Instruction for the Contractor's staff utilizing Trimble Unity Construct.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 UTILIZATION OF TRIMBLE UNITY CONSTRUCT

- A. The Contractor shall provide required information in a timely manner that also supports the project schedule and meets the requirements of the Contract.
- B. The Contractor shall provide and maintain competent and qualified personnel to perform the various tasks required to support the work within Trimble Unity Construct
- C. The Port will not be liable for any delays associated from the usage of Trimble Unity Construct including, but not limited to: slow response time, Port maintenance and off-line periods, connectivity problems or loss of information. Under no circumstances shall the usage of Trimble Unity Construct software be grounds for a time extension or cost adjustment to the contract.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a preliminary schedule and construction progress schedule, bar chart type.

1.02 SUBMITTALS

- A. Within 10 days following execution of the contract, submit a baseline project schedule defining planned operations.
- B. If the baseline project schedule requires revision after review, submit revised baseline project schedule within 10 days.
- C. Within 20 days after review of baseline project schedule, submit draft of proposed complete baseline project schedule for review.
- D. Submit updated progress schedule monthly to the Engineer with each pay application as required in Section 01 20 00 Price and Payment Procedures.

1.03 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or Consultant specializing in Critical Path Method (CPM) scheduling with one year's minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.04 SCHEDULE FORMAT

- A. The baseline project schedule shall be produced using the CPM format.
- B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- C. Sheet Size: Multiples of 11 x 17 (280 x 432 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BASELINE SCHEDULE

- A. Prepare baseline project schedule in the form of a horizontal bar chart.
- B. The baseline project schedule shall include all the activities listed in the Schedule of Values and be directly related to items listed in the Bid Form. The Contractor is encouraged to add sufficient activities to facilitate a clear understanding of the means and methods planned for the various work items.
- C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction and critical path. At a minimum it shall include and show the following:
 - 1. A time scale showing the elementary work items needed to complete the work;
 - 2. Estimated time durations for each activity, defined as any single identifiable work step within the project;
 - 3. A graphical network diagram showing the logical sequence of activities, their precedence relationships, and estimated float or leeway available for each;

4. The different categories of work as distinguished by crew requirements, equipment requirements, and construction materials; and
 5. The different areas of responsibility, such as distinctly separate or subcontracted work, and identifiable subdivisions of work.
- D. It shall be maintained and updated as necessary to accurately reflect past progress and the most probable future progress.
- E. Activities shown shall include submittals, milestones, and sufficient task breakdown for major components of work.
- F. Identify work of separate stages and other logically grouped activities.
- G. Provide sub-schedules to define critical portions of the entire schedule.
- H. Provide separate schedule of submittal dates for shop drawings, product data, samples, owner-furnished products, products identified, and dates reviewed submittals will be required from the Engineer. Indicate decision dates for selection of finishes.

3.02 PROGRESS SCHEDULE

- A. From the regularly-maintained baseline project schedule, progress schedules showing a three-week look-ahead, one-week look-back, shall be submitted and distributed at the weekly progress meetings. The progress schedule shall represent a practical plan to complete the work shown within the contract work window presented. At a minimum, the presentation, typically a Gantt-style chart, shall convey the task durations, a logical work sequence, task interdependencies, and identify important or critical constraints.
- B. Submittal and distribution of progress schedules will be understood to be the Contractor's representation that the scheduled work meets the requirements of the contract documents and that the work will be executed in the manner and sequence presented, and over the durations indicated.
- C. The scheduling, coordination, and execution of construction in accordance with the contract documents are the responsibility of the Contractor. The Contractor shall involve, coordinate, and resolve scheduling with all subcontractors, material suppliers, or others affected in development of the progress schedules.
- D. The progress schedule shall be used for coordination purposes for inspection and testing purposes as well as validation of work progress against the baseline schedule.

3.03 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Substantial Completion.
- E. Submit reports required to support recommended changes.
- F. Contractor shall submit an updated progress schedule with each pay application and include a written narrative describing the overall progress of the work. The narrative shall include the following key aspects:
1. Progress in the last period.

2. Critical Path progress and schedule concerns.
3. Changes to schedule logic or sequencing of the work.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes the requirements to provide a submittal log and project submittals.

1.02 SUBMITTAL LOG

- A. Contractor shall, within 14 days of contract execution prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction Work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:
1. Item Description
 2. Category
 3. Specification Section information of the applicable section
 4. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

- A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

- A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.
- B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.
- C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D.
- D. Required electronic formats for these drawings are as follows:
1. AutoCad DWG
 2. PDF - Formatted to print to half-scale using 11x17 paper
- E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.

2. Make Corrections Noted - Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 3. Reviewed - Submittal has been reviewed by the Port, does not constitute approval, and the Contractor is responsible for requirements in submittal.
 4. Review as Noted - Submittal has to be reviewed by the Port with comments as noted.
 5. Revise and Resubmit - Means, rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
 6. Rejected - Means, submitted material does not conform to the Contract Documents in a major respect (e.g., wrong material, size, capacity, model, etc.).
- B. Submittals marked "No Exceptions Taken," "Make Corrections Noted," or "Reviewed as Noted" authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- C. When submittals or prints of shop drawings have been marked "Revise and Resubmit" or "Rejected," Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.
- D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that the Contractor's submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. The Contractor shall submit all shop drawings, catalog cuts, brochures and physical samples using Trimble Unity Construct (a web based construction management software). All post-document-generated notations such as notes, arrows, stamps, clouding, or other items, are required to be shown directly on the submittal document. **Each submittal shall be accompanied by a transmittal developed within the Trimble Unity Construct software.**
- B. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively.

- C. Product submittals that cannot be accomplished electronically shall be submitted electronically without attachments, marked as being hand delivered, and accompanied by a printed version of a transmittal.
- D. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent, or are related in any way, must be submitted indicating the complete installation. Submittals shall not be altered once marked "No Exceptions Taken" Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.
- E. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.
- F. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- G. All submittal packages including, but not limited to, product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.
- H. When completing the Trimble Unity Construct submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 PRE-WORK SUBMITTALS

- A. Prior to issuance of Notice to Proceed, the following submittals must be submitted and returned to the Contractor as No Exceptions Taken, Make Corrections Noted, Reviewed, or Reviewed as Noted.
 - 1. Per 00 72 00 and 01 32 16, Baseline Project Schedule
 - 2. Per 00 73 63, Emergency Contact Numbers
 - 3. Per 01 35 29, Health and Safety Plan (HASP)
 - 4. Per 01 35 29, Spill Prevention and Countermeasures Plan (SPCC)
 - 5. Per 01 35 47, List of equipment and written certification

3.03 MAINTENANCE OF SUBMITTAL LOG

- A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer, use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. The work includes the requirements for health and safety provisions necessary for all work at the site for this project. The work also includes compliance with all laws, regulations and ordinances with respect to safety, noise, dust, fire and police action, civil disobedience, security or traffic.
- B. Some of the work tasks may place workers in the potential position of coming into contact with regulated building materials, waste, or environmental media. Detailed information regarding the known nature and extent of refuse and regulated materials in the project area is included in Section 00 31 26 Existing Hazardous Material Information.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall provide a site specific Health and Safety Plan (HASP), which meets all the requirements of local, state and federal laws, rules and regulations. The HASP shall address all requirements for general health and safety and shall include, but not be limited to:
 - 1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work;
 - 2. Map of the site(s) illustrating the location of the anticipated hazards and areas of control for those hazards (including containments, exclusion/work zones, and contaminant reduction/decontamination zones);
 - 3. Hazardous material inventory and safety data sheets (SDSs) for all chemicals which will be brought on site;
 - 4. Signage appropriate to warn site personnel and visitors of anticipated site hazards;
 - 5. Documentation that the necessary workers have completed the required Hazardous Waste Operations and Emergency Response (HAZWOPER) training;
 - 6. Engineering controls/equipment to be used to protect against anticipated hazards;
 - 7. Personal protective equipment and clothing including head, foot, skin, eye, and respiratory protection;
 - 8. Procedures which will be used for:
 - a. Suspicious materials and/or unidentified materials,
 - b. Odorous conditions and toxic gases;
 - 9. Site housekeeping procedures and personal hygiene practices;
 - 10. Personnel and equipment decontamination plan;
 - 11. Administrative controls;
 - 12. Emergency plan including locations of and route to nearest hospital;
 - 13. Recordkeeping including:
 - a. Documentation of appropriate employee training (e.g., Hazardous Waste Operations and Emergency Response [HAZWOPER] 40-hour training for staff involved with excavation and handling of soil),

14. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP;
 15. Dredging and barge loading procedures;
 16. Lighting and sanitation; and
 17. Signatory page for site personnel to acknowledge receipt, understanding, and agreement to comply with the HASP.
- B. Prior to the start of any Work, the Contractor shall provide a site specific Spill Prevention, Control and Countermeasures (SPCC) Plan, which meets all the requirements of local, state and federal laws, rules and regulations.
- C. Contractor may submit the HASP and SPCC Plan as one comprehensive document or may submit the plans as separate documents.

1.03 POTENTIAL CHEMICAL HAZARDS

A. Site Contaminants

1. The Contractor must provide site workers with Hazard Communication standard information for potential site contaminants (in accordance with WAC 296-843). The Contractor shall ensure that all site workers are aware of and understand this information. Additional information shall also be provided by the Contractor, as necessary, to meet the Hazard Communication Standard and HASP requirements as noted in WAC 296-901-14010 and 296-843. Workers shall be instructed on basic methods or techniques to assist in detecting suspicious material.

B. Potential Exposures Routes

1. Inhalation: Airborne dusts, fibers, particulates, or vapors may be released during site activities. Inhalation of airborne inorganic arsenic may occur.
2. Skin and Eye Contact: Dusts generated during site work activities may settle on the skin or clothing of site workers. Also, workers may contact potentially regulated sediments, or water, in the normal course of their work. Precautions to prevent skin or eye contact with hazardous materials will be included in the HASP. Arsenic exposure may cause skin irritation.
3. Ingestion: Inadvertent transfer of site contaminants from hands or other objects to the mouth could occur if site workers eat, drink, smoke, chew tobacco, or engage in similar activities in work areas. This could result in ingestion of site contaminants. Precautions to prevent accidental or inadvertent ingestion of hazardous materials will be included in the HASP.

- C. Chemical hazards may also result from Contractor operations resulting in inadvertent release of fuel, oil, or other chemicals in a manner that would expose workers.

1.04 POTENTIAL PHYSICAL AND OTHER HAZARDS

- A. The Work of the Contractor is described elsewhere in these specifications. Precautions to prevent all anticipated physical and other hazards, including heavy equipment and vessels, shall be addressed in the HASP.
- B. Specific aspects of construction resulting in physical hazards anticipated for this project include, but are not limited to the following:
1. Work over or adjacent to water, presenting hazards of falling into water, hypothermia from exposure to the elements, and drowning;

2. Operation of marine equipment, including winches, dredges, and related equipment, entrapment, ensnarement, and being struck by moving parts hazards;
 3. Major hazards associated with earthwork impacts from moving construction vehicles and trucks, noise, thermal stress, contact with unguarded machines, excavation hazards (i.e., cave-in, utility, etc.), strains from heavy lifting, and reduced visibility and communications difficulties in work area; and
 4. Operation of equipment, including excavators, loaders, and related equipment, presenting hazards of entrapment, ensnarement, and being struck by moving parts.
- C. Other anticipated physical hazards:
1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction);
 2. Cold stress, such as that potentially caused during times when temperatures are low, winds are high, especially when precipitation occurs during these conditions;
 3. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.); and
 4. Trips and falls.

PART 2 - PRODUCTS

2.01 SAFETY SIGNAGE

- A. The Contractor shall provide signage at strategic locations within the project site to alert jobsite workers and visitors of the remediation work, associated hazards, and required precautions.

2.02 PRODUCTS SPECIFIED FOR HEALTH AND SAFETY

- A. Provide the equipment and supplies necessary to support the work as described in the site-specific HASP. Equipment and supplies may include, but are not limited to:
1. All chemicals to be used on site;
 2. A hazardous materials inventory and SDSs for the chemicals brought on site;
 3. Warning signs and labels;
 4. Fire extinguishers;
 5. Personal protective equipment (hard hats, foot gear, skin, eye, and respiratory protection);
 6. First aid equipment;
 7. Spill response and spill prevention equipment; and
 8. Field documentation logs/supplies.

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

- A. Contractor shall comply with health and safety rules, regulations, ordinances promulgated by the local, state, and federal government, the various construction permits, and other sections of the Contract Documents. Such compliance shall include, but not be specifically limited to: any and all protective devices, equipment and clothing; guards; restraints; locks; latches; switches; and other safety provisions that may be required or necessitated by state and federal safety regulations. The Contractor shall determine the specific requirements for safety provisions and shall have inspections and reports by the appropriate safety authorities to be conducted to ensure compliance with the intent of the regulations.
- B. Contractor shall inform employees, subcontractors and their employees of the potential danger in working with any potentially regulated materials, equipment, soils and groundwater at the project site.
 - 1. The Contractor shall not proceed with jobsite activities that might result in exposure of employees to hazardous materials, including arsenic, until the HASP is reviewed by the Engineer.
- C. All Contractor employees expected to work at the jobsite or individuals entering the jobsite shall read the Contractor HASP before they enter the jobsite, and will sign a statement provided by the Contractor that they have read and understand the HASP. A copy of the Contractor's HASP shall be readily available at the site at all times the work is being performed.
- D. The Contractor's HASP shall be amended as needed by the CIH or CSP to include special work practices warranted by jobsite conditions actually encountered. Special practices could include provisions for decontamination of personnel and equipment, and the use of special equipment not covered in the initial plan.
- E. Contractor shall perform whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees of the Engineer, Engineer's Representative, and Contractor) and property during the Contract period. This requirement applies continuously and is not limited to normal working hours.
- F. The Engineer's review of the Contractor's performance does not include an opinion regarding the adequacy of, or approval of, the Contractor's safety supervisor, the site-specific HASP, safety program or safety measures taken in, on, or near the job site.
- G. Accidents causing death, injury, or damage must be reported immediately to the Engineer and the Port Security Department in person or by telephone or messenger. In addition, promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- H. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence, to the Engineer, giving full details of the claim.

3.02 SITE SAFETY AND HEALTH OFFICER

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, has a minimum current 40-hour HAZWOPER certification (minimum), and trained to use all necessary safety equipment, air monitoring equipment, and gas detectors. The person must be available and/or present at all times while work is being performed, and conduct testing, as necessary.

- B. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- C. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

3.03 SPILL PREVENTION AND CONTROL

- A. The Contractor shall be responsible for prevention, containment and cleanup of spilling petroleum and other chemicals/hazardous materials used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- B. The Contractor is advised that discharge of oil, fuel, other petroleum, or any chemicals/hazardous materials from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.
- C. In the event of a discharge of oil, fuel or chemicals/hazardous materials into waters, or onto land with a potential for entry into waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of all spilled material and used cleanup materials.
- D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup:
 - 1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
 - 2. All land-based chemical, oil and products' storage tanks shall be diked, contained and/or located so as to prevent spills from escaping into the water. Dikes and containment area surfaces shall be lined with impervious material to prevent chemicals or oil from seeping through the ground and dikes.
 - 3. All visible floating sheen shall be immediately contained with booms, dikes or other appropriate means and removed from the water prior to discharge into state waters. All visible spills on land shall be immediately contained using dikes, straw bales or other appropriate means and removed using sand, sawdust or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed offsite in accordance with applicable local, state and federal regulations.
 - 4. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the Port Security at their listed 24-hour response number:
 - a. Port Security: 253-383-9472
- E. The Contractor shall maintain the following materials (as a minimum) at each of the project sites:
 - 1. Oil-absorbent booms: 100 feet;
 - 2. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area;
 - 3. Oil-skimming system; and

4. Oil dry-all, gloves, and plastic bags.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section discloses procedures to follow if unknown regulated materials are encountered.

1.02 NOTIFICATION AND SUSPENSION

- A. In the event the Contractor detects the presence of potentially regulated materials not previously identified in this specification, the Contractor shall stop work and immediately notify the Port. Following such notification by the Contractor, the Port shall in turn notify the various governmental and regulatory agencies concerned with the presence of regulated materials, if warranted. Depending upon the type of materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.
1. Following completion of any further testing necessary to determine the nature of the materials involved, the Port will determine how the material shall be managed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the regulated material, the following alternate methods of operation are foreseen as possible:
 - a. Contractor to resume work as before the suspension.
 - b. Contractor to move its operations to another portion of the work until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
 - c. The Port to direct the Contractor to dispose or treat the material in an approved manner.
 - d. The Port to terminate or modify the Contract accordingly, for unforeseen conditions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. The Work includes the requirements to provide air and noise control measures until Final Completion of the Work.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall submit a list of equipment to be used on the project and written certification that all equipment on the list and any additional equipment, including Contractor's, subcontractors or supplier's equipment, shall meet the requirements of 3.01 below.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

- A. The Contractor shall meet or exceed EPA Tier 2 off-road diesel engine emission standards for off-road equipment ≥ 25 hp and meet or exceed EPA 1994 on-road diesel engine emission standards for on-road equipment except as follows:
 - 1. Equipment being used in an emergency or public safety capacity
- B. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.
- C. No vehicles can idle for more than 5 consecutive minutes, except as follows:
 - 1. Idling is required to bring or maintain the equipment to operating temperature;
 - 2. Engine idling is necessary to accomplish work for which the equipment was designed (i.e. operating a crane); or
 - 3. Idling vehicles being used in an emergency or public safety capacity.
- D. The Contractor shall minimize nuisance dust by cleaning, sweeping, vacuum sweeping, sprinkling with water, or other means. Equipment for this operation shall be on the job site or available at all times.

3.02 NOISE CONTROL

- A. The Contractor shall comply with all local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.
- B. All internal combustion engines used on the job shall be equipped with a muffler of a type recommended by the manufacturer.

END OF SECTION

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PART 1 – GENERAL

1.01 SUMMARY

- A. The Work shall consist of the procedures to be followed in the event that cultural and/or historical resources are inadvertently discovered during Project activities.
- B. The project is located in an area previously inventoried for cultural and historical resources; however, it is possible that additional, previously unidentified archaeological resources and/or skeletal remains could be inadvertently discovered during project activities. In the event that prehistoric, historic-era archaeological materials or skeletal remains are discovered, the appropriate protection measures and protocols described in this section must be followed.
- C. All Contractor employees shall be aware of the Inadvertent Discovery Plan and shall notify the Engineer if a suspected archeological resource is discovered.
- D. A copy of the Inadvertent Discovery Plan shall be kept on site and available at all times during ground disturbing activities.

1.02 REFERENCES

- A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:
 - 1. Port of Tacoma's "Archaeological Monitoring and Inadvertent Discovery Plan." A copy of this Plan is located in Appendix J .

PART 2 – PRODUCTS – NOT USED.

PART 3 – EXECUTION

3.01 PROTOCOLS FOR DISCOVERY OF ARCHAEOLOGICAL RESOURCES

- A. In the event that archaeological resources are encountered within the project, the following actions will be taken:
 - 1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures.
 - 2. The Contractor's work supervisor will be notified immediately.
 - 3. Contact the Port's Engineer and Environmental Project Manager immediately.
 - 4. A work stoppage zone, as determined by the Archaeologist and Port, will be established.
 - 5. The Port's Environmental Project Manager will contact the appropriate agencies.
 - 6. The Work Stoppage Zone will remain protected until further decisions can be made regarding the area.
 - 7. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.02 PROTOCOLS FOR DISCOVERY OF HUMAN REMAINS

- A. In the event that suspected human remains are encountered within the project, the following actions, consistent with RCWs 68.50.645, 27.44.055 and 68.60.055 will be taken:
 - 1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures. The remains will not be photographed, touched, moved or further disturbed.
 - 2. The Contractor's work supervisor will be notified immediately.

3. Contact the Port's Engineer and Environmental Project Manager immediately.
4. The Environmental Project Manager will notify the county medical examiner / coroner and local law enforcement.
5. A Work Stoppage Zone will be determined and remain protected until further decisions can be made regarding the area.
6. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.03 PROTOCOLS FOR CONFIDENTIALITY

- A. In the event that human remains or cultural resources are discovered within the project area, the Port and the Contractor shall keep and maintain all information regarding any discovery confidential.
 1. At no time shall the Contractor contact the media, any third party or otherwise share information regarding the discovery with any member of the public.
 2. If the Contractor is contacted by the media or the public regarding any discovery, they shall refrain from comment, and contact the Engineer or Environmental Project Manager immediately.

END OF SECTION

PART 1 - GENERAL

1.01 PERMITS, CODES, AND REGULATIONS

- A. The following permits/approvals have been applied for (or are on file) and incorporated into the Contract:
 - 1. State Environmental Policy Act (SEPA) Compliance Determination of Nonsignificance, located in Appendix A
 - 2. Shoreline Management Act / Critical Areas Compliance Exemption LU26-0162, located in Appendix B
 - 3. Hydraulic Project Approval 2026-6-330+01, located in Appendix C
 - 4. DMMP Suitability Determination Memorandum, located in Appendix D
 - 5. United States Army Corp of Engineers NWS-2020-1017-WRD, located in Appendix E
 - 6. Department of Ecology Water Quality Certification 20113, located in Appendix F
 - 7. Department of Natural Resources Site Use Authorization XX-XXXXXX, located in Appendix G
 - 8. Water Quality Monitoring and Protection Plan, located in Appendix H
 - 9. Department of Ecology Coastal Zone Management, located in Appendix I
- B. Conform with the requirements of listed permits and additional or other applicable permits, codes, and regulations as may govern the Work.
- C. Obtain and pay fees for licenses, permits, inspections, and approvals required by laws ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work (other than those listed under item 1.01.A above and Special Inspections called for by the International Building Code).
- D. Conform with current applicable codes, regulations and standards, which is the minimum standard of quality for material and workmanship. Provide labor, materials, and equipment necessary for compliance with code requirements or interpretations, although not specifically detailed in Drawings or specifications. Be familiar with applicable codes and standards prior to bidding.
- E. Process through Engineer, request to extend, modify, revise, or renew any of the permits (listed in 1.01.A above). Furnish requests in writing and include a narrative description and adequate Drawings to clearly describe and depict proposed action. Do not contact regulatory agency with requests for permit extensions, modifications, revisions, or renewals without the prior written consent of the Engineer.

1.02 VARIATIONS WITH CODES, REGULATIONS AND STANDARDS

- A. Nothing in the Drawings and specifications permits Work not conforming to codes, permits, or regulations. Promptly submit written notice to the Engineer of observed variations or discrepancies between the Contract Documents and governing codes and regulations.
- B. Appropriate modifications to the Contract Documents will be made by Change Order to incorporate changes to Work resulting from code and/or regulatory requirements. Contractor assumes responsibility for Work contrary to such requirements if Work proceeds without notice.
- C. Contractor is not relieved from complying with requirements of Contract Documents which may exceed, but not conflict with requirements of governing codes.

1.03 COORDINATION WITH REGULATORY AGENCIES

- A. Coordinate Work with appropriate governing or regulating authorities and agencies.
- B. Provide advance notification to proper officials of Project schedule and schedule revisions throughout Project duration, in order to allow proper scheduling of inspection visits at proper stages of Work completion.
- C. Regulation coordination is in addition to inspections conducted by Engineer. Notify Engineer at least 48 hours in advance of scheduled inspections involving outside regulating officials, to allow Engineer to be present for inspections.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to referenced standards.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.
- C. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE:

- A. The Contractor shall perform such detailed examination, inspection, quality control and assurance of the Work as to ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a portion of Work proceed prior to preparatory work having been satisfactorily completed. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work and has notified the Contractor (who shall promptly notify the Port in writing) of any defects or imperfections in preparatory work that will, in any way, affect completion of the Work.

1.02 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Temporary utilities,
 - 2. Temporary telecommunications services,
 - 3. Temporary sanitary facilities,

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Existing facilities not be used.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization. It is the Contractor's responsibility to be able to receive phone calls and emails at the job site.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return facilities to same or better condition as originally found.

1.05 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to final inspection.
- B. Clean and repair damage caused by installation or use of temporary work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Parking
 - 2. Construction parking controls
 - 3. Maintenance

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ACCESS TO SITE

- A. Contractor shall conduct all business through the gate assigned by the Engineer.
 - 1. The Contractor shall have access to the construction site by Contractor's boat. Contractor may use Port of Tacoma's access float located at the Port of Tacoma Administration Building, 1 Sitcum Plaza, Tacoma, WA 98421 and park employee vehicles in the adjacent parking lot.
- B. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.
- C. Provide and maintain access to fire hydrants free of obstructions.

3.02 PARKING

- A. All Contractor's employee cars and other private vehicles will be parked outside the Port terminals. Parking is available at the Port of Tacoma Administration Building at 1 Sitcum Plaza, Tacoma, WA 98421.

3.03 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Port operations.
- B. Prevent parking on or adjacent to access roads or in non-designated areas.

3.04 MAINTENANCE

- A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.

END OF SECTION

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PART 1 – GENERAL

1.01 SUMMARY

- A. The Work shall consist of planning, installing, inspecting, maintaining and removing Temporary Erosion and Sediment Control (TESC) Best Management Practices (BMPs) to prevent pollution of air and water; and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
- B. The Contractor shall use a project-specific Construction Stormwater Pollution Prevention Plan ("SWPPP") to meet or exceed the control measures required by the Washington Department of Ecology (Ecology). The SWPPP describes the proposed construction activities and all Temporary and Permanent Erosion and Sediment Control (ESC) measures, pollution prevention measures, inspection/monitoring activities, and recordkeeping that will be implemented during the proposed construction project. The Contractor shall have an individual who is a Certified Erosion and Sediment Control Lead (CESCL) on site or immediately available while the NPDES permit is active.
 - 1. The SWPPP consists of planning, installing, inspecting, maintaining, and removing TESC BMPs in accordance with Volume II of the Stormwater Management Manual for Western Washington (current version). The BMPs are designed to prevent pollution of air and water, to control peak volumetric flow rates and velocity of stormwater, and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.
 - 2. The Contractor will be responsible for updating the SWPPP to reflect changes to BMPs, as needed, to comply with the Construction Stormwater General Permit at no additional cost to the Port.
- C. These TESC requirements shall apply to all areas associated with the Work, including but not limited to the following:
 - 1. Work areas;
 - 2. Equipment and material storage areas;
 - 3. Staging areas;
 - 4. Stockpiles; and
 - 5. All discharge points within or adjacent to the Work areas that receive stormwater runoff from the site.
- D. Acceptance of TESC plans shall not constitute an approval of permanent Work or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- E. Contractor shall read and conform to all requirements set forth in Washington Department of Ecology's (Ecology) NPDES General Permit for Discharges Associated with Construction Activities (CSGP).

1.02 REFERENCES

- A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:
 - 1. Washington Department of Ecology, "Stormwater Management Manual for Western Washington," current version.

2. Washington Department of Ecology NPDES General Permit for Discharges Associated with Construction Activities (CSGP), current version.
3. Washington State Department of Transportation, current version, Standard Specification M41-10, Division 8-01 Erosion Control and Water Pollution Control.
4. City of Tacoma, "Surface Water Management Manual," Tacoma Public Works, Environmental Services, current version.
5. Administrative Order #_XXXXX_, Department of Ecology, current version (if applicable).

1.03 SUBMITTALS

- A. Prior to the start of any construction activities, the Contractor shall submit a Construction Stormwater Pollution Prevention Plan (SWPPP), as required by the CSGP.
 1. Contractor must adopt and comply with either a Port project SWPPP, or provide an alternative project SWPPP.
 2. Contractor shall be responsible for updating the project SWPPP during construction to reflect the required changes to BMPs and personnel, as needed, to comply with the CSGP at no additional cost to the Port.
- B. Safety Data Sheet (SDS) for any dust palliative product.
- C. A copy of all Contractor site inspection logs and monthly Discharge Monitoring Reports (DMRs).
- D. The name and contact number of the Certified Erosion and Sediment Control Lead (CESCL).

1.04 AUTHORITY OF ENGINEER

- A. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations, based on observed Site conditions; and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize impacts to adjacent streams or other watercourses, lakes, ponds, and other areas of water impoundment.
- B. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the Contractor rectifies the situation.

PART 2 – PRODUCTS

2.01 DUST CONTROL

- A. Dust palliative for dust control proposed by the Contractor and approved by the Engineer.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Port is subject to a NPDES General Permit for Discharges Associated with Construction Activities (CSGP). The permit shall be transferred to the Contractor prior to ground disturbing activities. The Contractor shall be the responsible Operator and Permittee for the duration of the project.
- B. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply as determined by the Engineer.
- C. No project discharge of water shall be allowed that causes or contributes to an exceedance of regulated pollutant levels in Ecology's NPDES permit associated with the Project .

- D. Contractor shall be solely responsible for all BMP modifications and upgrades to comply with the CSGP and the requirements of this Section, at no additional cost to the Port.
- E. Contractor shall be solely responsible for any damages and fines incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.
- F. The Contractor shall be solely responsible for schedule impacts incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL DEVELOPMENT

- A. The Contractor is responsible for developing the TESC BMPs and incorporating them into the SWPPP. The Contractor shall address the following issues as part of developing and implementing the BMPs.
 - 1. The TESC notes and details shown in the Drawings and the information in this Section of these Specifications are minimum requirements for the anticipated site conditions during the construction period. During the construction period the Contractor shall, at no additional cost to the Port, upgrade the TESC measures as needed for unexpected storm events and modify these measures for changing site conditions (such as relocation of ditches and silt fences, etc.) and update the SWPPP to document the modifications made.
 - 2. The Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning during the construction period. The Contractor will keep written records on site of inspections on a weekly basis during the wet season (October 1 through April 30) and on a monthly basis during the dry season (May 1 through September 30). The Contractor shall provide the Port with copies of the TESC inspections, as stated in Section 1.03 above.
 - 3. Any areas needing TESC measures not requiring immediate attention shall be addressed by the Contractor at the Port's discretion.
 - 4. The TESC measures in an inactive site shall be inspected and maintained by the Contractor at a frequency described in the Project Construction Stormwater NPDES General Permit.
 - 5. The Contractor shall be responsible for implementing the SWPPP and shall modify the SWPPP as required to reflect on-site activities and personnel.
- B. Contractor shall develop project-specific TESC BMPs and incorporate them into the SWPPP.
 - 1. The SWPPP shall comply with the requirements in Ecology's Volume II of the Stormwater Management Manual for Western Washington (current version) or equivalent.
 - 2. TESC notes and details shown in the Drawings and the information in this Section form a basis of the minimum requirements for a TESC Plan. Contractor shall develop a TESC Plan specific to the construction schedule and proposed means and methods prior to commencing construction activities for the duration of the Project.
- C. Contractor shall inspect the existing system and report to the Engineer the levels of existing material prior to installation of TESC BMPs.

3.03 TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION

- A. Contractor is responsible for implementing and updating the SWPPP including TESC BMPs.
 - 1. Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning for the duration of the Project.

2. Contractor will be responsible for documenting TESC site inspections on a weekly basis in areas of active construction and on a monthly basis in areas that have undergone stabilization. Contractor shall keep records of the inspections on site.
 3. During the construction period the Contractor shall, at no additional cost to the Port, upgrade and/or maintain TESC measures as needed, based on Contractor means and methods, work sequencing, and changing site conditions (e.g., changes to impervious surface coverage, proximity of work to storm conveyance systems, storm events, etc.). Contractor shall modify these measures for changing site conditions and update the SWPPP to document all modifications made.
- B. Contractor shall clean all stormwater components affected by construction debris prior to Work completion, per TESC BMPs for catch basin maintenance. The cleaning process shall not flush sediment-laden water into a downstream system.
 - C. Contractor shall ensure that water, or a dust palliative and a dispensing subcontractor, if needed, is available for project use. It is the responsibility of the Contractor to develop and adhere to appropriate safety measures pertaining to the palliative use. This also includes ensuring the dispensing subcontractor develops and adheres to the appropriate safety measures, if a dispensing subcontractor is used. Water used for dust suppression shall not be applied at such a rate or in a location that it will generate runoff from the site.
 - D. Areas of exposed soils, including embankments, which will not be disturbed for two days during the wet season (October 1 through April 30) or seven days during the dry season (May 1 through September 30), shall immediately be stabilized by the Contractor with an Ecology-approved TESC measure (e.g., seeding, mulching, plastic covering, etc.).
 - E. TESC measures in an inactive area shall be inspected and maintained by the Contractor until the area is permanently stabilized.
 - F. In the event that additional temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the Work as scheduled or as ordered by the Engineer, such work shall be performed by the Contractor at its own expense.
 - G. Contractor shall remove all TESC facilities, install permanent site surfacing improvements and permanent BMPs with minimal disturbance, and shall clean stormwater facilities prior to Work completion.
 - H. Contractor shall submit a Notice of Termination ("NOT") and terminate coverage under the CSGP upon final stabilization of the Site; in accordance with permit requirements.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes requirements relating to the following:
 - 1. Examination, preparation, and general installation procedures

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work.
Start of work means acceptance of existing conditions.
- B. Examine and verify specific conditions described in individual specification sections.

3.02 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes field engineering and land surveying services by Contractor.

1.02 DESCRIPTION OF WORK

- A. This section describes the general requirements for bathymetric site surveying including; pre-dredge and post-dredge surveys; and establishing and maintaining the design lines and grades shown on the Contract Documents. In addition, the work includes requirements for record keeping, keeping as-built records, and submittals.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. General submittals required for this Contract include:

1. Name, address, telephone number, and statement of qualifications of Hydrographic Surveyor before starting survey work. This surveyor shall be responsible for stamping and signing all work as noted below.
2. On request, field notes and documentation verifying accuracy of survey work, to include cross sections of progress surveys by the Contractor.
3. Project survey data shall be stored as electronic files formatted as a) DWG; b) PDF and printed to bond paper. At a minimum, data for each survey point shall include a sequential reference number, the elevation, and appropriate northing and easting coordinates.
4. Field notes, Drawings, quantity computations, and point data for each survey shall be submitted to the Engineer.

- B. Pre- and Post-Dredge Surveys

1. Dredging surveys include all pre- and post-dredge surveys noted in Section 35 20 23 - Dredging
2. At a minimum dredge survey submittals shall consist of the following:
 - a. A hardcopy drawing showing spot elevations for the area surveyed. The scale for the plan drawing shall be 1 inch = 50 feet.
 - b. A hardcopy plan drawing showing elevation contours (in color) for the area surveyed. The scale of the plan drawing shall be 1 inch = 50 feet.
 - c. Digital survey data in AutoCAD.dwg format along with an ASCII file including point number, Northing, Easting, and Depth with comma delimiters. Depth shall be relative to MLLW = 0.00 and shall be recorded as negative if recorded below MLLW.

- C. Post-Construction Surveying

1. The Contractor shall perform a post-construction bathymetric survey of the entire project site showing all constructed features. This survey shall include the final bathymetric finished elevation and grade line for the post dredge berthing areas.
2. The finished site plan drawing shall be at a scale of 1 inch equals 50 feet and a contour interval of 1 foot.

1.05 QUALITY ASSURANCE

- A. It is the responsibility of the Contractor to schedule Contractor's survey and to verify that it has met the Contract requirements prior to proceeding to the next sequence of work. The Port shall review and approve each survey or survey increment. The Contractor shall allow up to three (3) business days for Port review. Surveys of the project shall be surveyed using the same vertical datum and horizontal coordinate system as shown on the Contract Drawings.
- B. Hydrographic surveying shall be performed by a NSPS-THSOA Certified Hydrographer with a minimum of 5 years of documented experience with hydrographic survey data collection and processing. The hydrographic surveyor shall be familiar with US Army Corps of Engineers Hydrographic Survey Standards as documented in ACOE EM-1110-2-1003 – Hydrographic Surveying, shall be experienced in dredging and marine work, and shall be familiar with the use (and quality control of) all applicable electronic survey instruments proposed for use on this project. The hydrographic surveyor shall also be knowledgeable of the requirements for hydrographic survey data processing and the specific deliverables to the Port related to the analysis of the survey results, including, but not limited to: color contour plots, cross section development, detailed dredge volume reports, and surface (TIN) creation. The hydrographic surveyor statement of qualifications shall be submitted to the Port for approval in the Dredging and Disposal Work Plan (DDWP) described in Section 35 20 23 – Dredging.
- C. The Port reserves the right to retain an independent surveyor to periodically check the Contractor's survey. Surveying performed by the Port will be at no cost to the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PROCEDURES

- A. Contractor survey procedures (positioning modes, equipment calibration, and data reduction, adjustment, processing, and plotting) shall conform to industry standards.
- B. Failure to perform and process such surveys in accordance with recognized standards will result in a rejection and nonpayment for work performed.
- C. All systems, methods, and procedures shall be subject to the Engineer's approval.

3.02 DREDGING SURVEYS

- A. For Progress and Pre- and Post-Dredge Surveys, refer to Section 35 20 23 - Dredging for execution requirements.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes information for progress and final cleaning and restoration of damaged work prior to final inspection.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PROGRESS CLEAN-UP

- A. The Contractor shall clean the project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with all requirements for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials for the type of material to be stored.
- B. Site: Maintain Project site free from waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the work.
- D. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 - Construction Waste Management and Disposal.

3.02 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - c. Leave Project clean and ready for occupancy.

END OF SECTION

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PART 1 GENERAL

1.01 SUMMARY

- A. This section includes construction waste management requirements.
- B. This section will only be needed if debris is collected during dredging activities.

1.02 DEFINITIONS

- A. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types at an off-site facility.
- B. Construction, Demolition and Land-Clearing (CDL) Waste: Includes all nonhazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage. This also includes uncontaminated soils that are designated as geotechnically unsuitable or excess excavation.
- C. Hazardous/Dangerous Waste: As defined by Chapter 70.105.010 Revised Code of Washington and 40 Code of Federal Register 261 and by Washington Administrative Code 173-303.
- D. Proper Disposal: As defined by the jurisdiction receiving the waste.
- E. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- F. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on-site (as in the grinding of concrete).
- G. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- H. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.
- I. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- J. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
- K. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, contamination on site.
- L. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
- M. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.

1.03 SUBMITTALS

- A. Waste Management Plan
- B. Waste Management Final Report

1.04 PERFORMANCE GOALS

- A. General: Divert CDL waste to the maximum extent practicable from the landfill by one or a combination of the following activities:
 - 1. Salvage
 - 2. Reuse
 - 3. Source separated CDL recycling
 - 4. Co-mingled CDL recycling
- B. CDL waste materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
 - 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 - 2. Asphalt
 - 3. Concrete and concrete masonry units
 - 4. Ferrous and non-ferrous metals
 - 5. Field office waste paper, aluminum cans, glass, plastic, and cardboard
- C. Hazardous/Dangerous Wastes, contaminated soils and other hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts shall be disposed of at applicable permitted facilities.

1.05 WASTE MANAGEMENT PLAN

- A. Submit to the Engineer a Waste Management Plan narrative in accordance with these specifications. Provide a Waste Management Plan in a format as approved by the Engineer.
- B. The Waste Management Plan shall include the following:
 - 1. Name of designated Recycling Coordinator;
 - 2. A list of waste materials that will be salvaged for resale, salvaged for reuse, recycled, and disposed;
 - 3. Identify waste handling methods to be used, including one or more of the following:
 - a. Method 1 - Contractor or subcontractor(s) hauls recyclable materials to an approved recycling facility,
 - b. Method 2 - Contracting with diversion/recycling hauler to haul recyclable material to an approved recycling or material recovery facility,
 - c. Method 3 - Recyclable material reuse on-site, and
 - d. Method 4- Recyclable material salvage for resale;
 - 4. Identification of each recycling or material recovery facility to be utilized, including name, address and types of materials being recycled at each facility;
 - 5. Description of the method to be employed in collecting, and handling, waste materials; and
 - 6. Description of methods to communicate Waste Management Plan to personnel and subcontractors.

1.06 WASTE MANAGEMENT FINAL REPORT

- A. Provide a Waste Management Final Report, in a format approved by the Engineer. The Waste Management Final Report shall list the following for the project:
 - 1. A record of each waste material type and quantity recycled, reused, salvaged, or disposed from the Project. Include total quantity of waste material removed from the site and hauled to a landfill.
 - 2. Percentage of total waste material generated that was recycled, reused, or salvaged.
- B. Quantities shall be reported by weight (tons) unless otherwise approved by the Engineer.
- C. Submit copies of manifests, weight tickets, recycling/disposal receipts or invoices, which validate the calculations or a signed certification of completeness and accuracy of the final quantities reported.

1.07 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws that apply to Construction Waste Management and material salvage, reuse, recycling and disposal.
- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SOURCE-SEPARATED CDL RECYCLING

- A. Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.02 CO-MINGLED CDL RECYCLING

- A. Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.03 LANDFILL

- A. Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.

3.04 REMOVAL OF CDL WASTE FROM PROJECT SITE

- A. Transport CDL waste off Port's property and legally dispose of them.

END OF SECTION

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PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures
 - 2. Final completion procedures
 - 3. As-Built Drawings

1.02 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

1.03 PROJECT SUBMITTALS

- A. Record Drawings
 - 1. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:
 - 1. Submit closeout submittals specified in individual Sections, including specific warranties, operation and maintenance manuals, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request:
 - 1. Terminate and remove temporary facilities from Project site
 - 2. Complete final cleaning requirements
- D. Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to the date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Notice of Substantial Completion after inspection or will notify Contractor of items, either on the Contractor's list or additional items identified by the Engineer, that must be completed or corrected before notice will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for final completion.

1.05 PUNCH LIST (LIST OF INCOMPLETE ITEMS)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of Construction.
 - 1. Organize list of spaces in sequential order.
 - 2. Organize items applying to each space by major elements.

1.06 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete and submit the following:
 - 1. Submittal of all remaining items, including as-built documents, final completion construction photographic documentation, damage or settlement surveys, surveys, and similar final record information and all other submittals defined in the Contract Documents.
 - 2. List of Incomplete Items: Submit copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List). Copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be complete and ready for final inspection and tests. On receipt of request, the Engineer will either proceed with inspection or notify contractor of unfulfilled requirements.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- C. Execution of all Change Orders.

1.07 FINAL ACCEPTANCE PROCEDURES

- A. Submittals Prior to Final Acceptance:
 - 1. Receipt and approval of application for final payment; due within seven (7) days of receipt of Final Completion by the Engineer;
 - 2. Contractor's signed waiver and release of claims on the Engineer provided form;
 - 3. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form; and
 - 4. Contractor's submittal of a list of all subcontractors and suppliers requiring Affidavits of Wages paid on the Contract and certify that each of companies will submit an approved Affidavit of Wages paid to the Port within 30 days.
- B. The Engineer will issue the Final Acceptance Memo upon receipt of the required submittals.

PART 2 - PRODUCTS

2.01 AS-BUILT DRAWINGS

- A. Project As-Built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
- B. Project As-Built Drawings shall be compiled by the Contractor and submitted to the Engineer for translation to the Record Drawings on a monthly basis.
 - 1. The Project As-Built Drawings will be submitted on paper full-sized (ANSI D) copy.

2. Drawings shall be kept current and shall be done at the time the material and equipment is installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:
 - a. Additions – Red
 - b. Deletions – Green
 - c. Comments – Blue
 - d. Dimensions – Graphite
3. Project As-Built Drawings must be complete and accepted by the Engineer before Final Completion is issued.
4. As-Built Drawings shall be in accordance with horizontal and vertical control as shown on the drawings.

PART 3 – EXECUTION

3.01 MAINTENANCE OF AS-BUILT DRAWINGS

- A. The Contractor shall maintain at the Project site, in good order for ready reference by the Engineer, one complete copy of the Contract Documents, including Addenda, Change Orders, other documents issued by the Port, a current Progress Schedule, and approved Submittals. The Contractor shall also generate and keep on site all documents and reports required by applicable permits.
- B. The Contractor's As-Built Drawings shall be updated to record all changes made during construction. The location of all existing or new underground piping, valves and utilities, and obstructions located during the Work shall be appropriately marked until the Contractor incorporates the actual field dimensions and coordinates into the as-built drawings. The as-built drawings shall be updated at least weekly and before elements of the Work are covered or hidden from view. After the completion of the Work, the as-built drawings shall be provided to the Port.

END OF SECTION

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PART 3 - EXECUTION - NOT USED

END OF SECTION

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PART 1 GENERAL

1.01 REFERENCES

REFER TO THE APPENDICES FOR THE REFERENCES EXCEPT FOR REFERENCE TO THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM).

- A. Water Quality Monitoring and Protection Plan (WQMPP)
- B. Water Quality Certification
- C. Sediment Analytical Results

1.02 DESCRIPTION OF WORK

- A. This Section describes the general requirements for maintenance dredging, transportation of dredge sediments to an open-water disposal site, and disposal of dredge debris.
- B. Dredging work includes completing the required maintenance dredging of sediments from within the berthing area at the Washington United Terminal (WUT) and Piers 3 & 4 (Husky Terminal) as shown on the drawings.
- C. Dredge sediments at WUT and Husky Terminal are considered suitable for open-water disposal.
 - 1. Work under this Section includes furnishing all labor, materials, tools, equipment, and incidentals required for mechanical dredging, in-water transportation, in-water disposal, and haul barge transloading of debris as described in these Specifications and in the Drawings. Perform the dredging work using mechanical dredging methods to the required elevations and grades shown in the Drawings. Transport and dispose of dredged material from the WUT and Husky Terminal at the open-water dredged material disposal site.
- D. Suitable material shall be taken to the Dredge Material Management Program (DMMP) Commencement Bay Open-water Dredged Material disposal site. All material destined for a DMMP disposal site shall be transported by bottom-dump barge to the DMMP disposal site as shown on the Drawings. A debris grid with a maximum opening size of 12 inches by 12 inches must be used to remove debris from the suitable material that will be placed at the in-water disposal site.
- E. Material in transit must be fully contained by four walls. The use of sandbags or other modifications to barges or scows to fully contain material is not permitted.
- F. Dredging: The required dredge elevations are shown on the Drawings. Final dredge elevations shall be no higher than those shown on the Drawings. The maximum allowable overdredge is 2 feet. The payable overdredge depth (depth below Design Dredge shown on Drawings) is 1 foot.

1.03 DEFINITIONS

- A. Debris: Any solid waste materials other than dredged material excavated as part of the dredging operations, such as logs, wire, cable, steel bands, anchors, lumber, trash, timber piles, riprap, concrete, etc. Any dredged materials that do not pass through a grid opening 12-inch by 12-inch square are also considered debris and shall not be disposed of at the DMMP disposal site. Debris shall be disposed at a Port-approved upland landfill facility and in accordance with applicable local, state, and/or federal regulations.
- B. Required Dredging: Removal of material, including associated side slopes, to the minimum elevation within the dredge area as shown on the Drawings.

- C. Payable Overdredge Depth: Dredging up to 1 foot below the depth of Required Dredging will be paid. Payment will not be made for removal of material deeper than 1 foot below the depth of Required Dredging.
 - 1. Excessive Dredging: Dredging of material outside of the dredge limits and/or deeper than the maximum allowable overdredge depth is considered Excessive Dredging. Excessive Dredging shall be repaired by the Contractor at no cost to the Port. No payment shall be made for removal, management, transportation, or disposal of Excessive Dredging and Contractor will be responsible for any required corrective action as a result of Excessive Dredging, including, but not limited to, replacing materials or slope stabilization and fines or penalties that may be levied by regulatory agencies due to excessive dredging.
- D. Slough Area: The area outside the footprint of the dredge area that may slough into the footprint of the dredge area following dredging. The Contractor shall assume this slough area to be a slope as shown on the Drawings. Material sloughed into the dredge prism area from the side slopes shall be removed by the Contractor up to the time of completion and prior to conducting the post-dredge survey to achieve the minimum elevations of the Required Dredging.
- E. Suitable Material: Material deemed "suitable" is dredged material that has been characterized and has received a suitability determination from the DMMP, which authorizes its disposal at a DMMP open-water disposal site.
 - 1. Unsuitable Material: Material deemed "unsuitable" is dredged material that may not be disposed of at any DMMP open-water site. Unsuitable material as it applies to this project must be disposed of at a Port-approved upland landfill facility in accordance with applicable local, state, and/or federal regulations.

1.04 PRE-CONSTRUCTION SUBMITTALS

A. Dredging and Disposal Work Plan (DDWP):

Submit a detailed written Dredging and Disposal Work Plan (DDWP) to address activities associated with dredging, transport, and disposal of sediments. The plan must be submitted to the Port at least two weeks prior to proposed commencement of dredging at the project site. Dredging shall not begin until: (1) the Work Plan has been reviewed and approved by the Port and applicable regulatory agencies; (2) agency-required notifications have been completed in accordance with the permits; and (3) the Contractor schedules and attends a pre-dredge conference with the Port, U.S. Army Corps of Engineers (USACE), and other permitting agencies as required by the permits and receives agency approval to begin dredging as a result of that conference. The Work Plan must be submitted to the USACE at least two weeks prior to the pre-dredge conference. At a minimum, the DDWP shall contain the following:

- 1. Work Sequence and Equipment
 - a. Equipment identification, including the number, types (and names if applicable), and capacity of equipment to be used including: dredges, tugboats, workboats, water treatment barge (if used), haul barges, other marine vessels.
 - b. Work sequence: prepare a construction schedule that identifies the timing and sequencing of the major activities and milestones of dredge work. Include, but not be limited to, dredge phasing, timing and sequencing for mobilization, start of dredging, completion of dredging, in-water transportation duration, and completion of demobilization activities.
 - c. Hours of operation.
 - d. Methods for coordination with Port tenants throughout completion of the work.

2. Methods, procedures, and controls to protect existing Port, utilities, and other facilities against damage.
3. Positioning and Surveys
 - a. Layout of the work and positioning of dredge equipment.
 - b. A survey plan and equipment description. Once approved, the same method shall be used for all subsequent surveys.
4. Means and methods for completion of Required Dredging, in-water transportation, dredge material management and processing, and disposal activities:
 - a. Methods, procedures, and equipment to be used for all Required Dredging activities.
 - b. Procedures and equipment for collecting and disposing of submerged and floating debris encountered during dredging and other over-water activities.
 - c. In-water transport route to Commencement Bay Open-Water Dredged Material Disposal Site for material suitable for open water disposal.
 - d. Methods, procedures, and equipment to be used for anchoring floating equipment.
 - e. Methods, procedures, and equipment to be used to provide lights, lighted buoys, or other required markings to warn other vessels of presence of floating equipment and anchoring lines.
 - f. Notification and procedures to be used for moving dredging equipment to accommodate inbound and outbound commercial vessel traffic using the surrounding waterway. The operations of commercial business shall have precedence over related bid items of work in accordance with Section 01 14 00 – Work Restrictions.
 - g. Methods, procedures, and equipment to be used for all barge dewatering activities of dredge sediment and dredge debris as necessary.
 - h. If a turbidity curtain is proposed to be used, provide the type and make of the turbidity curtain system, including the turbidity curtain layout, dimensions and how the system will operate. Include the turbidity curtain anchoring plan and how the turbidity curtain will be attached to the pier structures. Include methods and procedures for inspection, maintenance, and repair of turbidity curtain system during construction.
 - i. Methods, procedures, and equipment to be used for in-water transportation of dredge material to open-water disposal site. Include procedures for preventing release of sediment and water during transportation. Include drawings that show the proposed concept for providing watertight containment of all dredged material in route from the Work Site to the disposal site.
 - j. Methods, procedures, and equipment to be used for in-water transportation of dredge debris to a transload facility for disposal at a Port-approved upland landfill facility. Include procedures for preventing release of sediment and water during transportation. Include drawings that show the proposed concept for providing watertight containment of all debris material in route from the Work Site to the disposal site.
 - k. Upland landfill facility proposed for disposal of dredge debris.
 - l. Copies of current scale certification documentation from the disposal facility.
5. Best Management Practices, Environmental Monitoring, and Spill Containment:

- a. The work shall meet the requirements and procedures specified in the WQMPP. Provide written acknowledgement of understanding of all requirements and procedures contained in these documents with respect to water quality monitoring, best management practices (BMPs), and notification procedures associated with dredge operations.
 - b. BMPs proposed by the Contractor during dredging, barge dewatering, in-water transportation of dredge sediment and dredge debris. Provide in addition to the BMPs listed in these Specifications.
 - c. Environmental monitoring, including procedures for emergency spill containment and removal operations.
 - d. Proposed methods and procedures for monitoring water quality in strict compliance with the WQMPP.
 - e. The means, methods, and procedures that will be used to prevent water quality requirement exceedances, and what contingency actions will be taken to restore compliance with water quality requirements should water quality exceedances occur during completion of dredging, barge dewatering, and in-water transportation activities.
 - f. The personnel and equipment that will be used to monitor water quality during the course of the work.
6. Contractor Quality Control: Organization chart with key personnel and supervisory chain. At a minimum, identify the following key personnel: superintendent, quality assurance representative, health and safety representative, dredge operator(s), water quality monitoring lead (or the firm hired to conduct monitoring), hydrographic survey lead (or the firm hired to perform daily progress surveys), and other key personnel deemed necessary for the successful implementation and completion of the work.
7. Water Quality Protection, Monitoring, and Notifications Procedures
- a. The Contractor shall be subject to the requirements and procedures specified in the WQMPP, Water Quality Certification, and the DMMP Suitability Determination. Provide written acknowledgement of understanding of all requirements and procedures contained in these documents with respect to water quality monitoring, BMPs, debris management, and notification procedures associated with dredge operations. Written acknowledgement shall be provided in the form of a signed letter from the Contractor to the Port of Tacoma as well as Attachment A to the Water Quality Certification signed by all Contractor personnel with the ability to control work.
 - b. Proposed methods and procedures for monitoring water quality in strict compliance with WQMPP.
 - c. The personnel and equipment that will be used to monitor water quality during the project.
 - d. Contingency measures to be implemented if water quality violations occur.

1.05 CONSTRUCTION SUBMITTALS

- A. Submit copies of all surveys in CAD format and as specified in 01 71 23 Field Engineering and Survey.

- B. Daily Report: keep a daily record of equipment used; description of activity as identified by dredge area and coordinates; quantity of sediments dredged that day and to date (reported in cubic yards and tonnage); the estimated quantity of dredge debris transported to the transload facility (based on in-situ cubic yards and tonnage); any downtime and delays to the operation; cause of any downtime and delays; health and safety performance; results from water quality monitoring, daily progress survey, and a summary of other details of the work. The report shall include the results of all inspections, surveys and monitoring activities and shall be signed by the Contractor's dredging superintendent or quality control manager. This daily record shall be submitted to the Port with a transmittal letter the morning following completion of work on the date of the Daily Report.
- C. Weekly Report: summarize the week's work in a weekly report submitted to the Port the following Monday morning. Identify work completed to date, anticipated work to be completed in the present week, results from water quality monitoring, and include the latest Progress Survey.
- D. Closure Report: prepare a closure report that summarizes all the weekly reports and identifies Contractors' estimates of dredge volume, dredge volume disposed at the DMMP site, dredge debris volume and tonnage disposed at the upland landfill facility, water quality monitoring, and bucket map for dredging.
- E. DNR Disposal Site Use Report
- F. DNR Monthly Disposal Statement
- G. Water Quality Monitoring Test Results

1.06 JOB CONDITIONS

- A. Subsurface investigation reports and descriptions of the sediment to be dredged are available as reference documents as noted in 00 31 00 Available Project Information.
- B. The Contractor shall anticipate inherent delays while conducting dredging and disposal operations in Commencement Bay. Inherent delays are primarily due to commercial shipping traffic within the shipping channel and terminal operations. Commercial shipping traffic shall have precedence over the Contractor's activities and may require them to stop, move, adjust, and/or slow down to accommodate vessel movement. The Contractor shall make allowance in its construction schedule for delays or interruptions due to vessel movement within the shipping channel in the waterway. The bid prices shall include allowances for such inherent delays.
- C. The Contractor shall satisfy itself regarding the nature of materials present at the site prior to bidding. The type of materials encountered at the site may vary from the conditions described in the appendices and reference drawings. Variations in the type of materials encountered may occur that differ materially from those indicated in these Specifications, and if encountered, will not be considered as basis for claims due to differing Work Site conditions.
- D. Any damage to the existing WUT or Husky Terminal wharf structure, fender systems, or other over-water structures at the Port and/or other existing facilities caused by the Contractor's operations or neglect, shall immediately be repaired to the pre-project condition at no cost to the Port.
 - 1. Condition Survey of Existing Structures: The Contractor and Port shall review and verify the condition of adjacent structures and appurtenances adjacent to the work areas prior to beginning work to ascertain existing conditions. Any damage documented as a result of the Contractor's activities will be repaired at no additional cost to the Port.
- E. The Port's tenants shall have access along the Work Site and to the portion(s) of the marine facilities not being worked on for the duration of the construction contract. Conduct operations in a manner that will minimize interference with those activities.

- F. The Blair Waterway and Commencement Bay are active navigation corridors used for transport of deep draft commerce activities. These activities shall take priority over the Contractor's operations. The Port's tenants and other entities using the waterway must have access along the project site for the duration of the construction contract. The Contractor shall conduct its operations in a manner that will minimize interference with those activities. In the event the Contractor's construction equipment (dredge, dump scows, tug, barges, workboats, anchors, lines, etc.) obstructs a navigable waterway so as to hinder movement of commercial vessels, the equipment shall immediately be moved to facilitate the shipping activity. Any damage to the Contractor's equipment in navigation lanes due to the Contractor's failure to move when required shall be at the Contractor's sole risk and expense.
- G. Security Concerns: For security and vessel navigation concerns, the Contractor shall give notice and receive required approval from the Port prior to berthing at any location along the Blair Waterway. The Contractor shall notify the U.S. Coast Guard (USCG) as required to comply with USCG and Port regulations for operating within the Blair Waterway and Commencement Bay.

1.07 MISPLACED MATERIAL

- A. Promptly recover and remove any material, barge, machinery, equipment, or appliance that is lost, dumped, thrown overboard, sunk, or misplaced during the execution of the work. Immediately notify the Port verbally, followed by written confirmation, of the description and location of such obstructions and mark and buoy such obstructions until they are removed. Should the Contractor refuse, neglect, or delay compliance with this requirement, such obstructions may be removed by the Port or its agents, and the cost of such operations may be deducted from any money due to the Contractor or may be recovered from the Contractor's bond. The liability of the Contractor for the removal of a vessel wrecked or sunk without his fault or negligence shall be limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of 3 March 1899 (33 U.S.C. 410 et seq.).
- B. The Contractor shall be responsible for any fees, fines, penalties or other costs resulting from misplaced materials. The Contractor shall also be responsible for removing accumulated spilled dredged materials in the waterway even if the material is located beyond the project dredging limits. Contractor shall notify the Port and coordinate with the Port and Agencies before spilled material can be removed.

1.08 DREDGING AND DISPOSAL REGULATORY COMPLIANCE

- A. Permits and Compliance. The Contractor shall be responsible to adhere and conform to all applicable provisions, conditions, and requirements of the permits:
 - 1. Permits that include conditions for dredging are provided in the appendices of these specifications.
 - 2. The Port will notify various regulatory agencies prior to commencing dredging, as required by the project permits. These notifications typically include the USACE, Washington State Department of Natural Resources (DNR), Washington State Department of Ecology, and Washington Department of Fish and Wildlife. Notification requirements are shown in the permits appended to these specifications.
 - 3. The Port will obtain DNR Disposal Site Use Authorization to Utilize Open Water Disposal Site prior to the start of construction:
 - a. Upon execution of this contract, the Port will endorse the DNR "Open Water Disposal Site Use Authorization" permit as "Grantee."

- b. Operational requirements prohibit discharge operations at the DMMP sites from dusk to dawn on weekdays, weekends, and holidays. Any proposed nighttime disposal operations must be coordinated with and approved by the USACE's Enforcement Section, Regulatory Branch, Port, and the Puyallup Tribe of Indians.

The Contractor is responsible for requesting approval for nighttime disposal operations from the USACE. Nighttime disposal shall not commence until written approval from the USACE is obtained.

- c. Within 10 days of the commencement date, as noted in the "Notice to Proceed," the Contractor shall complete the DNR "Plan of Operation for Use of Open Water Disposal Site" certification form and submit to:

Washington State Department of Natural Resources
Aquatic Resources Division
DMMP Coordinator
P.O. Box 47027
Olympia, WA 98504

- d. The Contractor shall comply with all DNR disposal regulations and reporting requirements, including, but not limited to, the following:
 - 1) The Contractor shall become familiar with and adhere to DNR disposal site discharge procedures and reporting requirements.
 - 2) The Contractor shall verify and record the barge location prior to each discharge, including the horizontal distance from the center of the disposal site. A positioning device must be located on the dump barge if the barge is towed to the dump site so the barge position can be determined at the time of dumping.
 - 3) The Contractor shall complete "Disposal Site Use Reports and monthly summaries" as required by DNR.
 - 4) The DNR reporting week begins on Monday and ends the following Sunday. Site Use Report forms must be filled out in their entirety and submitted to the Port by noon on Monday of the week following the week being reported.
 - 5) Monthly Reporting Summary forms must be completely filled out and submitted to the Port with a transmittal letter, no later than the nineteenth day of the month following the month being reported.
 - 6) Failure to provide forms in accordance with the above schedule may result in suspension or termination of the Site Use Authorization. The Contractor will be held responsible and liable for any damages, penalties, and/or delay costs incurred by the Port as a result of suspension or termination of the Site Use Authorization.
 - 7) The Contractor shall provide the Port with the originals of all disposal site use reports and forms to be submitted to DNR.
- e. The Port will pay directly to DNR all fees associated with the disposal of dredged material. The Contractor shall pay for any penalty or damage fees imposed by DNR for material dumped off site or other unauthorized disposal operations.

- B. Any conflicts between these contract specifications and issued permits will be brought to the attention of the Port. Nothing whatsoever shall be deemed to authorize violation of project permits.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 GENERAL

- A. Mechanically dredge sediment to the required elevations and grades as indicated on the Drawings during the in-water work period described in the project permits. Final dredge elevations shall be no higher than those shown on the Drawings. The maximum payable overdredge depth is indicated on the Drawings.
- B. The limits of dredging are shown in the Drawings.
- C. The Contractor shall use all available means to prevent material from reentering the water once it has been dredged and shall be responsible for dredging any deposition of material outside of the dredge area that occurs from spillage during dredging as determined based on pre- and post-construction surveys.
- D. Perform a pre-construction dredge survey prior to the start of any dredging operations.
- E. Transport all dredged materials from WUT and Husky Terminal maintenance dredge to the Commencement Bay Open-Water Dredged Material Disposal Site for open water disposal.

3.02 SURVEYS

- A. Sediment Dredge Positioning System
 - 1. Dredge equipment shall be equipped with sensors and related instrumentation to measure and display the real-time depth and horizontal position of the dredge bucket using differential global positioning system (DGPS) with dredge bucket logging capabilities (WINOPS software or equivalent). Use reliable and accurate DGPS equipment and an automated tide gauge, calibrated to the horizontal and vertical datums identified in Section 01 71 23 – Field Engineering and/or on the Drawings, to accurately determine the horizontal and vertical position of the dredge bucket. Depths shall be corrected for tidal conditions at the time of the survey. Dredge depth vertical control shall be accurate to at least ± 6 inches. Accuracy of dredge position for horizontal control shall be within ± 3 feet.
- B. Pre-Dredge and Post-Dredge Surveys
 - 1. Pre- and post-dredge surveys shall be referenced to existing horizontal and vertical survey control monuments and survey control baselines used during project design. See Section 01 71 23 – Field Engineering for trackline and sounding spacing requirements. Pre-dredge survey and final post-dredge survey (performed after completion of all required dredging) shall extend to a minimum of 50 feet waterward of the permitted dredge boundary and 50 feet beyond all other dredge limits.
 - 2. Pre-Dredge Survey: The pre-dredge survey shall be performed within two weeks of beginning the dredging operations. This pre-dredge survey will be the basis for payment quantities. The survey shall be provided to the Port seven business days prior to the start of dredging. The survey must be approved prior to the start of dredging activities.

3. Final Post-Dredge Survey: Upon completion of dredging to final grades, a post-dredge survey shall be performed. The survey shall be provided to the Contractor for their review. The Port will review the final post-dredge survey to determine whether all dredging has been satisfactorily completed and for payment purposes. If all of the required dredging has not been satisfactorily completed, as determined by the Engineer, the Contractor shall correct the deficiencies indicated in the survey and the area(s) will be rechecked by the Engineer. The cost for Contractor resurvey will not be paid by the Port and will be performed at the Contractor's own cost. Each additional post-dredge survey must be reviewed and approved by the Port prior to final acceptance of the work.
4. The Pre- and Post-Dredge surveys performed by an independent third-party surveyor will be used as the basis for determining final pay volumes and acceptance of the work. Calculate final pay volumes digital terrain modeling methods to generate pre- and post-construction surfaces, computing pay volumes to the nearest cubic yard. Provide a copy of the surveys and the quantity calculations to the Port for review and approval. These as-built surveys shall be conducted under the direct supervision of a licensed professional surveyor in the state of Washington or Congress on Surveying and Mapping (ACSM) certified hydrographer experienced in the use of multibeam survey equipment. The purpose of these surveys is to document the as-built bathymetry of areas dredged.

C. Dredge Progress Surveys

1. For progress dredge surveys, the Contractor shall compute quantities to the nearest cubic yard based on the progress sounding lines surveyed, the pre-dredge survey, and the dredging section indicated on the Contract Drawings. Barge displacement data may also be used along with the survey data to calculate progress pay quantities. Tabular summaries shall be submitted to show required elevation, allowable overdepth, and total dredging quantities both incremental and cumulative per 25-foot stations.
2. Survey results may be used to adjust dredging procedures to assure that the configuration of the dredging conforms to the Plan requirements. The Port may direct the Contractor to adjust its dredging procedure to assure compliance with the Drawings, at no additional cost to the Port.

3.03 CONDUCT OF WORK

A. Layout of Work

1. Layout work according to Section 01 71 23 – Field Engineering.

B. Dredging

1. Perform dredging using mechanical methods only. A clamshell bucket may be used for dredging material suitable for open water disposal.
2. Excavate the Dredge Prism to the required dredging lines, grades, slopes, and elevations shown on the Drawings. Each pass of the dredge bucket shall be complete, and there is to be no stockpiling of sediment in the water or on land. Do not level the completed dredging surface by dragging a beam or sweeping the dredge bucket.
3. Conduct dredging starting from the top of slopes, working down the slope, in order to minimize the potential for uncontrolled slope movement. Take care when dredging the toe of slopes to avoid overcutting the toe of slopes below the Overdredge Allowance.
4. If dredging is conducted at dusk or night, the Contractor shall ensure sufficient light is provided for visual monitoring of the dredge area for turbidity, as well as visual inspection for debris and large rocks within the disposal barge.

5. If daily Progress Survey results indicate that excessive dredging is occurring, or dredging is outside of the dredge prism, modify dredging operations and/or positioning control immediately to avoid additional excessive dredging. Excessive dredging, if performed, will be paid for by the Contractor at no additional expense to the Port.
6. Pay attention to the conditions of issued regulations and authorizations requiring minimizing turbidity and loss of resuspended sediments during dredging and transport operations and adherence to water quality requirements.
7. Control the dispersion of suspended solids away from the point of dredging and due to vessel propwash during dredging activities in order to prevent or reduce to the extent practicable the potential for sediment recontamination.
8. Upon completion of the work, but not until acceptance by the Port, remove the dredging equipment, including ranges, buoys, piles, and other markers or obstructions placed in the water or on shore.
9. All floating equipment shall be marked with U.S. Coast Guard-approved lights or lighted buoys, whenever operations and/or floating equipment laydown will occur during non-daylight hours.

C. Barge Dewatering

1. Minimize the amount of water in the sediment during dredging and maximize drainage of water from recovered sediment. Barge dewatering methods shall be modified if water quality monitoring indicates applicable criteria are being exceeded.
2. Unfiltered effluent release from the dredge material barge and/or dewatering barge is prohibited.
3. Contractor may passively dewater dredged sediment to remove suspended solids from the effluent. The method for passive barge dewatering shall be implemented in a manner that is compliant with the water quality requirements as described in the WQMPP and is within the permitted dredge boundary. Contractor shall review and understand these water quality requirements.
4. The sediment shall be placed to promote drainage of water. No overtopping of the sideboards will be allowed.
5. Ensure that all scuppers, sideboards, or other passageways for effluent to discharge back to Work Site waters have the proper filtration material in place prior to discharge of effluent. Cover the scuppers and any discharge points with filter fabric (or similar material acceptable to the Port) to filter and retain sediment while allowing water to drain back into the receiving waters, and to meet water quality criteria requirements. Free water shall not be directly discharged back into the Work Site waters without passing through filter media to prevent release of suspended sediment. The method for filtering return effluent must be described in the DDWP and accepted by the Port prior to conducting any dredging work.
6. Barge discharge is not allowed outside of the Work Site during in-water transportation from the Work Site to the Commencement Bay Open-Water Dredged Material Disposal Site.
7. If water quality criteria exceedances are observed during completion of passive dewatering activities, modify the passive barge dewatering process in order to comply with water quality criteria or cease passive barge dewatering activities at no additional cost to the Port.

3.04 TRANSPORTATION AND DISPOSAL OF DREDGED MATERIALS

A. In-Water Transportation

1. All dredged material shall be transported from the Work Site via barge. On-site stockpiling and overland transport of dredged sediment from the Work Site is prohibited.
 2. Transport all sediment to the open-water disposal site in accordance with the means and methods described in the DDWP. Deviations from the DDWP shall be approved by the Port prior to haul barges leaving the Work Site.
 3. Inspect each barge load of dredge sediment and dredge debris prior to transport from the Work Site to the open-water disposal site.
 - a. The Contractor shall obtain barge displacement measurements prior to in-water transportation and establish an estimated tonnage of material associated with that barge load. Estimated tonnages for each barge load of material removed from the Work Site shall be recorded in the Contractor Daily and Weekly Construction Reports.
 - b. The Contractor shall also document seaworthiness of each barge used for transport of dredge material and dredge debris from the Work Site to the transload facility or open-water disposal site. Documentation of the seaworthiness of each transport barge shall be submitted to the Port prior to that barge leaving the Work Site.
 - c. Transportation of dredge material and Dredge Debris from the Work Site shall comply with federal, state, local regulations, and permit conditions.
 4. Transport dredge debris from suitable dredge sediment by barge to the transload facility.
- B. Commencement Bay Open-Water Dredged Material Disposal Site (DMMP Disposal Site)
1. The Port will obtain a Disposal Site Use Authorization from DNR for disposal of dredged materials at the DMMP site. Suitable material shall be loaded onto bottom-dump haul barges and transported to the DMMP site. For DNR reporting requirements, the barge dump will be considered to start at initiation of bottom-dump or split hull opening. The end of the dump will be that time when all materials have exited the barge. No materials shall be dumped unless approved positioning equipment is operational. Overflow will not be permitted from haul barges at any time. The haul barges must have tightly sealing doors and compartments to minimize leakage of material during transit. Any barge that exhibits more than minor leakage shall be removed from the equipment used on this project until satisfactory repairs are made. All DNR disposal fees will be paid directly by the Port. The Contractor shall prepare a daily dredging report and daily site use report for each barge disposal. These reports shall be submitted to the Port with the Daily Construction Report.
- C. Vessel Traffic Service (VTS)
1. The Contractor must contact the USCG VTS by radio before disposal at the DMMP site for positioning and verification of location within the surface target zone. Disposal may not commence until verification is received from the USCG. The Contractor must also report the vessel position, tug, barge, skipper's name, DNR permit number, and the time dumping begins and ends.
 2. In addition to tug-mounted DGPS receiver, if the barge is to be towed, the Contractor shall provide a DGPS receiver on the barge to record its location at start and end of dump.
 3. Signal lights shall be displayed and operations shall be conducted in accordance with the regulations of local port and harbor authorities and by the applicable regulations of Code of Federal Regulations, Title 33 - Navigation and Navigable Waters, as required by the Department of the Army and the USCG.
- D. Disposal Site Mapping

1. Within 24 hours of each dump, the Contractor shall provide a printout for each dump showing the disposal site limits and barge location within the disposal site at the time of the dump. Coordinates for the barge at the beginning and end of each dump shall also be recorded on the printout.

3.05 WATER QUALITY MONITORING AND BEST MANAGEMENT PRACTICES

- A. A WQMPP has been prepared by the Port and included in the appendices. In accordance with this plan, perform water quality monitoring for quality assurance purposes during all in-water activities. Comply with all water quality requirements as defined in the project Water Quality Certificate, Permits, and applicable local, state, and federal standards. Conduct water quality monitoring as needed to provide quality control of the work. As a minimum, have in place the following.
 1. BMPs to prevent water quality exceedances.
 2. Contingency measures to implement should water quality exceedances occur.
- B. Delays caused by complying with water quality requirements shall not be cause for additional compensation to the Contractor.
- C. Best Management Practices
 1. Implement BMPs to minimize impacts to the aquatic environment, minimize sediment loss, and minimize turbidity generation during dredging and other in-water operations. Turbidity and other water quality parameters will be monitored to ensure construction activities are in compliance with Washington State Surface Water Quality Standards (173-201A WAC), the WQMPP, and in accordance with the Permits. At a minimum, the following BMPs shall be implemented, but are not limited to:
 - a. Ensure that no fuel, garbage, or debris enters the waterway from the dredge, receiving barge, other vessels associated with the work.
 - b. Perform dredging using mechanical methods only. Use an environmental bucket or closed top bucket whenever feasible.
 - c. Eliminate multiple bites while the dredge bucket is on the seafloor.
 - d. Do not stockpile dredged material on the seafloor.
 - e. Do not perform seafloor leveling.
 - f. Place dredge materials into the disposal scows without splashing material out of the barge.
 - g. Ensure that the dredge bucket is completely emptied of sediments over the disposal scow before re-submerging the dredge bucket in the waterway.
 - h. Depending on the results of the water quality monitoring program, enhanced BMPs may also be implemented to further control turbidity. Enhanced BMPs may include, but are not limited to:
 - 1) Slowing the velocity (i.e., increasing the cycle time) of the ascending loaded clamshell bucket through the water column
 - 2) Pausing the dredge bucket near the bottom while descending and near the water line while ascending
 - 3) Placing filter material over the barge scuppers to clear dredge return water

- i. Manage barges such that the dredged sediment load does not exceed the capacity of the barge. The load shall be placed in the barge to maintain an even keel and avoid listing.
 - j. Dredge vessel personnel shall be trained in hazardous material handling and spill response and will be equipped with appropriate response tools, including absorbent oil booms. If a spill occurs, spill cleanup and containment efforts will begin immediately and will take precedence over normal work.
 - k. Inspect fuel hoses, oil or fuel transfer valves, and fittings on a regular basis for drips or leaks in order to prevent spills into the surface water.
 - l. Install and maintain an impervious turbidity curtain during dredging operations if needed to control turbidity. Design, procurement, installation, operation, inspection, maintenance, and repair the turbidity curtains. The turbidity curtains can be supported by either a floating boom or can fully extend above the waterline and be attached to a marine structure if allowed by the Port. If a floating boom is used, moor the turbidity curtain to the marine structures and support by floats at the top that keep the top of the turbidity curtain above the water surface. The turbidity curtain bottom shall be weighted at the bottom, be tapered to the bathymetry, and rest directly on the mudline. The turbidity curtain shall be inspected and maintained regularly to the satisfaction of the Port during construction.
2. During barge dewatering activities, the following BMPs shall be implemented to minimize water quality impacts:
- a. Return water draining from the receiving barge shall be treated by filtering water through geotextile fabric.
 - b. Change geotextile fabric regularly to ensure efficient filtration of the return water.
 - c. Barges shall not be overfilled to the point where recovered material overflows directly back to open water.
 - d. During sediment dewatering, the receiving barge shall remain within the work area.
 - e. Return water from the barge shall not be allowed to discharge to surface water outside the work area.
 - f. Constantly observe and monitor the filtration system to confirm that the system is operating as expected and that turbid water in excess of the specified water quality limit is not being discharged to the waterway. Additional BMPs shall be used in the event of overflow or to ensure proper functioning of the filtration system and to prevent excessively turbid water from leaving the barge.

3.06 SALVAGED MATERIALS

- A. Anchors, chains, straps, and other articles or debris brought to the surface during the course of the dredging operations shall remain the property of the Contractor and shall be disposed of at an upland disposal facility licensed/permitted to receive such material. Salvage and removal of such material will be managed and paid using the Dredge Debris Allowance Bid Item. Hazardous material/waste, consisting of creosote-treated piles, batteries, PCBs, etc. shall be disposed of in accordance with applicable federal, state, and local regulations. The Port does not expect hazardous material to be within the dredging area. When such material/waste is encountered, immediately notify the Port to determine the course of action to be taken. The Contractor will be compensated for costs associated with handling and disposal of debris encountered during dredging.

END OF SECTION

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**Appendix A - State
Environmental Policy Act
(SEPA) Compliance
Determination of
Non-significance**

**DETERMINATION OF NONSIGNIFICANCE
WAC 197-11-970****Project Name:** Port of Tacoma Blair Waterway Berth Deepening

Description of proposal: Proposal to deepen berthing areas at Washington United Terminals (WUT) and Husky Terminal (Piers 3 and 4) from -51 to -57 feet MLLW, with a 2-foot overdredge allowance to a maximum depth of -59 feet MLLW. Includes dredging the WUT and Husky berths within the Blair Waterway, installing toe walls to stabilize slope segments, and replacing existing fenders. A total of approximately 315,000 cubic yards (CY) of material will be dredged and disposed of, and approximately 14,000 CY of riprap may be replaced. Dredged material will be disposed of at the Commencement Bay open-water site, a beneficial use site, or an upland facility.

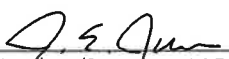
Proponent: Port of Tacoma

Location of proposal, including street address, if any: The Project will be located at the Husky Terminal at 1101 Port of Tacoma Road, Tacoma, Washington 98421, and the Washington United Terminal (WUT) at 1815 Port of Tacoma Road, Tacoma, Washington 98421, Pierce County. The Project is situated in Section 27SE, 27SW, 34NE, 35NW, 35SE, 35SW, and 36SW, Township 21N, Range 03E, and Section 2NE and 1NW, Township 20N, Range 03E of the Willamette Meridian.

Lead agency: Port of Tacoma

The lead agency for this proposal has determined that the project does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under Revised Code of Washington (RCW) 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. Additional project and/or State Environmental Policy Act (SEPA) information is available upon request at the Port of Tacoma's Administration building, located at One Sitcum Plaza, Tacoma, WA 98421 or at the Port's website at <http://www.portoftacoma.com/sepa>.

Comments: This Determination of Non-Significance (DNS) is issued under Chapter 197-11-340(2) Washington Administrative Code (WAC). Pursuant to Port policy, all interested parties shall have 14 calendars days to comment on the proposed SEPA threshold determination. The lead agency will not act on this proposal for 14 days from the start date of the comment period described below. Comments shall be submitted to the Port of Tacoma, Environmental Programs, C/O Heather Curbow at One Sitcum Plaza, Tacoma, WA 98421 or at the Port's website at <http://www.portoftacoma.com/sepa>.

Responsible official: Jason Jordan, Sr. Director, Environmental and Planning Programs
Jason Jordan (Dec 22, 2025 07:57:49 PST)**Comment start date:** January 1, 2026**Comment end date:** January 15, 2026

**Appendix B - Shoreline
Management Act / Critical
Areas Compliance LU26-0162**



City of Tacoma
Planning and Development Services

September 08, 2026

Sara Potter
Port of Tacoma
PO Box 1837
Tacoma, WA, 98401

via electronic mail

RE: Shoreline Substantial Development Permit Exemption File No. LU26-0162
Blair Waterway Maintenance Dredging
1815 Port of Tacoma Road
Parcels: 0321353030, 0321353016, 0321353014, 0321354035 and 2275200610

Dear Robert and Sara:

You have requested a Shoreline Substantial Development Permit Exemption to allow maintenance dredging of high spots at two berth locations within the Blair waterway. The proposed maintenance dredging at the Port's Washington United Terminal (WUT) and Husky Terminal (Husky).

The proposed maintenance action is qualified for an exemption under the City of Tacoma Municipal Code (TMC) 19.02.030.C.2 and Washington Administrative Code (WAC) 173-27-040(2)(b) for "normal maintenance and repair" because the project proposes to restore the previously authorized depths at the berthing areas. This will restore the previously maintained berth elevation of -51 feet mean lower low water (MLLW), improve safe navigation, and restore terminal operations to full capacity.

The *Tacoma Shoreline Master Program (TSMP)* designates the site of the proposed activity as an "Aquatic Environment" within the S-13 Shoreline District – Marine Waters of the State. The intent of the S-13 Shoreline District is to maintain these water bodies for the use by the public for navigation, commerce and recreation purposes and to manage in-water structures in a consistent manner throughout the City's shorelines.

Pursuant to WAC 197-11-340(2) and in compliance with the City of Tacoma SEPA Procedures a Determination of Non-Significance (DNS) was issued by the Port of Tacoma. Further, an environmental impact statement (EIS) is not required under Revised Code of Washington (RCW) 43.21C.030(2)(C).

Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements are listed as exempt from a Substantial Development Permit according to TMC 19.02.030.C.2. "Normal Maintenance" includes those usual acts to prevent a decline, lapse or cessation from a lawful established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration,

location and external appearance and the replacement does not cause substantial adverse effect to shoreline resource or environment. Relocation and reconfiguration of the structure or development may be performed within the existing property boundaries if the relocation or reconfiguration results in a measurable and sustainable ecological improvement.

The Port of Tacoma proposes to dredge a total volume estimated at approximately 17,830 cubic yards to restore the authorized depth of -51-foot MLLW, including an incidental 2-foot dredge allowance (-53-foot MLLW). The total potential dredge volume is approximately 17,830 cubic yards across approximately 95,100 square feet.

Following review, I have concluded the following:

- Best management protocols will be utilized to allow dredging to occur without habitat degradation in intertidal and shallow subtidal habitat and only during the authorized work window (July 15-February 15). Turbidity will be controlled through prescriptive best management practices while dredging.
- Priority species will not be affected through the timing restrictions for salmonids and in-water work. No eelgrass, kelp, forage fish spawning areas or known shellfish resources or habitats located within or adjacent to the area being dredged. No impacts are expected with the overall project; therefore, no compensatory mitigation is required.
- The dredged material will be transported in a split-hull or pocket barge and disposed of at the Commencement Bay Nondispersive Open-Water Disposal Site.
- Based on the above findings, the proposal is consistent with the policies of the *TSMP Title 19* shoreline code.

Therefore, the proposed activities are consistent with the applicable regulations, plans, and policies of the City of Tacoma. Furthermore, the Shoreline Management Act (*SMA*) allows certain activities to be exempt from the Shoreline Substantial Development Permit requirements. Based on the above findings, the requested exemption to the City's Shoreline Substantial Development Permit requirement is consistent with the policies of the *SMA*, the policies and implementing regulations of the *TSMP* and with the criteria set forth in the *WAC* and *RCW* for the authorization of such permits.

The following are conditional requirements:

1. The work must be accomplished per the approved plans and specifications.
2. The applicant shall comply with all requirements, including approved WDFW and USACE approved in-water work windows.
3. The applicant shall provide a copy of the approved HPA and USACE permits or approvals to the City prior to commencing work.
4. A copy of this exemption letter shall be available on the site during all stages of the project.

The applicant is also advised of the following:

- This permit is only applicable to the proposed project as described above and based upon the information submitted by the applicant. Future activities or development within regulated state waters or the 200-foot shoreline jurisdiction may be subject to further review and additional permits or exemptions as required in accordance with TMC 19.
- This Letter of Exemption shall expire one year after its date of issuance.
- The applicant must obtain other approvals prior to construction as required by other local, state and federal agencies including the Army Corps of Engineers and State Department of Fish and Wildlife which have requirements regarding work within regulated waters that may be applicable to the project.

We are issuing this letter of exemption per the provisions of *Tacoma Shoreline Master Program* and TMC Title 19 to comply with the requirements WAC 173-27-050 and WAC 173-27-040(2). Should you have any further questions or requests please do not hesitate to contact me at 253-345-1367.

Sincerely,

A handwritten signature in black ink, appearing to read "Alexia Henderson". The signature is fluid and cursive, with the first name "Alexia" and last name "Henderson" clearly distinguishable.

Alexia Henderson
Senior Critical Areas Biologist

cc via electronic mail:

Puyallup Tribe - Jennifer.M.Keating@puyalluptribe-nsn.gov, Brandon.Reynon@PuyallupTribe-nsn.gov;
Mike.Shong@PuyallupTribe-nsn.gov; robert.b.barandon@puyalluptribe-nsn.gov

Washington Department of Ecology, Shorelands & Environmental Assistance Program -
smp@ecy.wa.gov; ECYSEAPermits@ecy.wa.gov

Washington Department of Fish and Wildlife - R6SSplanning@dfw.wa.gov

U.S. Army Corps of Engineers, Attn: Regulatory Branch, CENWS-OD-RG -
alexandra.m.hammond@usace.army.mil

Washington Department of Natural Resources – Kirsten.miller@dnr.wa.gov; shoreline@dnr.wa.gov

**Appendix C - Department of
Fish and Wildlife Hydraulic
Project Approval 2026-6-
330+01**



HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish and Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issue Date: 09/22/2026
Project End Date: 09/21/2031

Permit Type: HPA - Standard
Permit Number: 2026-6-330+01
Application ID: 0045073

PERMITTEE	AUTHORIZED AGENT
ATTENTION Port of Tacoma Sara Potter P.O. BOX 1837 Tacoma, Washington 98401	ATTENTION Robert Bennington 1201 3rd Avenue, Suite 2600 Seattle, Washington 98101

Project Name: Blair Waterway Berth Deepening Project

Project Description: The Project proposes to deepen the entire berthing areas at the north and south berths of Washington United Terminals (WUT), as well as Piers 3 and 4 at Husky Terminal, from -51 feet MLLW to a minimum depth of -57 feet MLLW, with an additional 2-foot overdredge allowance, reaching a maximum depth of -59 feet MLLW. Proposed construction includes dredging the berthing areas, supporting existing under-pier slopes with toe walls in some areas, removal/replacement of a portion of the riprap toes, and replacing existing fenders. Along the face of the piers, material will be removed to -63.5 feet MLLW plus 1 foot of overdredge allowance (to a maximum of approximately -64.5 feet MLLW) to allow for the replaced riprap. Dredged material deemed suitable for open-water disposal may be disposed of at the Commencement Bay open-water disposal site or at an approved in-water beneficial use site (including the East Commencement Habitat Opportunity (ECHO beneficial use site). Material may also be placed on Port property or at an upland disposal facility. Prior to the Project and during the 2026/2027 work window, maintenance dredging of high spots within the berth deepening footprints will be conducted, with disposal at DNR's Commencement Bay openwater disposal site.

PROVISIONS

AUTHORIZED WORK TIMES

1. You may begin the project on immediately and you must complete the project by September 21, 2031. To protect fish and shellfish habitats at the site, work below the ordinary high water line (OHWL) must only occur from July 15 through December 31 and January 1 through February 15 of any year for the life of the permit.

PROJECT APPROVALS

2. Work must be accomplished per the plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled "Drawings-Maintenance Dredging at WUT and Husky Terminal," uploaded to APPS on September 11, 2026, "Drawings-Blair Waterway Berth Deepening," uploaded to APPS on September 11, 2026, "20260417-Blair WW Deepening-Use Plan," uploaded to APPS on September 11, 2026, "Drawings-ECHO Plan & Sections," uploaded to APPS on September 11, 2026, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction.

INVASIVE SPECIES CONTROL



HYDRAULIC PROJECT APPROVAL

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3. Follow Method 1 for low-risk locations (i.e., clean/drain/rinse/dry). Thoroughly remove visible dirt and debris from all equipment and gear—including vessels, boots, waders, drive mechanisms, wheels, tires, tracks, buckets, and undercarriage—before arriving at and leaving the job site to prevent the transport and introduction of aquatic invasive species. For contaminated or high-risk sites, refer to the Method 2 Decontamination protocol. Clean, rinse, and dry all decontamination equipment used and properly dispose of any water and chemicals used for cleaning. For additional decontamination details, including specific protocols for freshwater, marine, and estuarine environments, refer to the Washington Department of Fish and Wildlife Invasive Species Management Protocols, available online at <https://wdfw.wa.gov/species-habitats/invasive/prevention/clean-drain-dry#decontamination>

NOTIFICATION REQUIREMENTS

4. You or your agent must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov or mail to Post Office Box 43234, Olympia, Washington 98504-3234 at least three business days before starting work in a given in-water work window (July 15 - February 15), and again within seven days after completing the work in a given in-water work window. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.
5. FISH KILL/WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

COMPENSATORY MITIGATION

6. To offset impacts to fish life, the applicant shall provide compensatory mitigation by utilizing Puget Sound Partnership Nearshore Credits Program ESA fish and habitat conservation credits generated through the Tacoma Maritime Center Project (WCRO-2019-04086-8256). The approved compensatory mitigation plan document entitled, "20260417-Blair WW Deepening-Use Plan," uploaded to APPS on September 11, 2026, can be found in the documents section of the HPA application. The permittee must provide written documentation (signed and dated ledger showing deduction of the appropriate number of credits) from Puget Sound Partnership before project construction can begin.
EXCEPTION: Maintenance dredging actions approved by this HPA that don't permanently deepen Blair Waterway beyond the approved depth of -51 feet Mean Lower Low Water are not subject to the provisional requirements above.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

7. Establish staging areas (used for activities such as equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.
8. Confine the use of equipment to the specific access and work corridor shown in the approved plans.
9. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.
10. Equipment used in or near water must use environmentally acceptable lubricants composed of biodegradable base oils. These are vegetable oils, synthetic esters, and polyalkylene glycols.

CONSTRUCTION MATERIALS

11. As specified in the approved plans, the sheet pile wall must be made primarily of steel material.
12. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).
13. Riprap used for the bulkhead construction must be composed of clean, angular material of a sufficient size to prevent it from being washed away by high water or wave action.

SEDIMENT, EROSION, AND POLLUTION CONTAINMENT



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14. Before starting dredging work, deploy a floating silt curtain around the dredge area to as necessary minimize dispersion of suspended sediments. Inspect turbidity control measures regularly during construction and make all needed repairs if any damage occurs.
15. Do not stockpile dredged material waterward of the ordinary high water line.
16. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above extreme high tide unless the material is approved by the Washington Department of Fish and Wildlife for placement elsewhere.
17. To minimize turbidity, hopper dredges, scows, and barges used to transport dredged materials to the disposal or transfer sites must completely contain the dredged material. Scuppers must be fitted with screens or other suitable filter medium to protect water quality of return water and must be inspected regularly to ensure proper function.
18. To prevent unintended loss of dredged material, extreme care must be taken to not overload the barge beyond its structural limits.
19. Secure all containers storing fuel or other deleterious substances on the barge during dredging operations to prevent incidental spills.
20. Prevent project contaminants, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.
21. If flow conditions arise that will result in erosion or siltation of waters of the state, stop all hydraulic project activities except those needed to control erosion and siltation.

PROJECT DESIGN

22. The length of the WUT sheet pile toe wall must not exceed 2,661 linear feet and the Husky sheet pile toe wall must not exceed 1,243 linear feet, as shown in the approved plans. Locate and install toe wall structures in accordance with the approved plan document entitled, "Drawings-Blair Waterway Berth Deepening," uploaded to APPS on September 11, 2026.
23. This HPA authorizes the removal and replacement of up to 14,000 cubic yards of riprap bank armoring material over the life of the permit in the areas detailed in the approved plans
24. Limit the waterward extent of proposed riprap armoring to the locations shown in the approved plan document entitled, "Drawings-Blair Waterway Berth Deepening," uploaded to APPS on September 11, 2026.
25. As shown in the approved plans, construct the side slopes of the riprap armoring to be no steeper than three feet horizontal to one foot vertical.

PROJECT IMPLEMENTATION

26. This HPA authorizes the removal of approximately 315,000 cubic yards of dredged material over the life of the permit from the Husky Terminal and WUT areas shown in the approved plans.
27. Limit dredging to the target depth of -57 feet mean lower low water (MLLW) (+2 feet overdredge allowance to -59 feet MLLW), as shown in the approved plans.
EXCEPTION: Along the face of the WUT pier and Pier 3 of Husky, dredging may remove material to a depth of -63.5 feet MLLW (+1 foot of overdredge allowance to -64.5 feet MLLW) to allow for placement of scour protection rock.
28. Conduct dredging using a mechanical clamshell dredge. Operate the clamshell to minimize turbidity. During excavation, complete each pass with the clamshell bucket. Do not stockpile dredged material waterward of the OHWL.
29. Dispose of dredged materials in accordance with the procedures described in the Dredged Material Evaluation and Disposal Procedures User Manual (USACE 2025). Sediment dredged that is suitable for open-water disposal may be disposed of at the Commencement Bay open-water disposal site shown in the approved plans. Sediment that is suitable for beneficial reuse may be placed at the East Commencement Habitat Opportunity (ECHO) site shown in the approved plans. Sediment that is designated as unsuitable for open-water disposal or beneficial reuse must be placed at an approved upland disposal site.
30. Open-water disposal material must be released in a controlled manner to reduce turbidity and ensure the material reaches the target site.



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31. Piling removal:

1. Use a vibratory system to dislodge piling whenever feasible;
2. Place the piling on a construction barge or other dry storage site after the piling is removed. The piling must not be shaken, hosed off, left hanging to dry or any other action intended to clean or remove adhering material from the piling;
3. If a treated wood piling breaks during extraction, remove the stump from the water column by fully extracting the stump or cutting it three feet below the substrate and cap all buried stumps with clean sediment that matches the native material;
4. Fill holes left by piling extraction with clean sediment that matches the native material whenever feasible.
5. When removing creosote piling, containment booms and absorbent booms (or other oil absorbent fabric) must be placed around the perimeter of the work area to capture wood debris, oil, and other materials released into marine waters as a result of construction activities to remove creosote pilings. All accumulated debris must be collected and disposed upland at an approved disposal site.
6. Creosote piling must be fully suspended during removal so no portion of the log drags through the water or onto the bed.

32. The use of a vibratory hammer or impact hammer is authorized for piling installation under this HPA.

33. If impact pile driving is used, set the drop height to the minimum needed to drive the piling.

34. Sound attenuation methods are required for the driving or proofing of steel piles with an impact hammer below the ordinary high water line. For impact driving of steel piles that exceed the following criteria, a bubble curtain or other Washington Department of Fish and Wildlife approved sound attenuation device must be used. The specific criteria include sound pressure levels of:

- a. Greater than or equal to 206 dB (one micropascal squared per second) peak;
- b. Greater than or equal to 187 dB (one micropascal squared per second) accumulated sound exposure level (SEL) for fish greater than or equal to 2 grams;
- c. Greater than or equal to 183 dB (one micropascal squared per second) (SEL) for fish less than 2 grams;
- d. Install a bubble curtain around the pile during all driving operations to ensure proper sound attenuation. The bubble curtain must distribute air bubbles around 100 percent of the perimeter of the piling over the full length of the pile in the water column.

DEMOBILIZATION AND CLEANUP

35. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.
36. Remove temporary erosion and sediment control methods after job site is stabilized or within three months of project completion, whichever is sooner.

PROJECT LOCATION(S)

Location		
Blair Waterway - Commencement Bay		
Latitude	Longitude	County
47.274489000000000	-122.407014000000000	Pierce



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WRIA	Waterbody	Tributary to
WRIA	Unnamed	Unnamed

APPLIES TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval (HPA) pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. If the project requires the handling, capture, and/or transport of aquatic or terrestrial species additional permits and authorizations are required from WDFW. The person(s) to whom this HPA is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state, and/or federal) that may be necessary for this project.

This Hydraulic Project Approval (HPA) shall be available on the job site at all times and all its provisions followed by the person(s) to whom this HPA is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval (HPA) is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this HPA.

Failure to comply with the provisions of this Hydraulic Project Approval could result in a civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by a fine and/or imprisonment.

All Hydraulic Project Approvals (HPA) issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Washington Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this HPA is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HYDRAULIC PROJECT APPROVAL (HPA): You may request approval of minor modifications to the required work timing or the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require the issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics, or construction of your project that do not alter the project's impact to fish life or habitat and do not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at <https://hpa.wdfw.wa.gov/s>. If you did not use APPS you must submit a written request for a minor modification to an existing HPA. Written requests must include the name of the permittee, the name of the authorized agent if applicable, the APP ID or HPA number, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by email to HPAapplications@dfw.wa.gov, or by mail to Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You should allow up to 45 days for the Department to process your request.



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MAJOR MODIFICATIONS TO THIS HYDRUALIC PROJECT APPROVAL (HPA): You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require the issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at <https://hpa.wdfw.wa.gov/s>. If you did not use APPS you must submit a written request for a major modification to an existing HPA. Written requests must include the name of the permittee, the name of the authorized agent if applicable, the APP ID or HPA number, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by email to HPAapplications@dfw.wa.gov or by mail to Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You should allow up to 45 days for the Department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), the Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the WDFW employee who issued, denied, or conditioned the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by WDFW management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process.

- A. **INFORMAL APPEALS:** WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule:

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the WDFW Habitat Program, Natural Resources Building, 1111 Washington St SE, Olympia, Washington 98501. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Habitat Program Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

- B. **FORMAL APPEALS:** WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule:

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Habitat Program, Natural



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Resources Building, 1111 Washington St SE, Olympia, Washington 98501. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Habitat Program Director's or designee's written decision in response to the informal appeal.

- C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Miles Penk
Area Habitat Biologist
(360) 480-2908
miles.penk@dfw.wa.gov

A handwritten signature in black ink, appearing to read "Miles Penk".

For Director
DFW

Appendix D - DMMP Suitability Determination Memorandum

Memorandum for Record

October 22, 2025

Subject: Suitability Determination Memorandum and Antidegradation Assessment for Husky and Washington United Terminals Berth Deepening in Tacoma, Washington (NWS-2024-1010-WRD).

Introduction

This suitability determination memorandum (SDM) and antidegradation assessment documents the consensus regarding the suitability of the proposed dredged material for unconfined aquatic disposal and compliance of the post-dredge leave surface as determined by the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers (USACE), Washington Departments of Ecology and Natural Resources, and the U.S. Environmental Protection Agency (EPA)).

Project Description

The Port of Tacoma (Port) is evaluating dredging of the berthing areas of Husky Terminals 3 and 4 (Husky) and Washington United Terminal (WUT) in the Blair Waterway, Tacoma, Washington (Figures 1 - 3). The objective of this dredging is to improve and modernize the berthing areas to accommodate newer, larger container vessels. The targeted depth of -57 feet (ft) mean lower low water (MLLW) plus a 2 ft overdredge (final elevation -59 ft MLLW) would match the depth proposed for the deepening the federal navigation channel in the Blair Waterway.

Additionally, to provide scour protection to the berth areas, deeper dredging and placement of riprap armoring is proposed adjacent to the toe walls at Husky Terminal 3 and WUT, as well as at the riprap keyway of Husky Terminal 4. The scour protection cuts are designed to a depth of -63.5 ft MLLW plus a 1 ft overdredge (final elevation -64.5 ft MLLW), extending approximately 11 feet in width from the slope toward the channel. Figure 4 provides an example of the scour protection cut.

Project Summary

Waterbody	Blair Waterway in Tacoma Harbor
Water classification	Marine
Project rank	Moderate
Total proposed dredging volume (cy)	314,851 ; 161,490 (Husky), 153,361 (WUT)
Target proposed dredging depth	-57 ft MLLW
Max. proposed dredging depth (including 2 feet of overdepth)	-59 ft MLLW
Target scour protection cuts (including 1 foot of overdepth)	Up to -64.5 ft MLLW
Proposed disposal location(s)	Non-dispersive open-water disposal or beneficial use
Dredged Material Management Units (DMMUs)	18 DMMUs; 10 (Husky), 8 (WUT)
EIM Study ID	POTHW24
USACE Regulatory Reference Number	NWS-2024-1010-WRD
Sampling and Analysis Plan (SAP) Approval Date	October 18, 2024 (Anchor QEA, 2024)
Sampling Date(s)	October 22 – November 14, 2024
Sediment Characterization Report Approval Date	July 28, 2025 (Anchor QEA, 2025a)
Sediment Characterization Report Addendum #1 Memorandum Approval Date	October 22, 2025 (Anchor QEA, 2025b)
Testing Parameters	DMMP Marine COCs plus dioxins/furans and TBT
Suitability Outcome	All material found suitable for non-dispersive in-water disposal
Recency Expiration Date: Moderate=5 years	October 2029
Antidegradation Assessment	In compliance

Sampling and Analysis Description

Sediment sampling activities were conducted in the project areas from October 22 through November 14, 2024, using Gravity Marine Services' research vessel *Tieton*, a 32-foot aluminum landing craft. All sediment sampling was conducted using vibracore equipment except for three locations at the Husky Terminal where a box core sample was used for locations on top of the rock keyway where vibracoring was not feasible. Sediments below the rock keyway are assumed to be native and clean, as these areas underwent significant cleanup and reconfiguring during 2015-2016 (Anchor QEA, 2024). The areas that represent the scour protection cuts were not sampled directly nor were any samples collected to the proposed cut depth due to the existing rock keyway.

A differential global positioning system (GPS) mounted to the vessel A-frame was used for sample station positioning. Mudline elevations and real-time tidal corrections were determined at each station using a Real-Time Kinematic (RTK) GPS and a high precision fathometer. Calibration was performed using a Washington State Reference marker in addition to comparison to water levels from the National Oceanic and Atmospheric Administration automated tide station in Commencement Bay, Tacoma, WA (Station ID: 9446484). Lead line measurements were also taken during sampling as an additional quality control step.

Most samples were collected with 10 feet of the targeted sample location except for three vibracore samples and one box core sample. All station adjustments were coordinated with the DMMP and remained within their respective DMMU boundaries. Core acceptability deviations occurred due to recurring shallow refusal. Among 51 accepted vibracore samples:

- 36 samples did not reach the Z-layer interval due to refusal.
- Four samples did not reach both the subsurface and Z-layer interval.
- 19 samples had less than 75% recovery.

All three box core samples failed to reach full penetration depth of 50 centimeters along the rock keyway and may have been due to lower sediment accumulation in this area than expected.

If sample recovery criteria were not met for any vibracore or box core sample on the first attempt, up to two additional attempts were made (and in one case a total of five attempts). The attempt with the highest recovery were accepted for all samples and was coordinated with the DMMP agencies.

Samples were transported to a shore-side location at the head of the Sitcum Waterway for processing. Sediment samples were submitted to Analytical Resources, LLC in Tukwila, WA for analysis.

Data Validation

Laboratory Data Consultants, Inc. conducted an EPA Stage 2B review and validation for all DMMU chemistry data. Only minor issues were documented. One 2,4-dimethylphenol result was rejected due to quality control recovery criteria not being met, and one sulfide result was rejected due to an exceedance of the hold-time. The DMMP agencies determined that the data are sufficient for decision-making.

Analytical Testing Results

Tables 1 and 2 summarize the analytical results for the samples alongside the DMMP marine guidelines (DMMP, 2021) and SMS (Ecology, 2013). All chemical concentrations were below Screening Levels and Bioaccumulation Triggers.

Biological Testing

Biological Testing was not required based on the results of the analytical screening.

DMMP Determinations

Suitability Determination

Chemical concentrations from the Husky and WUT composite samples were below the DMMP marine SLs and BTs. The DMMP agencies have concluded that all of the characterized material (314,851 cy) from Husky and WUT is suitable for open-water disposal at the Commencement Bay non-dispersive disposal site. Sediments at the scour protection cuts are assumed to be native and also suitable for aquatic disposal.

Antidegradation Determination

The sediment to be exposed by dredging must either meet the State of Washington Sediment Management Standards (SMS) or the State's Antidegradation Standard (Ecology, 2013) as outlined by DMMP guidance (DMMP, 2008). Concentrations of all DMMP chemicals of concern were below the DMMP screening levels and there is no reason to believe that a new exposed surface would be contaminated relative to the overlying materials; therefore, this project is in compliance with the State of Washington's antidegradation standard. Expected native material below the scour protection cuts is also assumed to be in compliance. The scour protection areas will be covered with new rock armoring effectively burying the newly exposed sediment.

Suitability for Beneficial Use

The DMMP agencies do not determine the suitability of material for beneficial use projects. It is up to the project proponents, the site receiving the material, and other interested stakeholders including applicable resource agencies and Tribes to determine the physical and chemical suitability of dredged materials for a beneficial use site.

The Tacoma Harbor Integrated Feasibility Report and Environmental Assessment (USACE 2022) identified factors that may be considered when evaluating potential dredged material for beneficial use from the Blair Federal Navigation Channel. Those elements included:

- Meeting the suitability requirements for open-water disposal per DMMP guidance.
- Meeting Washington State's Sediment Management Standard (SMS) benthic criteria.
- Total polycyclic aromatic hydrocarbon (PAH) is less than 2,000 micrograms per kilogram
- Total Dioxin/Furan Toxic Equivalency (TEQ) of less than 4 parts per trillion

Sediment evaluated under the Husky and Washington United Terminals Berth Deepening characterization meet the criteria listed above.

Debris Management

The DMMP agencies implemented a debris management requirement following the 2015 SMARM to prevent the disposal of debris (natural or anthropogenic) greater than 12 inches in any dimension at open-water disposal sites in Puget Sound. Debris screens shall be used for this project unless it can be demonstrated that debris is unlikely to be present or that the debris is large woody debris that can be easily observed and removed by other means during dredging. Debris screen usage, or detailed justification for not using one, must be included in the dredging quality assurance plan.

Notes and Clarifications

The decisions documented in this memorandum do **not** constitute final agency approval of the project. During the public comment period that follows a public notice, resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

A pre-dredge meeting with DNR, Ecology, and the Corps of Engineers is required at least 7 days prior to dredging. A dredging quality control plan must be developed and submitted to the USACE Seattle District's Regulatory Branch and Ecology. Refer to the USACE permit and Ecology 401 certification for project-specific submittal requirements and timelines.

Projects proposing to use one of the DMMP open-water disposal sites must submit their application for a Site Use Authorization (SUA) to the Washington State Department of Natural Resources (DNR) at least 4 weeks prior to dredging. Applications submitted less than 4 weeks prior to dredging may be subject to delays.

References

Anchor QEA, 2024. Husky and Washington United Terminals Berth Deepening Sediment Characterization. Sampling and Quality Assurance Project Plan. Final. October 2024. Prepared for Port of Tacoma. Prepared by Anchor QEA.

- Anchor QEA, 2025a. Husky and Washington United Terminals Berth Deepening Sediment Characterization. Sediment Characterization Report. Final. July 2025. Prepared for Port of Tacoma. Prepared by Anchor QEA.
- Anchor QEA, 2025b. Husky and Washington United Terminals Berth Deepening – Sediment Characterization Report Addendum #1. Memorandum Final. October 2025. Prepared for DMMP. Prepared by Anchor QEA.
- DMMP, 2008. *Quality of Post-Dredge Sediment Surfaces (Updated)*. A Clarification Paper Prepared by David Fox (USACE), Erika Hoffman (EPA) and Tom Gries (Ecology) for the Dredged Material Management Program, June 2008.
- DMMP, 2021b. *Dredged Material Evaluation and Disposal Procedures (User Manual)*. Dredged Material Management Program, updated July 2021.
- Ecology. 2021. Sediment Cleanup User's Manual (SCUM): Guidance for Implementing the Cleanup Provisions of the Sediment Management Standards, Chapter 173-204-WAC. December 2021.
- Ecology, 2013. *Sediment Management Standards – Chapter 173-204 WAC*. Washington State Department of Ecology, February 2013.
- USACE (U.S. Army Corps of Engineers), 2022. Final Integrated Feasibility Report and Environmental Assessment. Tacoma Harbor, Washington Feasibility Study. June 2022.

Agency Signatures

<u>10/23/2025</u>	<u><i>Brian Hester</i></u>
Date	Brian Hester – U.S. Army Corps of Engineers, Seattle District
<u>10/22/2025</u>	<u><i>Whitney Conard</i></u>
Date	Whitney Conard, PhD. – U.S. Environmental Protection Agency, Region 10
<u>10/23/2025</u>	<u><i>Laura Inouye</i></u>
Date	Laura Inouye, PhD. – Washington State Department of Ecology
<u>10/22/2025</u>	<u><i>Shannon Soto</i></u>
Date	Shannon Soto – Washington State Department of Natural Resources

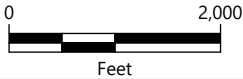
Copies Furnished:

DMMP agencies
LeeAnn Simmons, Regulatory Project Manager
Sara Potter, Port of Tacoma
Christine Simmons, Anchor QEA
DMMO File



LEGEND:
Property Boundary

NOTE:
1. Imagery sources: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, and NPS; World Imagery: Maxar





SOURCE: Survey by USACE, dated October 27, 2021, and David Evans and Associates, Inc., dated May 27, 2022, with data gaps filled from survey by USACE dated November 14, 2022. Aerial from Bing Maps. Current Federal Navigation Channel linework provided by Port of Tacoma and USACE dated 2023.

HORIZONTAL DATUM: Washington State Plane South Zone, NAD83, U.S. Survey Feet

VERTICAL DATUM: MLLW

ABBREVIATIONS:

DMMU: Dredged Material Management Unit

H:V: Horizontal to Vertical

MLLW: Mean Lower Low Water

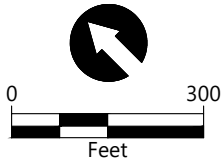
PED: Pre-Engineering Design

USACE: U.S. Army Corps of Engineers

LEGEND:

- PED Federal Navigation Channel
- - - Current Federal Navigation Channel
- - - Feasibility Study Federal Navigation Channel
- [Pattern] Extent of Pier
- 55 Existing Contours (1' & 5' Intervals)

- ▲ Outfall
- [Pattern] DMMU-1 Surface DMMU
- [Pattern] DMMU-6 Subsurface DMMU
- Proposed Sediment Core Location
- Actual Sediment Core Location





SOURCE: Survey by USACE, dated October 27, 2021, and David Evans and Associates, Inc., dated May 27, 2022, with data gaps filled from survey by USACE dated November 14, 2022. Aerial from Bing Maps. Current Federal Navigation Channel linework provided by Port of Tacoma and USACE dated 2023.

HORIZONTAL DATUM: Washington State Plane South Zone, NAD83, U.S. Survey Feet

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DMMU: Dredged Material Management Unit

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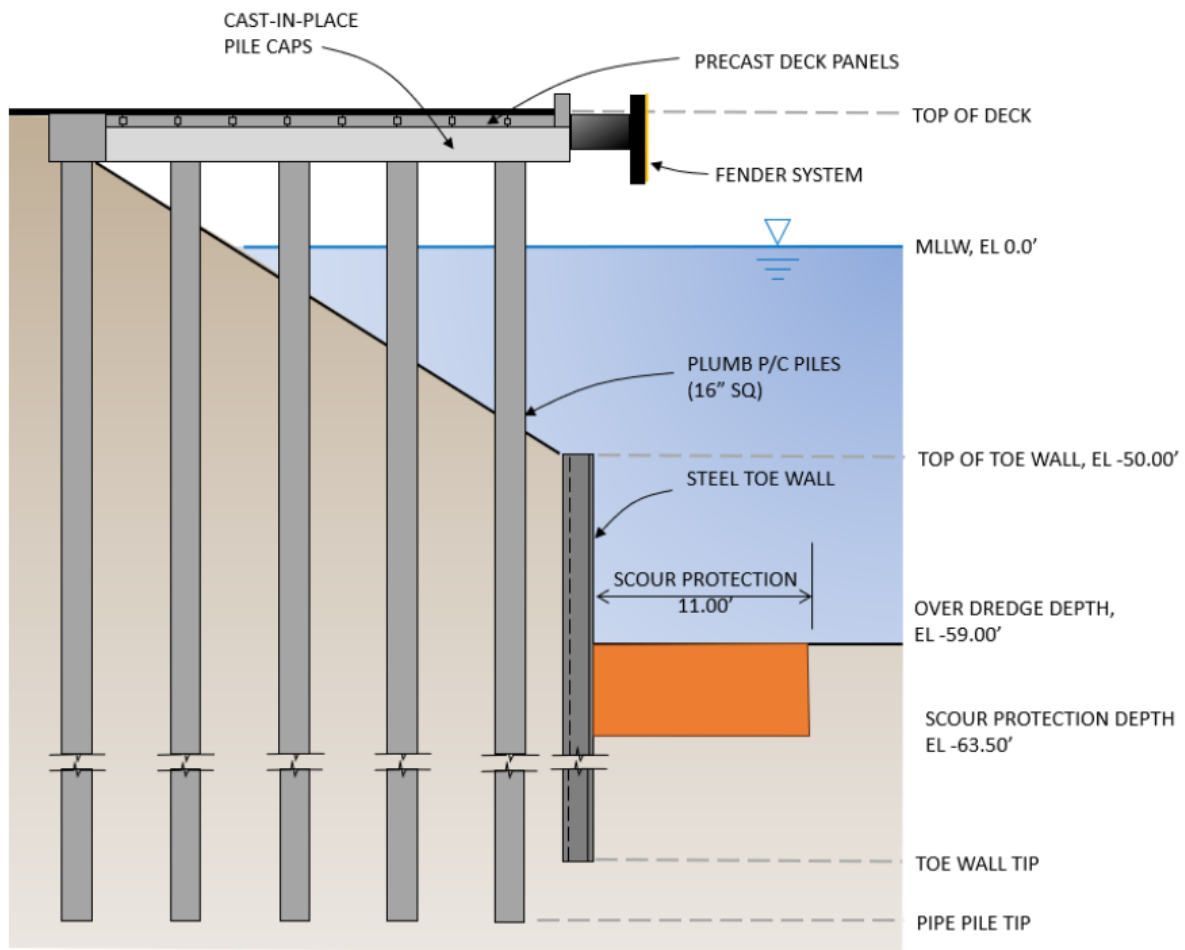
USACE: U.S. Army Corps of Engineers

Publish Date: 2025/03/28 11:43 AM | User: jbiggsby
Filepath: K:\Projects\0092-Port of Tacoma\Berth Deepening and Habitat Restoration\0092-RP-003 (Dredge Plan-Sediment Characterization).dwg Figure 2b



Figure 3
Proposed and Actual Sampling Locations: Washington United Terminals
Sediment Characterization Report
Husky and Washington United Terminals Berth Deepening Sediment Characterization

Figure 4
Husky and Washington United Terminals Updated Scour Protection Requirements



Note: Excerpt from interim design submittal (post-30%/pre-60% design) dated 7/21/2025. Calculation of riprap quantities based on prop wash study and existing scour protection for project permitting purposes. Design is subject to change; however, the depth and volume of rock presented is a conservative estimate and not expected to increase.

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						HT-01 Surface HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02 Surface HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03 Surface HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04 Surface HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05 Surface HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06 Subsurface HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE	HT-07 Subsurface HT-07CS-B 11/1/2024 HT-07CS-B-241101 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Conventional Parameters (mg/kg)												
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	3.92	0.89	2.99	0.93	1.44	0.55	2.16
Sulfide	SM4500S2D	--	--	--	--	128	1.9 J	11.2 J	49.0	41.4 J	1.08 UJ	2.26 J
Conventional Parameters (pct)												
Total organic carbon	SW9060AM	--	--	--	--	0.41	0.25	0.18	0.32	0.22	0.2	0.15
Total solids	SM2540G	--	--	--	--	66.76	76.62	75.21	80.06	76.57	84.48	81.31
Total volatile solids	PSEP-TV5	--	--	--	--	2.56	1.46	1.55	1.80	1.52	1.14	1.58
Metals (mg/kg)												
Antimony	SW6020	--	150	--	200	0.29 U	0.26 UJ	0.26 U	0.25 U	0.26 UJ	0.23 UJ	0.24 U
Arsenic	SW6020	--	57	507.1	700	3.12	1.56 J	2.09	2.10	2.17 J	1.03 J	1.63
Cadmium	SW6020	--	5.1	--	14	0.07 J	0.13 U	0.13 U	0.05 J	0.13 U	0.12 U	0.12 U
Chromium	SW6020	--	260	--	--	11.0	8.7 J	9.77	11.1	8.56 J	7.59 J	9.74
Copper	SW6020	--	390	--	1300	21.6	11.8	13.8	16.8	14.2	8.65	13.1
Lead	SW6020	--	450	975	1200	3.66	1.49	2.34	2.77	2.8 J	1.04 J	1.86
Mercury	SW7471B	--	0.41	1.5	2.3	0.0184 J	0.00829 J	0.0164 J	0.0190 J	0.0211 J	0.0264 U	0.0120 J
Selenium	SW6020	--	--	3	--	0.59 J	0.24 J	0.54 J	0.52 J	0.4 J	0.34 J	0.57 J
Silver	SW6020	--	6.1	--	8.4	0.05 J	0.04 J	0.04 J	0.05 J	0.06 J	0.03 J	0.03 J
Zinc	SW6020	--	410	--	3800	31.4	18.8	24.2	24.4	21.2	16.3	21.2
Organometals (µg/kg)												
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.85 U	3.86 UJ	6.81	3.84 U	3.85 UJ	3.84 UJ	2.78 J
Semivolatile Organics (µg/kg)												
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 U	20.0 UJ	20.0 UJ	20.0 UJ	19.9 UJ	20.0 UJ	20.0 UJ
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	6.6	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	75.9 J	99.9 UJ	100 U	54.0 J	99.3 UJ	99.8 UJ	100 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	58.9	50.0 U	50.0 U	50.0 U	49.7 U	49.9 U	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	6.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	12.7 J	20 U	20.0 U	20 U	19.9 U	20 U	20.0 U
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-01	HT-02	HT-03	HT-04	HT-05	HT-06	HT-07
		Surface or Subsurface				Surface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
		Location ID				HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B	HT-07CS-B
		Sample Date				11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024	11/1/2024
		Sample ID				HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030	HT-07CS-B-241101
		Matrix				SE	SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	29.5 UJ	20.0 U
Phenol	SW8270ESIM	--	420	--	1200	6.9	5.0 UJ	9.9	5.0 U	5.0 UJ	21.4 J	5.2
Polycyclic Aromatic Hydrocarbons (µg/kg)												
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ	20.0 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	10.9 J	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	13.1 J	20.0 U	11.4 J	20.0 U	14.2 J	20.0 U	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--	--	--	--	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	--	21000	14.7 J	20.0 U	12.3 J	11.1 J	13.9 J	20.0 U	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	3.0 J	5.0 U	10.0 U	5.0 U	5.0 U	5.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	4600	30000	19.1 J	15.8 J	15.3 J	12.4 J	17.8 J	20.0 U	17.8 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	20.0 U	20.0 U	20.0 UJ	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	20.5 J	20.0 U	20.0 U	19.9 UJ	10.3 J	20.0 U
Phenanthrene	SW8270E	--	1500	--	21000	12.8 J	14.7 J	11.8 J	20.0 U	10.7 J	20.0 U	10.6 J
Pyrene	SW8270E	--	2600	11980	16000	21.7	27.5	25.2	17.8 J	25.3	10.7 J	15.8 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U	40.0 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	83 J	43.3 J	64.2 J	41.3 J	71.2 J	10.7 J	33.6 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	12.8 J	35.2 J	11.8 J	20.0 UJ	10.7 J	10.3 J	10.6 J
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-01	HT-02	HT-03	HT-04	HT-05	HT-06	HT-07
		Surface or Subsurface				Surface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
		Location ID				HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B	HT-07CS-B
		Sample Date				11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024	11/1/2024
		Sample ID				HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030	HT-07CS-B-241101
		Matrix				SE	SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
Oxychlordane	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 U	1 UJ	1.00 UJ	1.00 UJ	1 UJ	1 UJ	1.00 UJ
Total DDx (U = 0 max limit)	Calculated	--	--	--	--	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.93 J	1.00 UJ
D/F (ng/kg)												
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	206	62.1	198	147	138	18.9	74.2
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	9.97	3.22	5.71	6.84	8.71	0.915 J	2.19 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	25.0	6.84	18.4	15.8	18.2	2.38 J	7.04
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	5.36	1.63 J	2.67	3.92 J	3.94	0.743 J	1.23
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.673 JEMPC	0.0020 U	0.312 U	0.394 J	0.691 J	0.0020 U	0.309 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.395 U	0.022 U	0.230 U	0.183 U	0.027 U	0.016 U	0.281 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.859 J	0.461 J	0.397 J	0.923 J	1.38	0.010 U	0.146 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	1.18	0.024 U	0.890 J	0.788 J	0.949 J	0.127 J	0.323 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.529 JEMPC	0.018 U	0.240 J	0.137 U	0.461 J	0.010 U	0.133 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.691 J	0.025 U	0.488 J	0.594 J	0.505 J	0.018 U	0.304 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.363 U	0.021 U	0.207 U	0.248 J	0.026 U	0.013 U	0.198 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.410 U	0.135 U	0.323 U	0.175 U	0.105 U	0.073 U	0.278 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.471 J	0.223 J	0.174 J	0.443 J	0.832 J	0.0070 U	0.159 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.268 U	0.017 U	0.146 U	0.128 U	0.268 J	0.010 U	0.140 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.348 U	0.090 U	0.186 U	0.170 U	0.393 J	0.073 U	0.169 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.309 U	0.103 U	0.144 U	0.105 U	0.123 U	0.077 U	0.134 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.550 JEMPC	0.138 J	0.239 U	0.389 J	0.84 J	0.010 U	0.183 U
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	56.4	14.3	41.5	42.2	42.6	5.09	15.8
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	14.8	2.95	9.20	10.9	12.2	1.32	3.84
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	4.77	1.07	4.87	3.56	4.96	0.575 J	0.440 J
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	3.14	1.58	4.37	2.80	6.51	0.275 J	1.68
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	1.32	-- U	0.202 J	0.142 J	0.45 J	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	2.02	-- U	1.14	0.977 J	1.63	-- U	0.127 J

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-01	HT-02	HT-03	HT-04	HT-05	HT-06	HT-07
		Surface or Subsurface				Surface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
		Location ID				HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B	HT-07CS-B
		Sample Date				11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024	11/1/2024
		Sample ID				HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030	HT-07CS-B-241101
		Matrix				SE	SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	-- U	-- U	0.875 J	0.75	0.134 J	0.268 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	-- U	-- U	0.646 J	1.5	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.770 J	0.171 J	0.479 J	0.555 J	0.86 J	0.0499 J	0.138 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	1.23 J	0.310 J	0.783 J	0.743 J	0.97 J	0.140 J	0.442 J
PCB Aroclors (mg/kg-OC)												
Aroclor 1016	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1221	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1232	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1242	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1248	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1254	SW8082A	--	--	--	--	0.98 U	1.7	2.2 U	1.3 U	1.6 J	2.0 U	2.7 U
Aroclor 1260	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1262	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1268	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	0.98 U	1.7	2.2 U	1.3 U	1.6 J	2 U	2.7 U
PCB Aroclors (µg/kg)												
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4 U	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						HT-08 Subsurface HT-08CS-B 11/7/2024 HT-08CS-B-241107 SE	HT-09 Subsurface HT-09CS-B 11/12/2024 HT-09CS-B-241112 SE	HT-10 Subsurface HT-10CS-B 10/29/2024 HT-10CS-B-241029 SE	WUT-20 Surface WUT-20CS-A 11/6/2024 WUT-20CS-A-241106 SE	WUT-21 Surface WUT-21CS-A 11/7/2024 WUT-21CS-A-241107 SE	WUT-22 Surface WUT-22CS-A 11/4/2024 WUT-22CS-A-241104 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Conventional Parameters (mg/kg)											
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	8.67	1.92	7.22	1.32	0.44 U	0.57
Sulfide	SM4500S2D	--	--	--	--	16.8 J	2.66	1.79 J	5.30	3.54	16.3
Conventional Parameters (pct)											
Total organic carbon	SW9060AM	--	--	--	--	0.25	0.06	0.24	0.15	0.16	0.11
Total solids	SM2540G	--	--	--	--	73.73	83.59	80.51	82.88	83.39	80.03
Total volatile solids	PSEP-TV5	--	--	--	--	1.67	1.34	1.27	1.15	1.14	1.25
Metals (mg/kg)											
Antimony	SW6020	--	150	--	200	0.25 U	0.22 U	0.24 UJ	0.23 U	0.24 U	0.24 U
Arsenic	SW6020	--	57	507.1	700	1.51	0.94	1.12 J	2.81	3.17	3.28
Cadmium	SW6020	--	5.1	--	14	0.13 U	0.11 U	0.1 J	0.04 J	0.04 J	0.12 U
Chromium	SW6020	--	260	--	--	9.63	8.16	9.49 J	12.0	9.18	7.63
Copper	SW6020	--	390	--	1300	16.3	11.2	10.4	14.6	15.1	12.0
Lead	SW6020	--	450	975	1200	1.67	1.30	1.38	2.25	2.22	1.68
Mercury	SW7471B	--	0.41	1.5	2.3	0.0235 J	0.00900 J	0.0135 J	0.0110 J	0.0148 J	0.0104 J
Selenium	SW6020	--	--	3	--	0.55 J	0.39 J	0.41 J	0.52 J	0.49 J	0.42 J
Silver	SW6020	--	6.1	--	8.4	0.04 J	0.22 U	0.03 J	0.04 J	0.04 J	0.03 J
Zinc	SW6020	--	410	--	3800	22.4	18.4	22.1	24.4	25.9	18.5
Organometals (µg/kg)											
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.84 U	3.85 U	3.85 UJ	3.86 U	3.85 U	19.0
Semivolatile Organics (µg/kg)											
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 U	5.0 UJ	2.7 J	5.0 U	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 U	5.0 UJ	3.1 J	5.0 U	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 UJ	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	100 U	499 UJ	99.9 UJ	99.9 U	99.9 U	99.6 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	50.0 U	49.9 U	50.0 U	49.9 U	50.0 U	49.8 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	5.0 U	19.9 U	5.0 U	3.4 J	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	20.0 U	21.9 U	20 U	20.0 U	20.0 U	19.9 U
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix				HT-08 Subsurface HT-08CS-B 11/7/2024 HT-08CS-B-241107 SE	HT-09 Subsurface HT-09CS-B 11/12/2024 HT-09CS-B-241112 SE	HT-10 Subsurface HT-10CS-B 10/29/2024 HT-10CS-B-241029 SE	WUT-20 Surface WUT-20CS-A 11/6/2024 WUT-20CS-A-241106 SE	WUT-21 Surface WUT-21CS-A 11/7/2024 WUT-21CS-A-241107 SE	WUT-22 Surface WUT-22CS-A 11/4/2024 WUT-22CS-A-241104 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Phenol	SW8270ESIM	--	420	--	1200	8.3	5.0 U	5.0 UJ	5.1	6.9	10.4
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	20.0 U	19.9 U	20.0 U	12.0 J	20.0 U	19.9 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U	39.9 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Carbazole	SW8270E	--	--	--	--	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Chrysene	SW8270E	--	1400	--	21000	20.0 U	19.9 U	20.0 U	19.0 J	20.0 U	19.9 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Fluoranthene	SW8270E	--	1700	4600	30000	20.0 U	19.9 U	20.0 U	45.1	20.0 U	18.0 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	19.9 UJ	20.0 U	20.0 U	20.0 U	19.9 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Phenanthrene	SW8270E	--	1500	--	21000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Pyrene	SW8270E	--	2600	11980	16000	20.0 U	19.9 U	20.0 U	50.0	11.2 J	14.2 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U	39.9 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	40.0 U	39.9 U	40.0 U	126 J	11.2 J	32.2 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	20.0 U	19.9 UJ	20.0 UJ	20.0 U	20.0 U	19.9 U
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-08	HT-09	HT-10	WUT-20	WUT-21	WUT-22
		Surface or Subsurface				Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
		Location ID				HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A	WUT-22CS-A
		Sample Date				11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024	11/4/2024
		Sample ID				HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107	WUT-22CS-A-241104
		Matrix				SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
Oxychlordane	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 UJ	1.00 UJ	1 UJ	1.00 U	1.00 U	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	0.71 J	1.00 U	1.00 U
D/F (ng/kg)											
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	11.1	3.34 J	32	388	218	118
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	0.396 U	0.361 U	2.34 J	10.5	7.34	4.53
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	0.779 J	0.235 J	4.31	36.1	22.3	11.6
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.216 J	0.144 UJ	1.43	4.61	3.98	2.22
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.314 U	0.224 UJ	0.0030 U	0.356 JEMPC	0.481 U	0.255 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.236 U	0.199 U	0.024 U	0.374 JEMPC	0.224 U	0.185 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.146 U	0.119 U	0.642 J	0.990 J	1.11	0.681 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.247 U	0.231 U	0.026 U	1.34 EMPC	1.05	0.586 JEMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.152 U	0.120 U	0.017 U	0.311 JEMPC	0.198 U	0.155 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.263 U	0.234 U	0.027 U	0.558 J	0.503 JEMPC	0.337 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.190 U	0.173 U	0.024 U	0.294 JEMPC	0.241 U	0.200 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.223 U	0.168 U	0.102 U	0.259 JEMPC	0.227 U	0.254 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.199 U	0.189 U	0.321 J	0.329 JEMPC	0.288 JEMPC	0.309 JEMPC
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.153 U	0.115 U	0.017 U	0.170 U	0.196 U	0.156 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.216 U	0.201 U	0.094 U	0.202 JEMPC	0.306 JEMPC	0.180 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.168 U	0.118 U	0.111 U	0.151 U	0.172 U	0.152 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.170 U	0.168 U	0.321 J	0.378 JEMPC	0.423 JEMPC	0.212 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	2.83	0.235 J	9.77	78.0	52.5	26.4
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	-- U	-- U	3.1	16.2	12.5	7.48
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	0.186 J	-- U	0.471 J	8.15	3.22	-- U
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	-- U	-- U	1.2	7.15	5.84	3.83
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	-- U	-- U	0.278 J	-- U	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	0.178 J	-- U	-- U	0.182 J	1.00	0.107 J

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-08	HT-09	HT-10	WUT-20	WUT-21	WUT-22
		Surface or Subsurface				Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
		Location ID				HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A	WUT-22CS-A
		Sample Date				11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024	11/4/2024
		Sample ID				HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107	WUT-22CS-A-241104
		Matrix				SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	-- U	-- U	0.413 J	0.656 J	0.321 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	-- U	0.321 J	0.126 J	0.501 J	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.0133 J	0.00335 J	0.17 J	1.28 J	0.739 J	0.420 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	0.324 J	0.249 J	0.30 J	1.37 J	0.984 J	0.659 J
PCB Aroclors (mg/kg-OC)											
Aroclor 1016	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1221	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1232	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1242	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1248	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1254	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1260	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1262	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1268	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	1.6 U	6.7 U	2 U	2.7 U	2.5 U	3.6 U
PCB Aroclors (µg/kg)											
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.0 U	4 U	4.0 U	4.0 U	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	3.23	1.61	0.58	0.40 U	4.16
Sulfide	SM4500S2D	--	--	--	--	1.40	1.72	1.06 U	1.1 UJ	78.4
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	--	0.14	0.09	0.15	0.19 J	0.21
Total solids	SM2540G	--	--	--	--	81.28	84.95	85.41	85.38	77.09
Total volatile solids	PSEP-TV5	--	--	--	--	1.29	1.02	1.07	1.3	1.49
Metals (mg/kg)										
Antimony	SW6020	--	150	--	200	0.24 U	0.22 U	0.22 U	0.23 U	0.25 U
Arsenic	SW6020	--	57	507.1	700	3.75	2.42	2.32	2.62	4.30
Cadmium	SW6020	--	5.1	--	14	0.06 J	0.03 J	0.11 U	0.12 U	0.09 J
Chromium	SW6020	--	260	--	--	8.21	8.63	8.95	8.29	9.26
Copper	SW6020	--	390	--	1300	13.3	13.8	12.8	10.9	17.7
Lead	SW6020	--	450	975	1200	1.76	1.83	1.64	1.26	2.61
Mercury	SW7471B	--	0.41	1.5	2.3	0.0148 J	0.0103 J	0.00997 J	0.00631 J	0.0213 J
Selenium	SW6020	--	--	3	--	0.45 J	0.50 J	0.50 J	0.37 J	0.44 J
Silver	SW6020	--	6.1	--	8.4	0.04 J	0.03 J	0.03 J	0.03 J	0.05 J
Zinc	SW6020	--	410	--	3800	23.1	22.8	22.2	18.6	25.6
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.85 U	3.85 U	3.81 U	3.85 UJ	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 U	20.0 U	19.9 U	-- R	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	100 U	99.9 U	99.6 U	99.9 UJ	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	50.0 U	49.9 U	49.8 U	62.0	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	21.8	20.0 U	19.9 U	22.9 U	24.8
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 UJ	2.5 J
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U
Phenol	SW8270ESIM	--	420	--	1200	5.0 U	8.2	8.4	5.0 UJ	5.0 U
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	20.0 U	--	--	--	20.0 U
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	20.0 U	20.0 U	19.9 U	20.0 U	10.3 J
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--	--	--	--	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	--	21000	20.0 U	20.0 U	19.9 U	20.0 U	11.2 J
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	5.0 U	10.0 U	10.0 U	5.0 J	5.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	4600	30000	20.0 U	16.0 J	19.9 U	20.0 U	11.1 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	--	21000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	11980	16000	20.0 U	17.3 J	19.9 U	15.1 J	15.6 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	40.0 U	33.3 J	39.9 U	20 J	48.2 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U

Table 1
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DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Oxychlordane	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 U	1.00 U	1.00 U	1 UJ	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	110	308	94.0	66.5	276
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	4.70 EMPC	5.34	2.85	1.86 J	14.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	10.2	29.4	8.97	4.08	30.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	2.43	3.61	1.54	0.874 J	6.63
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.407 U	0.253 U	0.240 U	0.0020 U	0.552 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.293 U	0.302 JEMPC	0.217 U	0.022 U	0.374 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.537 JEMPC	0.714 J	0.554 JEMPC	0.012 U	2.43
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.324 U	1.52	0.391 J	0.025 U	1.29 EMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.259 U	0.156 U	0.127 J	0.012 U	0.906 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.336 U	0.454 JEMPC	0.268 JEMPC	0.025 U	0.501 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.348 U	0.205 U	0.254 U	0.018 U	0.313 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.264 U	0.265 J	0.203 U	0.085 U	0.449 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.182 U	0.168 JEMPC	0.270 JEMPC	0.0090 U	0.637 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.249 U	0.154 U	0.180 U	0.012 U	0.228 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.205 U	0.186 U	0.190 U	0.144 J	0.366 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.173 U	0.136 U	0.149 U	0.113 U	0.214 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.163 U	0.185 U	0.222 J	0.014 U	0.352 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	24.1	62.9	20.2	9.74	65.9
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	6.88	11.2	4.97	1.76	20.9
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	1.84	4.84	1.19	0.518 J	4.09
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	1.81	6.27	1.42	-- U	9.90
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	0.302	0.530 J	-- U	0.168	0.318
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	-- U	1.18	-- U	-- U	1.64

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface				Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID				WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date				10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID				WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix				SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	0.177 J	-- U	-- U	-- U
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	0.145 J	0.222 J	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.21 J	0.993 J	0.298 J	0.113 J	1.13 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	0.57 J	1.13 J	0.537 J	0.219 J	1.51 J
PCB Aroclors (mg/kg-OC)										
Aroclor 1016	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1221	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1232	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1242	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1248	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1254	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1260	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	1.8 J	1.9 U
Aroclor 1262	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1268	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	2.9 U	4.4 U	2.7 U	1.8 J	1.9 U
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

Notes:

- Detected concentration is greater than DMMP SL screening level
- Detected concentration is greater than DMMP BT screening level
- Detected concentration is greater than DMMP ML screening level
- Non-detected concentration is above one or more identified screening levels

Bold: Detected result

Analysis included total solids, total volatile solids, total organic carbon, ammonia, sulfide, metals, butyltins, semivolatile organic compounds, pesticides, PCBs, and D/F.

Calculated values have been rounded to laboratory-reported significant digits.

EMPC: Estimated maximum possible concentration

J: Estimated value

R: Rejected

U: Compound analyzed for but not detected above detection limit

UJ: Compound analyzed for, but not detected above estimated detection limit

--: not applicable/no data

µg/kg: microgram per kilogram

BT: bioaccumulation trigger

D/F: dioxins/furans

D/F TEF: total dioxin/furan TEQ 2005 (mammal) (TEF)

DDx: total dichlorodiphenyltrichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyldichloroethane

DMMP: Dredged Material Management Program

DMMU: Dredged Material Management Unit

HPAH: high-molecular-weight polycyclic aromatic hydrocarbon

ID: identification

LPAH: low molecular weight polycyclic aromatic hydrocarbon

mg/kg: milligram per kilogram

ML: maximum level

ng/kg: nanogram per kilogram

OC: organic carbon

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

pct: percent

QC: quality control

SE: sediment

SL: screening level

TEQ: toxic equivalence

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Surface or Subsurface			Surface	Surface	Surface	Surface	Surface	Subsurface
		Location ID			HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B
		Sample Date			11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024
		Sample ID			HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030
Matrix			SE	SE	SE	SE	SE	SE	SE	
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	3.92	0.89	2.99	0.93	1.44	0.55
Sulfide	SM4500S2D	--	--	--	128	1.9 J	11.2 J	49.0	41.4 J	1.08 UJ
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.41	0.25	0.18	0.32	0.22	0.2
Total solids	D2216 / SM2540G	--	--	--	66.76	76.62	75.21	80.06	76.57	84.48
Total volatile solids	PSEP-TVS	--	--	--	2.56	1.46	1.55	1.80	1.52	1.14
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.29 U	0.26 UJ	0.26 U	0.25 U	0.26 UJ	0.23 UJ
Arsenic	SW6020	--	57	93	3.12	1.56 J	2.09	2.10	2.17 J	1.03 J
Cadmium	SW6020	--	5.1	6.7	0.07 J	0.13 U	0.13 U	0.05 J	0.13 U	0.12 U
Chromium	SW6020	--	260	270	11.0	8.7 J	9.77	11.1	8.56 J	7.59 J
Copper	SW6020	--	390	390	21.6	11.8	13.8	16.8	14.2	8.65
Lead	SW6020	--	450	530	3.66	1.49	2.34	2.77	2.8 J	1.04 J
Mercury	SW7471B	--	0.41	0.59	0.0184 J	0.00829 J	0.0164 J	0.0190 J	0.0211 J	0.0264 U
Selenium	SW6020	--	--	--	0.59 J	0.24 J	0.54 J	0.52 J	0.4 J	0.34 J
Silver	SW6020	--	6.1	6.1	0.05 J	0.04 J	0.04 J	0.05 J	0.06 J	0.03 J
Zinc	SW6020	--	410	960	31.4	18.8	24.2	24.4	21.2	16.3
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	3.85 U	3.86 UJ	6.81	3.84 U	3.85 UJ	3.84 UJ
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
2,4-Dimethylphenol	SW8270ESIM	--	29	29	20.0 U	20.0 UJ	20.0 UJ	20.0 UJ	19.9 UJ	20.0 UJ
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	6.6	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
Benzoic acid	SW8270ESIM	--	650	650	75.9 J	99.9 UJ	100 U	54.0 J	99.3 UJ	99.8 UJ
Benzyl alcohol	SW8270ESIM	--	57	73	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	58.9	50.0 U	50.0 U	50.0 U	49.7 U	49.9 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	6.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	12.7 J	20 U	20.0 U	20 U	19.9 U	20 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	Surface	Surface	Surface	Surface	Surface	Subsurface
					Location ID	Location ID	Location ID	Location ID	Location ID	Location ID
					Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date
					Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	360	690	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	29.5 UJ
Phenol	SW8270ESIM	--	420	1200	6.9	5.0 UJ	9.9	5.0 U	5.0 UJ	21.4 J
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	670	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Acenaphthene	SW8270E	--	500	500	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ
Anthracene	SW8270E	--	960	960	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	10.9 J	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	13.1 J	20.0 U	11.4 J	20.0 U	14.2 J	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Carbazole	SW8270E	--			20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Chrysene	SW8270E	--	1400	2800	14.7 J	20.0 U	12.3 J	11.1 J	13.9 J	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	3.0 J	5.0 U	10.0 U	5.0 U	5.0 U	5.0 U
Dibenzofuran	SW8270E	--	540	540	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	19.1 J	15.8 J	15.3 J	12.4 J	17.8 J	20.0 U
Fluorene	SW8270E	--	540	540	20.0 U	20.0 U	20.0 U	20.0 UJ	19.9 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	20.0 U	20.5 J	20.0 U	20.0 U	19.9 UJ	10.3 J
Phenanthrene	SW8270E	--	1500	1500	12.8 J	14.7 J	11.8 J	20.0 U	10.7 J	20.0 U
Pyrene	SW8270E	--	2600	3300	21.7	27.5	25.2	17.8 J	25.3	10.7 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	83 J	43.3 J	64.2 J	41.3 J	71.2 J	10.7 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	12.8 J	35.2 J	11.8 J	20.0 UJ	10.7 J	10.3 J
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	Surface	Surface	Surface	Surface	Surface	Subsurface
					Location ID	Location ID	Location ID	Location ID	Location ID	Location ID
					Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date
					Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
Oxychlordane	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 U	1 UJ	1.00 UJ	1.00 UJ	1 UJ	1 UJ
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.93 J
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	206	62.1	198	147	138	18.9
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	9.97	3.22	5.71	6.84	8.71	0.915 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	25.0	6.84	18.4	15.8	18.2	2.38 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	5.36	1.63 J	2.67	3.92 J	3.94	0.743 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.673 JEMPC	0.0020 U	0.312 U	0.394 J	0.691 J	0.0020 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.395 U	0.022 U	0.230 U	0.183 U	0.027 U	0.016 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.859 J	0.461 J	0.397 J	0.923 J	1.38	0.010 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	1.18	0.024 U	0.890 J	0.788 J	0.949 J	0.127 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.529 JEMPC	0.018 U	0.240 J	0.137 U	0.461 J	0.010 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.691 J	0.025 U	0.488 J	0.594 J	0.505 J	0.018 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.363 U	0.021 U	0.207 U	0.248 J	0.026 U	0.013 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.410 U	0.135 U	0.323 U	0.175 U	0.105 U	0.073 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.471 J	0.223 J	0.174 J	0.443 J	0.832 J	0.0070 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.268 U	0.017 U	0.146 U	0.128 U	0.268 J	0.010 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.348 U	0.090 U	0.186 U	0.170 U	0.393 J	0.073 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.309 U	0.103 U	0.144 U	0.105 U	0.123 U	0.077 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.550 JEMPC	0.138 J	0.239 U	0.389 J	0.84 J	0.010 U
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	56.4	14.3	41.5	42.2	42.6	5.09
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	14.8	2.95	9.20	10.9	12.2	1.32
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	4.77	1.07	4.87	3.56	4.96	0.575 J

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix					HT-01 Surface HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02 Surface HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03 Surface HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04 Surface HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05 Surface HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06 Subsurface HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	3.14	1.58	4.37	2.80	6.51	0.275 J
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	1.32	-- U	0.202 J	0.142 J	0.45 J	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	2.02	-- U	1.14	0.977 J	1.63	-- U
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	-- U	-- U	-- U	0.875 J	0.75	0.134 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	-- U	0.646 J	1.5	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.770 J	0.171 J	0.479 J	0.555 J	0.86 J	0.0499 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	1.23 J	0.310 J	0.783 J	0.743 J	0.97 J	0.140 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	2.16	8.67	1.92	7.22	1.32	0.44 U
Sulfide	SM4500S2D	--	--	--	2.26 J	16.8 J	2.66	1.79 J	5.30	3.54
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.15	0.25	0.06	0.24	0.15	0.16
Total solids	D2216 / SM2540G	--	--	--	81.31	73.73	83.59	80.51	82.88	83.39
Total volatile solids	PSEP-TVS	--	--	--	1.58	1.67	1.34	1.27	1.15	1.14
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.24 U	0.25 U	0.22 U	0.24 UJ	0.23 U	0.24 U
Arsenic	SW6020	--	57	93	1.63	1.51	0.94	1.12 J	2.81	3.17
Cadmium	SW6020	--	5.1	6.7	0.12 U	0.13 U	0.11 U	0.1 J	0.04 J	0.04 J
Chromium	SW6020	--	260	270	9.74	9.63	8.16	9.49 J	12.0	9.18
Copper	SW6020	--	390	390	13.1	16.3	11.2	10.4	14.6	15.1
Lead	SW6020	--	450	530	1.86	1.67	1.30	1.38	2.25	2.22
Mercury	SW7471B	--	0.41	0.59	0.0120 J	0.0235 J	0.00900 J	0.0135 J	0.0110 J	0.0148 J
Selenium	SW6020	--	--	--	0.57 J	0.55 J	0.39 J	0.41 J	0.52 J	0.49 J
Silver	SW6020	--	6.1	6.1	0.03 J	0.04 J	0.22 U	0.03 J	0.04 J	0.04 J
Zinc	SW6020	--	410	960	21.2	22.4	18.4	22.1	24.4	25.9
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	2.78 J	3.84 U	3.85 U	3.85 UJ	3.86 U	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 U	5.0 U	5.0 UJ	2.7 J	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 U	5.0 U	5.0 UJ	3.1 J	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	29	20.0 UJ	20.0 UJ	19.9 U	20.0 UJ	20.0 U	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	650	100 U	100 U	499 UJ	99.9 UJ	99.9 U	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	73	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	50.0 U	50.0 U	49.9 U	50.0 U	49.9 U	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	5.0 U	5.0 U	19.9 U	5.0 U	3.4 J	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	20.0 U	20.0 U	21.9 U	20 U	20.0 U	20.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	360	690	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U
Phenol	SW8270ESIM	--	420	1200	5.2	8.3	5.0 U	5.0 UJ	5.1	6.9
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	670	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	500	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Anthracene	SW8270E	--	960	960	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	20.0 U	20.0 U	19.9 U	20.0 U	12.0 J	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	40.0 U	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Carbazole	SW8270E	--			20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	2800	20.0 U	20.0 U	19.9 U	20.0 U	19.0 J	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	10.0 U	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	540	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	17.8 J	20.0 U	19.9 U	20.0 U	45.1	20.0 U
Fluorene	SW8270E	--	540	540	20.0 U	20.0 U	19.9 UJ	20.0 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	1500	10.6 J	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	3300	15.8 J	20.0 U	19.9 U	20.0 U	50.0	11.2 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	40.0 U	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	33.6 J	40.0 U	39.9 U	40.0 U	126 J	11.2 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	10.6 J	20.0 U	19.9 UJ	20.0 UJ	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
Oxychlordane	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1 UJ	1.00 U	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.71 J	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	74.2	11.1	3.34 J	32	388	218
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	2.19 J	0.396 U	0.361 U	2.34 J	10.5	7.34
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	7.04	0.779 J	0.235 J	4.31	36.1	22.3
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	1.23	0.216 J	0.144 UJ	1.43	4.61	3.98
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.309 U	0.314 U	0.224 UJ	0.0030 U	0.356 JEMPC	0.481 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.281 U	0.236 U	0.199 U	0.024 U	0.374 JEMPC	0.224 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.146 U	0.146 U	0.119 U	0.642 J	0.990 J	1.11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.323 J	0.247 U	0.231 U	0.026 U	1.34 EMPC	1.05
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.133 U	0.152 U	0.120 U	0.017 U	0.311 JEMPC	0.198 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.304 U	0.263 U	0.234 U	0.027 U	0.558 J	0.503 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.198 U	0.190 U	0.173 U	0.024 U	0.294 JEMPC	0.241 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.278 U	0.223 U	0.168 U	0.102 U	0.259 JEMPC	0.227 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.159 U	0.199 U	0.189 U	0.321 J	0.329 JEMPC	0.288 JEMPC
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.140 U	0.153 U	0.115 U	0.017 U	0.170 U	0.196 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.169 U	0.216 U	0.201 U	0.094 U	0.202 JEMPC	0.306 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.134 U	0.168 U	0.118 U	0.111 U	0.151 U	0.172 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.183 U	0.170 U	0.168 U	0.321 J	0.378 JEMPC	0.423 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	15.8	2.83	0.235 J	9.77	78.0	52.5
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	3.84	-- U	-- U	3.1	16.2	12.5
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	0.440 J	0.186 J	-- U	0.471 J	8.15	3.22

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	1.68	-- U	-- U	1.2	7.15	5.84
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	-- U	-- U	-- U	0.278 J	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	0.127 J	0.178 J	-- U	-- U	0.182 J	1.00
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	0.268 J	-- U	-- U	-- U	0.413 J	0.656 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	-- U	0.321 J	0.126 J	0.501 J
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.138 J	0.0133 J	0.00335 J	0.17 J	1.28 J	0.739 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	0.442 J	0.324 J	0.249 J	0.30 J	1.37 J	0.984 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.0 U	4.0 U	4 U	4.0 U	4.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
Matrix			SE	SE	SE	SE	SE	SE	SE	
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	0.57	3.23	1.61	0.58	0.40 U	4.16
Sulfide	SM4500S2D	--	--	--	16.3	1.40	1.72	1.06 U	1.1 UJ	78.4
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.11	0.14	0.09	0.15	0.19 J	0.21
Total solids	D2216 / SM2540G	--	--	--	80.03	81.28	84.95	85.41	85.38	77.09
Total volatile solids	PSEP-TVS	--	--	--	1.25	1.29	1.02	1.07	1.3	1.49
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.24 U	0.24 U	0.22 U	0.22 U	0.23 U	0.25 U
Arsenic	SW6020	--	57	93	3.28	3.75	2.42	2.32	2.62	4.30
Cadmium	SW6020	--	5.1	6.7	0.12 U	0.06 J	0.03 J	0.11 U	0.12 U	0.09 J
Chromium	SW6020	--	260	270	7.63	8.21	8.63	8.95	8.29	9.26
Copper	SW6020	--	390	390	12.0	13.3	13.8	12.8	10.9	17.7
Lead	SW6020	--	450	530	1.68	1.76	1.83	1.64	1.26	2.61
Mercury	SW7471B	--	0.41	0.59	0.0104 J	0.0148 J	0.0103 J	0.00997 J	0.00631 J	0.0213 J
Selenium	SW6020	--	--	--	0.42 J	0.45 J	0.50 J	0.50 J	0.37 J	0.44 J
Silver	SW6020	--	6.1	6.1	0.03 J	0.04 J	0.03 J	0.03 J	0.03 J	0.05 J
Zinc	SW6020	--	410	960	18.5	23.1	22.8	22.2	18.6	25.6
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	19.0	3.85 U	3.85 U	3.81 U	3.85 UJ	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	29	19.9 U	20.0 U	20.0 U	19.9 U	-- R	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	650	99.6 U	100 U	99.9 U	99.6 U	99.9 UJ	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	73	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	49.8 U	50.0 U	49.9 U	49.8 U	62.0	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	19.9 U	21.8	20.0 U	19.9 U	22.9 U	24.8

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	2.5 J
Pentachlorophenol	SW8270ESIM	--	360	690	19.9 U	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U
Phenol	SW8270ESIM	--	420	1200	10.4	5.0 U	8.2	8.4	5.0 UJ	5.0 U
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	20.0 U	--	--	--	20.0 U
2-Methylnaphthalene	SW8270E	--	670	670	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	500	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Anthracene	SW8270E	--	960	960	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	10.3 J
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	39.9 U	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--			19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	2800	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	11.2 J
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	10.0 U	5.0 U	10.0 U	10.0 U	5.0 J	5.0 U
Dibenzofuran	SW8270E	--	540	540	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	18.0 J	20.0 U	16.0 J	19.9 U	20.0 U	11.1 J
Fluorene	SW8270E	--	540	540	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	1500	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	3300	14.2 J	20.0 U	17.3 J	19.9 U	15.1 J	15.6 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	39.9 U	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	32.2 J	40.0 U	33.3 J	39.9 U	20 J	48.2 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Oxychlordane	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1 UJ	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	118	110	308	94.0	66.5	276
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	4.53	4.70 EMPC	5.34	2.85	1.86 J	14.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	11.6	10.2	29.4	8.97	4.08	30.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	2.22	2.43	3.61	1.54	0.874 J	6.63
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.255 U	0.407 U	0.253 U	0.240 U	0.0020 U	0.552 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.185 U	0.293 U	0.302 JEMPC	0.217 U	0.022 U	0.374 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.681 J	0.537 JEMPC	0.714 J	0.554 JEMPC	0.012 U	2.43
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.586 JEMPC	0.324 U	1.52	0.391 J	0.025 U	1.29 EMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.155 U	0.259 U	0.156 U	0.127 J	0.012 U	0.906 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.337 JEMPC	0.336 U	0.454 JEMPC	0.268 JEMPC	0.025 U	0.501 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.200 U	0.348 U	0.205 U	0.254 U	0.018 U	0.313 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.254 U	0.264 U	0.265 J	0.203 U	0.085 U	0.449 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.309 JEMPC	0.182 U	0.168 JEMPC	0.270 JEMPC	0.0090 U	0.637 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.156 U	0.249 U	0.154 U	0.180 U	0.012 U	0.228 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.180 JEMPC	0.205 U	0.186 U	0.190 U	0.144 J	0.366 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.152 U	0.173 U	0.136 U	0.149 U	0.113 U	0.214 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.212 JEMPC	0.163 U	0.185 U	0.222 J	0.014 U	0.352 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	26.4	24.1	62.9	20.2	9.74	65.9
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	7.48	6.88	11.2	4.97	1.76	20.9
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	-- U	1.84	4.84	1.19	0.518 J	4.09

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	3.83	1.81	6.27	1.42	-- U	9.90
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	-- U	0.302	0.530 J	-- U	0.168	0.318
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	0.107 J	-- U	1.18	-- U	-- U	1.64
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	0.321 J	-- U	0.177 J	-- U	-- U	-- U
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	0.145 J	0.222 J	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.420 J	0.21 J	0.993 J	0.298 J	0.113 J	1.13 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	0.659 J	0.57 J	1.13 J	0.537 J	0.219 J	1.51 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Notes:

TOC out of range

- Detected concentration is greater than Marine AET SCO
- Detected concentration is greater than Marine AET CSL
- Non-detected concentration is above one or more identified screening levels

Bold: Detected result

Calculated values have been rounded to laboratory-reported significant digits.

Organic carbon normalized results are not reported if TOC concentration of the sample is outside of 0.5% to 3.5%.

EMPC: Estimated maximum possible concentration

J: Estimated value

R: Rejected

U: Compound analyzed for but not detected above detection limit

UJ: Compound analyzed for but not detected above estimated detection limit

--: not applicable/no data

µg/kg: microgram per kilogram

AET: apparent effects threshold

CSL: cleanup screening level

D/F: dioxins/furans

D/F TEF: total dioxin/furan TEQ 2005 (mammal) (TEF)

DDx: total dichlorodiphenyltrichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyldichloroethane

DMMP: Dredged Material Management Program

DMMU: Dredged Material Management Unit

HPAH: high-molecular-weight polycyclic aromatic hydrocarbon

LPAH: low molecular weight polycylic aromatic hydrocarbon

mg/kg: milligram per kilogram

ng/kg: nanogram per kilogram

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

pct: percent

SCO: sediment cleanup objective

SE: sediment

TEQ: toxic equivalence

TOC: total organic carbon

**Appendix E - United States
Army Corps of Engineers NWS-
2024-446-WRD**

Memorandum for Record

October 22, 2025

Subject: Suitability Determination Memorandum and Antidegradation Assessment for Husky and Washington United Terminals Berth Deepening in Tacoma, Washington (NWS-2024-1010-WRD).

Introduction

This suitability determination memorandum (SDM) and antidegradation assessment documents the consensus regarding the suitability of the proposed dredged material for unconfined aquatic disposal and compliance of the post-dredge leave surface as determined by the Dredged Material Management Program (DMMP) agencies (U.S. Army Corps of Engineers (USACE), Washington Departments of Ecology and Natural Resources, and the U.S. Environmental Protection Agency (EPA)).

Project Description

The Port of Tacoma (Port) is evaluating dredging of the berthing areas of Husky Terminals 3 and 4 (Husky) and Washington United Terminal (WUT) in the Blair Waterway, Tacoma, Washington (Figures 1 - 3). The objective of this dredging is to improve and modernize the berthing areas to accommodate newer, larger container vessels. The targeted depth of -57 feet (ft) mean lower low water (MLLW) plus a 2 ft overdredge (final elevation -59 ft MLLW) would match the depth proposed for the deepening the federal navigation channel in the Blair Waterway.

Additionally, to provide scour protection to the berth areas, deeper dredging and placement of riprap armoring is proposed adjacent to the toe walls at Husky Terminal 3 and WUT, as well as at the riprap keyway of Husky Terminal 4. The scour protection cuts are designed to a depth of -63.5 ft MLLW plus a 1 ft overdredge (final elevation -64.5 ft MLLW), extending approximately 11 feet in width from the slope toward the channel. Figure 4 provides an example of the scour protection cut.

Project Summary

Waterbody	Blair Waterway in Tacoma Harbor
Water classification	Marine
Project rank	Moderate
Total proposed dredging volume (cy)	314,851 ; 161,490 (Husky), 153,361 (WUT)
Target proposed dredging depth	-57 ft MLLW
Max. proposed dredging depth (including 2 feet of overdepth)	-59 ft MLLW
Target scour protection cuts (including 1 foot of overdepth)	Up to -64.5 ft MLLW
Proposed disposal location(s)	Non-dispersive open-water disposal or beneficial use
Dredged Material Management Units (DMMUs)	18 DMMUs; 10 (Husky), 8 (WUT)
EIM Study ID	POTHW24
USACE Regulatory Reference Number	NWS-2024-1010-WRD
Sampling and Analysis Plan (SAP) Approval Date	October 18, 2024 (Anchor QEA, 2024)
Sampling Date(s)	October 22 – November 14, 2024
Sediment Characterization Report Approval Date	July 28, 2025 (Anchor QEA, 2025a)
Sediment Characterization Report Addendum #1 Memorandum Approval Date	October 22, 2025 (Anchor QEA, 2025b)
Testing Parameters	DMMP Marine COCs plus dioxins/furans and TBT
Suitability Outcome	All material found suitable for non-dispersive in-water disposal
Recency Expiration Date: Moderate=5 years	October 2029
Antidegradation Assessment	In compliance

Sampling and Analysis Description

Sediment sampling activities were conducted in the project areas from October 22 through November 14, 2024, using Gravity Marine Services' research vessel *Tieton*, a 32-foot aluminum landing craft. All sediment sampling was conducted using vibracore equipment except for three locations at the Husky Terminal where a box core sample was used for locations on top of the rock keyway where vibracoring was not feasible. Sediments below the rock keyway are assumed to be native and clean, as these areas underwent significant cleanup and reconfiguring during 2015-2016 (Anchor QEA, 2024). The areas that represent the scour protection cuts were not sampled directly nor were any samples collected to the proposed cut depth due to the existing rock keyway.

A differential global positioning system (GPS) mounted to the vessel A-frame was used for sample station positioning. Mudline elevations and real-time tidal corrections were determined at each station using a Real-Time Kinematic (RTK) GPS and a high precision fathometer. Calibration was performed using a Washington State Reference marker in addition to comparison to water levels from the National Oceanic and Atmospheric Administration automated tide station in Commencement Bay, Tacoma, WA (Station ID: 9446484). Lead line measurements were also taken during sampling as an additional quality control step.

Most samples were collected with 10 feet of the targeted sample location except for three vibracore samples and one box core sample. All station adjustments were coordinated with the DMMP and remained within their respective DMMU boundaries. Core acceptability deviations occurred due to recurring shallow refusal. Among 51 accepted vibracore samples:

- 36 samples did not reach the Z-layer interval due to refusal.
- Four samples did not reach both the subsurface and Z-layer interval.
- 19 samples had less than 75% recovery.

All three box core samples failed to reach full penetration depth of 50 centimeters along the rock keyway and may have been due to lower sediment accumulation in this area than expected.

If sample recovery criteria were not met for any vibracore or box core sample on the first attempt, up to two additional attempts were made (and in one case a total of five attempts). The attempt with the highest recovery were accepted for all samples and was coordinated with the DMMP agencies.

Samples were transported to a shore-side location at the head of the Sitcum Waterway for processing. Sediment samples were submitted to Analytical Resources, LLC in Tukwila, WA for analysis.

Data Validation

Laboratory Data Consultants, Inc. conducted an EPA Stage 2B review and validation for all DMMU chemistry data. Only minor issues were documented. One 2,4-dimethylphenol result was rejected due to quality control recovery criteria not being met, and one sulfide result was rejected due to an exceedance of the hold-time. The DMMP agencies determined that the data are sufficient for decision-making.

Analytical Testing Results

Tables 1 and 2 summarize the analytical results for the samples alongside the DMMP marine guidelines (DMMP, 2021) and SMS (Ecology, 2013). All chemical concentrations were below Screening Levels and Bioaccumulation Triggers.

Biological Testing

Biological Testing was not required based on the results of the analytical screening.

DMMP Determinations

Suitability Determination

Chemical concentrations from the Husky and WUT composite samples were below the DMMP marine SLs and BTs. The DMMP agencies have concluded that all of the characterized material (314,851 cy) from Husky and WUT is suitable for open-water disposal at the Commencement Bay non-dispersive disposal site. Sediments at the scour protection cuts are assumed to be native and also suitable for aquatic disposal.

Antidegradation Determination

The sediment to be exposed by dredging must either meet the State of Washington Sediment Management Standards (SMS) or the State's Antidegradation Standard (Ecology, 2013) as outlined by DMMP guidance (DMMP, 2008). Concentrations of all DMMP chemicals of concern were below the DMMP screening levels and there is no reason to believe that a new exposed surface would be contaminated relative to the overlying materials; therefore, this project is in compliance with the State of Washington's antidegradation standard. Expected native material below the scour protection cuts is also assumed to be in compliance. The scour protection areas will be covered with new rock armoring effectively burying the newly exposed sediment.

Suitability for Beneficial Use

The DMMP agencies do not determine the suitability of material for beneficial use projects. It is up to the project proponents, the site receiving the material, and other interested stakeholders including applicable resource agencies and Tribes to determine the physical and chemical suitability of dredged materials for a beneficial use site.

The Tacoma Harbor Integrated Feasibility Report and Environmental Assessment (USACE 2022) identified factors that may be considered when evaluating potential dredged material for beneficial use from the Blair Federal Navigation Channel. Those elements included:

- Meeting the suitability requirements for open-water disposal per DMMP guidance.
- Meeting Washington State's Sediment Management Standard (SMS) benthic criteria.
- Total polycyclic aromatic hydrocarbon (PAH) is less than 2,000 micrograms per kilogram
- Total Dioxin/Furan Toxic Equivalency (TEQ) of less than 4 parts per trillion

Sediment evaluated under the Husky and Washington United Terminals Berth Deepening characterization meet the criteria listed above.

Debris Management

The DMMP agencies implemented a debris management requirement following the 2015 SMARM to prevent the disposal of debris (natural or anthropogenic) greater than 12 inches in any dimension at open-water disposal sites in Puget Sound. Debris screens shall be used for this project unless it can be demonstrated that debris is unlikely to be present or that the debris is large woody debris that can be easily observed and removed by other means during dredging. Debris screen usage, or detailed justification for not using one, must be included in the dredging quality assurance plan.

Notes and Clarifications

The decisions documented in this memorandum do **not** constitute final agency approval of the project. During the public comment period that follows a public notice, resource agencies will provide input on the overall project. A final decision will be made after full consideration of agency input, and after an alternatives analysis is done under section 404(b)(1) of the Clean Water Act.

A pre-dredge meeting with DNR, Ecology, and the Corps of Engineers is required at least 7 days prior to dredging. A dredging quality control plan must be developed and submitted to the USACE Seattle District's Regulatory Branch and Ecology. Refer to the USACE permit and Ecology 401 certification for project-specific submittal requirements and timelines.

Projects proposing to use one of the DMMP open-water disposal sites must submit their application for a Site Use Authorization (SUA) to the Washington State Department of Natural Resources (DNR) at least 4 weeks prior to dredging. Applications submitted less than 4 weeks prior to dredging may be subject to delays.

References

Anchor QEA, 2024. Husky and Washington United Terminals Berth Deepening Sediment Characterization. Sampling and Quality Assurance Project Plan. Final. October 2024. Prepared for Port of Tacoma. Prepared by Anchor QEA.

- Anchor QEA, 2025a. Husky and Washington United Terminals Berth Deepening Sediment Characterization. Sediment Characterization Report. Final. July 2025. Prepared for Port of Tacoma. Prepared by Anchor QEA.
- Anchor QEA, 2025b. Husky and Washington United Terminals Berth Deepening – Sediment Characterization Report Addendum #1. Memorandum Final. October 2025. Prepared for DMMP. Prepared by Anchor QEA.
- DMMP, 2008. *Quality of Post-Dredge Sediment Surfaces (Updated)*. A Clarification Paper Prepared by David Fox (USACE), Erika Hoffman (EPA) and Tom Gries (Ecology) for the Dredged Material Management Program, June 2008.
- DMMP, 2021b. *Dredged Material Evaluation and Disposal Procedures (User Manual)*. Dredged Material Management Program, updated July 2021.
- Ecology. 2021. Sediment Cleanup User's Manual (SCUM): Guidance for Implementing the Cleanup Provisions of the Sediment Management Standards, Chapter 173-204-WAC. December 2021.
- Ecology, 2013. *Sediment Management Standards – Chapter 173-204 WAC*. Washington State Department of Ecology, February 2013.
- USACE (U.S. Army Corps of Engineers), 2022. Final Integrated Feasibility Report and Environmental Assessment. Tacoma Harbor, Washington Feasibility Study. June 2022.

Agency Signatures

<u>10/23/2025</u>	<u><i>Brian Hester</i></u>
Date	Brian Hester – U.S. Army Corps of Engineers, Seattle District
<u>10/22/2025</u>	<u><i>Whitney Conard</i></u>
Date	Whitney Conard, PhD. – U.S. Environmental Protection Agency, Region 10
<u>10/23/2025</u>	<u><i>Laura Inouye</i></u>
Date	Laura Inouye, PhD. – Washington State Department of Ecology
<u>10/22/2025</u>	<u><i>Shannon Soto</i></u>
Date	Shannon Soto – Washington State Department of Natural Resources

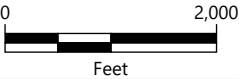
Copies Furnished:

DMMP agencies
LeeAnn Simmons, Regulatory Project Manager
Sara Potter, Port of Tacoma
Christine Simmons, Anchor QEA
DMMO File



LEGEND:
Property Boundary

NOTE:
1. Imagery sources: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, and NPS; World Imagery: Maxar





SOURCE: Survey by USACE, dated October 27, 2021, and David Evans and Associates, Inc., dated May 27, 2022, with data gaps filled from survey by USACE dated November 14, 2022. Aerial from Bing Maps. Current Federal Navigation Channel linework provided by Port of Tacoma and USACE dated 2023.

HORIZONTAL DATUM: Washington State Plane South Zone, NAD83, U.S. Survey Feet

VERTICAL DATUM: MLLW

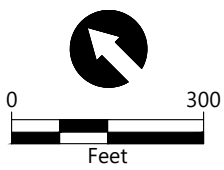
ABBREVIATIONS:

DMMU: Dredged Material Management Unit
H:V: Horizontal to Vertical
MLLW: Mean Lower Low Water
PED: Pre-Engineering Design
USACE: U.S. Army Corps of Engineers

LEGEND:

- PED Federal Navigation Channel
- - - Current Federal Navigation Channel
- - - Feasibility Study Federal Navigation Channel
- Extent of Pier
- 55 Existing Contours (1' & 5' Intervals)

- ▲ Outfall
- DMMU-1 Surface DMMU
- DMMU-6 Subsurface DMMU
- Proposed Sediment Core Location
- Actual Sediment Core Location



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Filepath: K:\Projects\0092-Port of Tacoma\Berth Deepening and Habitat Restoration\0092-RP-003 (Dredge Plan-Sediment Characterization).dwg Figure 2a



Figure 2
Proposed and Actual Sampling Locations: Husky Terminal
Sediment Characterization Report
Husky and Washington United Terminals Berth Deepening Sediment Characterization



SOURCE: Survey by USACE, dated October 27, 2021, and David Evans and Associates, Inc., dated May 27, 2022, with data gaps filled from survey by USACE dated November 14, 2022. Aerial from Bing Maps. Current Federal Navigation Channel linework provided by Port of Tacoma and USACE dated 2023.

HORIZONTAL DATUM: Washington State Plane South Zone, NAD83, U.S. Survey Feet

VERTICAL DATUM: MLLW

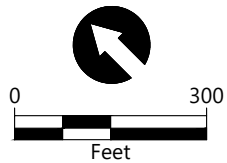
ABBREVIATIONS:

- DMMU: Dredged Material Management Unit
- H:V: Horizontal to Vertical
- MLLW: Mean Lower Low Water
- PED: Pre-Engineering Design
- USACE: U.S. Army Corps of Engineers

LEGEND:

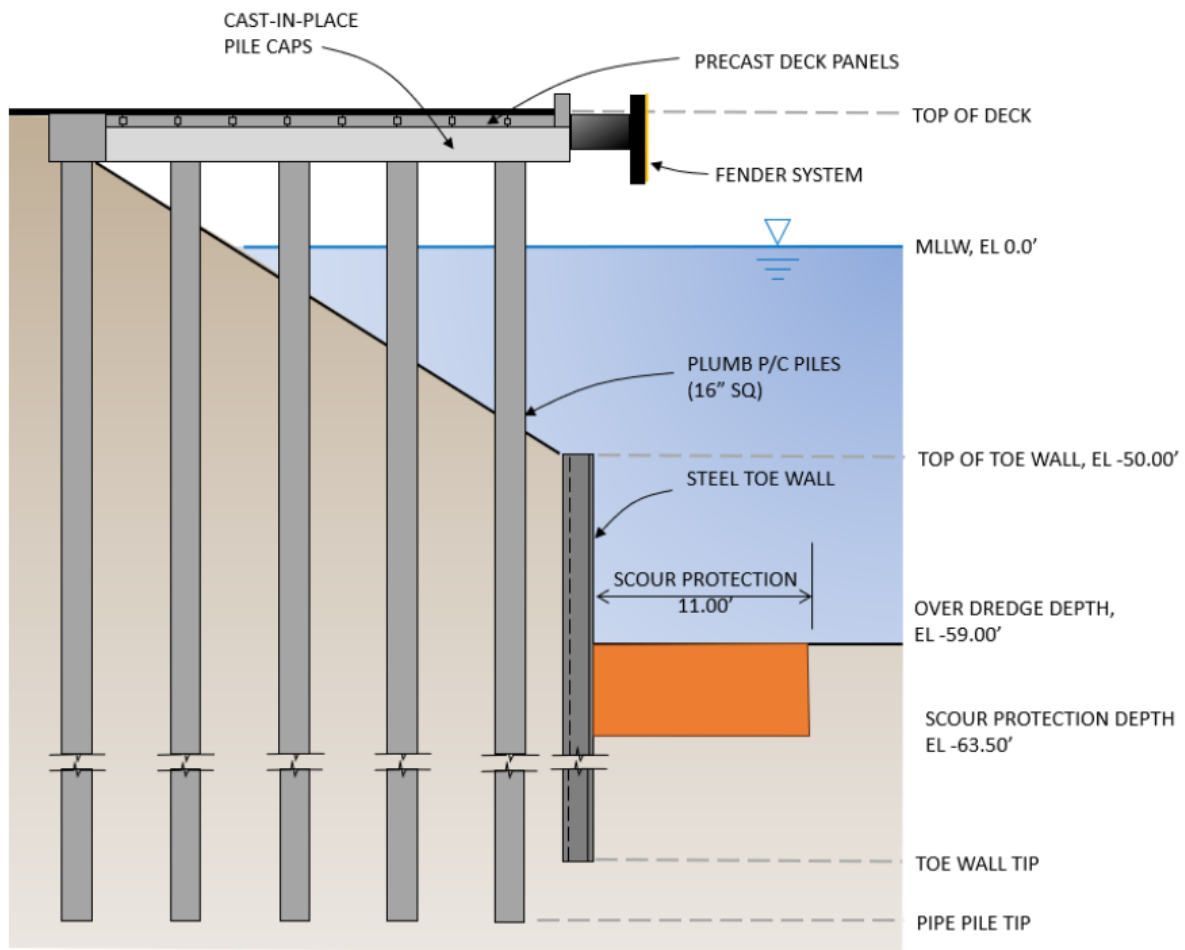
- PED Federal Navigation Channel
- Current Federal Navigation Channel
- Feasibility Study Federal Navigation Channel
- Extent of Pier
- Existing Contours (1' & 5' Intervals)

- Outfall
- Surface DMMU
- Subsurface DMMU
- Proposed Sediment Core Location
- Actual Sediment Core Location



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Figure 4
Husky and Washington United Terminals Updated Scour Protection Requirements



Note: Excerpt from interim design submittal (post-30%/pre-60% design) dated 7/21/2025. Calculation of riprap quantities based on prop wash study and existing scour protection for project permitting purposes. Design is subject to change; however, the depth and volume of rock presented is a conservative estimate and not expected to increase.

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						HT-01 Surface HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02 Surface HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03 Surface HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04 Surface HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05 Surface HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06 Subsurface HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE	HT-07 Subsurface HT-07CS-B 11/1/2024 HT-07CS-B-241101 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Conventional Parameters (mg/kg)												
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	3.92	0.89	2.99	0.93	1.44	0.55	2.16
Sulfide	SM4500S2D	--	--	--	--	128	1.9 J	11.2 J	49.0	41.4 J	1.08 UJ	2.26 J
Conventional Parameters (pct)												
Total organic carbon	SW9060AM	--	--	--	--	0.41	0.25	0.18	0.32	0.22	0.2	0.15
Total solids	SM2540G	--	--	--	--	66.76	76.62	75.21	80.06	76.57	84.48	81.31
Total volatile solids	PSEP-TV5	--	--	--	--	2.56	1.46	1.55	1.80	1.52	1.14	1.58
Metals (mg/kg)												
Antimony	SW6020	--	150	--	200	0.29 U	0.26 UJ	0.26 U	0.25 U	0.26 UJ	0.23 UJ	0.24 U
Arsenic	SW6020	--	57	507.1	700	3.12	1.56 J	2.09	2.10	2.17 J	1.03 J	1.63
Cadmium	SW6020	--	5.1	--	14	0.07 J	0.13 U	0.13 U	0.05 J	0.13 U	0.12 U	0.12 U
Chromium	SW6020	--	260	--	--	11.0	8.7 J	9.77	11.1	8.56 J	7.59 J	9.74
Copper	SW6020	--	390	--	1300	21.6	11.8	13.8	16.8	14.2	8.65	13.1
Lead	SW6020	--	450	975	1200	3.66	1.49	2.34	2.77	2.8 J	1.04 J	1.86
Mercury	SW7471B	--	0.41	1.5	2.3	0.0184 J	0.00829 J	0.0164 J	0.0190 J	0.0211 J	0.0264 U	0.0120 J
Selenium	SW6020	--	--	3	--	0.59 J	0.24 J	0.54 J	0.52 J	0.4 J	0.34 J	0.57 J
Silver	SW6020	--	6.1	--	8.4	0.05 J	0.04 J	0.04 J	0.05 J	0.06 J	0.03 J	0.03 J
Zinc	SW6020	--	410	--	3800	31.4	18.8	24.2	24.4	21.2	16.3	21.2
Organometals (µg/kg)												
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.85 U	3.86 UJ	6.81	3.84 U	3.85 UJ	3.84 UJ	2.78 J
Semivolatile Organics (µg/kg)												
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 U	20.0 UJ	20.0 UJ	20.0 UJ	19.9 UJ	20.0 UJ	20.0 UJ
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	6.6	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	75.9 J	99.9 UJ	100 U	54.0 J	99.3 UJ	99.8 UJ	100 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	58.9	50.0 U	50.0 U	50.0 U	49.7 U	49.9 U	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	6.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	12.7 J	20 U	20.0 U	20 U	19.9 U	20 U	20.0 U
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						HT-01 Surface HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02 Surface HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03 Surface HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04 Surface HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05 Surface HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06 Subsurface HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE	HT-07 Subsurface HT-07CS-B 11/1/2024 HT-07CS-B-241101 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	29.5 UJ	20.0 U
Phenol	SW8270ESIM	--	420	--	1200	6.9	5.0 UJ	9.9	5.0 U	5.0 UJ	21.4 J	5.2
Polycyclic Aromatic Hydrocarbons (µg/kg)												
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ	20.0 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	10.9 J	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	13.1 J	20.0 U	11.4 J	20.0 U	14.2 J	20.0 U	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--	--	--	--	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	--	21000	14.7 J	20.0 U	12.3 J	11.1 J	13.9 J	20.0 U	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	3.0 J	5.0 U	10.0 U	5.0 U	5.0 U	5.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	4600	30000	19.1 J	15.8 J	15.3 J	12.4 J	17.8 J	20.0 U	17.8 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	20.0 U	20.0 U	20.0 UJ	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	20.5 J	20.0 U	20.0 U	19.9 UJ	10.3 J	20.0 U
Phenanthrene	SW8270E	--	1500	--	21000	12.8 J	14.7 J	11.8 J	20.0 U	10.7 J	20.0 U	10.6 J
Pyrene	SW8270E	--	2600	11980	16000	21.7	27.5	25.2	17.8 J	25.3	10.7 J	15.8 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U	40.0 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	83 J	43.3 J	64.2 J	41.3 J	71.2 J	10.7 J	33.6 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	12.8 J	35.2 J	11.8 J	20.0 UJ	10.7 J	10.3 J	10.6 J
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-01	HT-02	HT-03	HT-04	HT-05	HT-06	HT-07
		Surface or Subsurface				Surface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
		Location ID				HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B	HT-07CS-B
		Sample Date				11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024	11/1/2024
		Sample ID				HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030	HT-07CS-B-241101
		Matrix				SE	SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
Oxychlordane	SW8081B	--	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ	1.00 UJ
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 U	1 UJ	1.00 UJ	1.00 UJ	1 UJ	1 UJ	1.00 UJ
Total DDx (U = 0 max limit)	Calculated	--	--	--	--	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.93 J	1.00 UJ
D/F (ng/kg)												
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	206	62.1	198	147	138	18.9	74.2
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	9.97	3.22	5.71	6.84	8.71	0.915 J	2.19 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	25.0	6.84	18.4	15.8	18.2	2.38 J	7.04
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	5.36	1.63 J	2.67	3.92 J	3.94	0.743 J	1.23
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.673 JEMPC	0.0020 U	0.312 U	0.394 J	0.691 J	0.0020 U	0.309 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.395 U	0.022 U	0.230 U	0.183 U	0.027 U	0.016 U	0.281 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.859 J	0.461 J	0.397 J	0.923 J	1.38	0.010 U	0.146 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	1.18	0.024 U	0.890 J	0.788 J	0.949 J	0.127 J	0.323 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.529 JEMPC	0.018 U	0.240 J	0.137 U	0.461 J	0.010 U	0.133 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.691 J	0.025 U	0.488 J	0.594 J	0.505 J	0.018 U	0.304 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.363 U	0.021 U	0.207 U	0.248 J	0.026 U	0.013 U	0.198 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.410 U	0.135 U	0.323 U	0.175 U	0.105 U	0.073 U	0.278 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.471 J	0.223 J	0.174 J	0.443 J	0.832 J	0.0070 U	0.159 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.268 U	0.017 U	0.146 U	0.128 U	0.268 J	0.010 U	0.140 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.348 U	0.090 U	0.186 U	0.170 U	0.393 J	0.073 U	0.169 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.309 U	0.103 U	0.144 U	0.105 U	0.123 U	0.077 U	0.134 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.550 JEMPC	0.138 J	0.239 U	0.389 J	0.84 J	0.010 U	0.183 U
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	56.4	14.3	41.5	42.2	42.6	5.09	15.8
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	14.8	2.95	9.20	10.9	12.2	1.32	3.84
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	4.77	1.07	4.87	3.56	4.96	0.575 J	0.440 J
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	3.14	1.58	4.37	2.80	6.51	0.275 J	1.68
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	1.32	-- U	0.202 J	0.142 J	0.45 J	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	2.02	-- U	1.14	0.977 J	1.63	-- U	0.127 J

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Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-01	HT-02	HT-03	HT-04	HT-05	HT-06	HT-07
		Surface or Subsurface				Surface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
		Location ID				HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B	HT-07CS-B
		Sample Date				11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024	11/1/2024
		Sample ID				HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030	HT-07CS-B-241101
		Matrix				SE	SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML							
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	-- U	-- U	0.875 J	0.75	0.134 J	0.268 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	-- U	-- U	0.646 J	1.5	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.770 J	0.171 J	0.479 J	0.555 J	0.86 J	0.0499 J	0.138 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	1.23 J	0.310 J	0.783 J	0.743 J	0.97 J	0.140 J	0.442 J
PCB Aroclors (mg/kg-OC)												
Aroclor 1016	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1221	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1232	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1242	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1248	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1254	SW8082A	--	--	--	--	0.98 U	1.7	2.2 U	1.3 U	1.6 J	2.0 U	2.7 U
Aroclor 1260	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1262	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Aroclor 1268	SW8082A	--	--	--	--	0.98 U	1.6 U	2.2 U	1.3 U	1.8 U	2.0 U	2.7 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	0.98 U	1.7	2.2 U	1.3 U	1.6 J	2 U	2.7 U
PCB Aroclors (µg/kg)												
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4 U	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						HT-08 Subsurface HT-08CS-B 11/7/2024 HT-08CS-B-241107 SE	HT-09 Subsurface HT-09CS-B 11/12/2024 HT-09CS-B-241112 SE	HT-10 Subsurface HT-10CS-B 10/29/2024 HT-10CS-B-241029 SE	WUT-20 Surface WUT-20CS-A 11/6/2024 WUT-20CS-A-241106 SE	WUT-21 Surface WUT-21CS-A 11/7/2024 WUT-21CS-A-241107 SE	WUT-22 Surface WUT-22CS-A 11/4/2024 WUT-22CS-A-241104 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Conventional Parameters (mg/kg)											
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	8.67	1.92	7.22	1.32	0.44 U	0.57
Sulfide	SM4500S2D	--	--	--	--	16.8 J	2.66	1.79 J	5.30	3.54	16.3
Conventional Parameters (pct)											
Total organic carbon	SW9060AM	--	--	--	--	0.25	0.06	0.24	0.15	0.16	0.11
Total solids	SM2540G	--	--	--	--	73.73	83.59	80.51	82.88	83.39	80.03
Total volatile solids	PSEP-TV5	--	--	--	--	1.67	1.34	1.27	1.15	1.14	1.25
Metals (mg/kg)											
Antimony	SW6020	--	150	--	200	0.25 U	0.22 U	0.24 UJ	0.23 U	0.24 U	0.24 U
Arsenic	SW6020	--	57	507.1	700	1.51	0.94	1.12 J	2.81	3.17	3.28
Cadmium	SW6020	--	5.1	--	14	0.13 U	0.11 U	0.1 J	0.04 J	0.04 J	0.12 U
Chromium	SW6020	--	260	--	--	9.63	8.16	9.49 J	12.0	9.18	7.63
Copper	SW6020	--	390	--	1300	16.3	11.2	10.4	14.6	15.1	12.0
Lead	SW6020	--	450	975	1200	1.67	1.30	1.38	2.25	2.22	1.68
Mercury	SW7471B	--	0.41	1.5	2.3	0.0235 J	0.00900 J	0.0135 J	0.0110 J	0.0148 J	0.0104 J
Selenium	SW6020	--	--	3	--	0.55 J	0.39 J	0.41 J	0.52 J	0.49 J	0.42 J
Silver	SW6020	--	6.1	--	8.4	0.04 J	0.22 U	0.03 J	0.04 J	0.04 J	0.03 J
Zinc	SW6020	--	410	--	3800	22.4	18.4	22.1	24.4	25.9	18.5
Organometals (µg/kg)											
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.84 U	3.85 U	3.85 UJ	3.86 U	3.85 U	19.0
Semivolatile Organics (µg/kg)											
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 U	5.0 UJ	2.7 J	5.0 U	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 U	5.0 UJ	3.1 J	5.0 U	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 UJ	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	100 U	499 UJ	99.9 UJ	99.9 U	99.9 U	99.6 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	50.0 U	49.9 U	50.0 U	49.9 U	50.0 U	49.8 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	5.0 U	19.9 U	5.0 U	3.4 J	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	20.0 U	21.9 U	20 U	20.0 U	20.0 U	19.9 U
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-08	HT-09	HT-10	WUT-20	WUT-21	WUT-22
		Surface or Subsurface				Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
		Location ID				HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A	WUT-22CS-A
		Sample Date				11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024	11/4/2024
		Sample ID				HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107	WUT-22CS-A-241104
		Matrix				SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Phenol	SW8270ESIM	--	420	--	1200	8.3	5.0 U	5.0 UJ	5.1	6.9	10.4
Polycyclic Aromatic Hydrocarbons (µg/kg)											
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	20.0 U	19.9 U	20.0 U	12.0 J	20.0 U	19.9 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U	39.9 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Carbazole	SW8270E	--	--	--	--	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Chrysene	SW8270E	--	1400	--	21000	20.0 U	19.9 U	20.0 U	19.0 J	20.0 U	19.9 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Fluoranthene	SW8270E	--	1700	4600	30000	20.0 U	19.9 U	20.0 U	45.1	20.0 U	18.0 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	19.9 UJ	20.0 U	20.0 U	20.0 U	19.9 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U	19.9 U
Phenanthrene	SW8270E	--	1500	--	21000	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U	19.9 U
Pyrene	SW8270E	--	2600	11980	16000	20.0 U	19.9 U	20.0 U	50.0	11.2 J	14.2 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U	39.9 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	40.0 U	39.9 U	40.0 U	126 J	11.2 J	32.2 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	20.0 U	19.9 UJ	20.0 UJ	20.0 U	20.0 U	19.9 U
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-08	HT-09	HT-10	WUT-20	WUT-21	WUT-22
		Surface or Subsurface				Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
		Location ID				HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A	WUT-22CS-A
		Sample Date				11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024	11/4/2024
		Sample ID				HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107	WUT-22CS-A-241104
		Matrix				SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
Oxychlordane	SW8081B	--	--	--	--	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 UJ	1.00 UJ	1 UJ	1.00 U	1.00 U	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	0.71 J	1.00 U	1.00 U
D/F (ng/kg)											
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	11.1	3.34 J	32	388	218	118
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	0.396 U	0.361 U	2.34 J	10.5	7.34	4.53
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	0.779 J	0.235 J	4.31	36.1	22.3	11.6
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.216 J	0.144 UJ	1.43	4.61	3.98	2.22
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.314 U	0.224 UJ	0.0030 U	0.356 JEMPC	0.481 U	0.255 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.236 U	0.199 U	0.024 U	0.374 JEMPC	0.224 U	0.185 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.146 U	0.119 U	0.642 J	0.990 J	1.11	0.681 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.247 U	0.231 U	0.026 U	1.34 EMPC	1.05	0.586 JEMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.152 U	0.120 U	0.017 U	0.311 JEMPC	0.198 U	0.155 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.263 U	0.234 U	0.027 U	0.558 J	0.503 JEMPC	0.337 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.190 U	0.173 U	0.024 U	0.294 JEMPC	0.241 U	0.200 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.223 U	0.168 U	0.102 U	0.259 JEMPC	0.227 U	0.254 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.199 U	0.189 U	0.321 J	0.329 JEMPC	0.288 JEMPC	0.309 JEMPC
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.153 U	0.115 U	0.017 U	0.170 U	0.196 U	0.156 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.216 U	0.201 U	0.094 U	0.202 JEMPC	0.306 JEMPC	0.180 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.168 U	0.118 U	0.111 U	0.151 U	0.172 U	0.152 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.170 U	0.168 U	0.321 J	0.378 JEMPC	0.423 JEMPC	0.212 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	2.83	0.235 J	9.77	78.0	52.5	26.4
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	-- U	-- U	3.1	16.2	12.5	7.48
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	0.186 J	-- U	0.471 J	8.15	3.22	-- U
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	-- U	-- U	1.2	7.15	5.84	3.83
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	-- U	-- U	0.278 J	-- U	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	0.178 J	-- U	-- U	0.182 J	1.00	0.107 J

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU				HT-08	HT-09	HT-10	WUT-20	WUT-21	WUT-22
		Surface or Subsurface				Subsurface	Subsurface	Subsurface	Surface	Surface	Surface
		Location ID				HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A	WUT-22CS-A
		Sample Date				11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024	11/4/2024
		Sample ID				HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107	WUT-22CS-A-241104
		Matrix				SE	SE	SE	SE	SE	SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML						
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	-- U	-- U	0.413 J	0.656 J	0.321 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	-- U	0.321 J	0.126 J	0.501 J	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.0133 J	0.00335 J	0.17 J	1.28 J	0.739 J	0.420 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	0.324 J	0.249 J	0.30 J	1.37 J	0.984 J	0.659 J
PCB Aroclors (mg/kg-OC)											
Aroclor 1016	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1221	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1232	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1242	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1248	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1254	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1260	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1262	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Aroclor 1268	SW8082A	--	--	--	--	1.6 U	6.7 U	1.7 U	2.7 U	2.5 U	3.6 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	1.6 U	6.7 U	2 U	2.7 U	2.5 U	3.6 U
PCB Aroclors (µg/kg)											
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.0 U	4 U	4.0 U	4.0 U	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	--	3.23	1.61	0.58	0.40 U	4.16
Sulfide	SM4500S2D	--	--	--	--	1.40	1.72	1.06 U	1.1 UJ	78.4
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	--	0.14	0.09	0.15	0.19 J	0.21
Total solids	SM2540G	--	--	--	--	81.28	84.95	85.41	85.38	77.09
Total volatile solids	PSEP-TV5	--	--	--	--	1.29	1.02	1.07	1.3	1.49
Metals (mg/kg)										
Antimony	SW6020	--	150	--	200	0.24 U	0.22 U	0.22 U	0.23 U	0.25 U
Arsenic	SW6020	--	57	507.1	700	3.75	2.42	2.32	2.62	4.30
Cadmium	SW6020	--	5.1	--	14	0.06 J	0.03 J	0.11 U	0.12 U	0.09 J
Chromium	SW6020	--	260	--	--	8.21	8.63	8.95	8.29	9.26
Copper	SW6020	--	390	--	1300	13.3	13.8	12.8	10.9	17.7
Lead	SW6020	--	450	975	1200	1.76	1.83	1.64	1.26	2.61
Mercury	SW7471B	--	0.41	1.5	2.3	0.0148 J	0.0103 J	0.00997 J	0.00631 J	0.0213 J
Selenium	SW6020	--	--	3	--	0.45 J	0.50 J	0.50 J	0.37 J	0.44 J
Silver	SW6020	--	6.1	--	8.4	0.04 J	0.03 J	0.03 J	0.03 J	0.05 J
Zinc	SW6020	--	410	--	3800	23.1	22.8	22.2	18.6	25.6
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	73	--	3.85 U	3.85 U	3.81 U	3.85 UJ	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	--	64	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	--	110	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	--	120	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	--	210	20.0 U	20.0 U	19.9 U	-- R	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	--	77	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	--	3600	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	--	760	100 U	99.9 U	99.6 U	99.9 UJ	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	--	870	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	--	8300	50.0 U	49.9 U	49.8 U	62.0	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	--	970	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	--	5100	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	--	6200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	--	1200	21.8	20.0 U	19.9 U	22.9 U	24.8
Dimethyl phthalate	SW8270ESIM	--	71	--	1400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Hexachlorobenzene	SW8270ESIM	--	22	168	230	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	--	270	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	--	130	5.0 U	5.0 U	5.0 U	5.0 UJ	2.5 J
Pentachlorophenol	SW8270ESIM	--	400	504	690	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U
Phenol	SW8270ESIM	--	420	--	1200	5.0 U	8.2	8.4	5.0 UJ	5.0 U
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	20.0 U	--	--	--	20.0 U
2-Methylnaphthalene	SW8270E	--	670	--	1900	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	--	2000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	560	--	1300	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Anthracene	SW8270E	--	960	--	13000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	--	5100	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	--	3600	20.0 U	20.0 U	19.9 U	20.0 U	10.3 J
Benzo(b,j,k)fluoranthenes	SW8270E	--	--	--	--	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	--	3200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--	--	--	--	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	--	21000	20.0 U	20.0 U	19.9 U	20.0 U	11.2 J
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	--	1900	5.0 U	10.0 U	10.0 U	5.0 J	5.0 U
Dibenzofuran	SW8270E	--	540	--	1700	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	4600	30000	20.0 U	16.0 J	19.9 U	20.0 U	11.1 J
Fluorene	SW8270E	--	540	--	3600	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	--	4400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	--	2400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	--	21000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	11980	16000	20.0 U	17.3 J	19.9 U	15.1 J	15.6 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	--	9900	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Total HPAH (DMMP) (U = 0 max limit)	Calculated	--	12000	--	69000	40.0 U	33.3 J	39.9 U	20 J	48.2 J
Total LPAH (DMMP) (U = 0 max limit)	Calculated	--	5200	--	29000	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	16	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	9	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDT (p,p'-DDT)	SW8081B	--	12	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Aldrin	SW8081B	--	9.5	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix						WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Dieldrin	SW8081B	--	1.9	--	1700	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Endrin ketone	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Heptachlor	SW8081B	--	1.5	--	270	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	--	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Oxychlordane	SW8081B	--	--	--	--	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	50	69	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	2.8	37	--	1.00 U	1.00 U	1.00 U	1 UJ	1.00 U
Total DDX (U = 0 max limit)	Calculated	--	--	--	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	--	110	308	94.0	66.5	276
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	--	4.70 EMPC	5.34	2.85	1.86 J	14.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	--	10.2	29.4	8.97	4.08	30.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	2.43	3.61	1.54	0.874 J	6.63
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	--	0.407 U	0.253 U	0.240 U	0.0020 U	0.552 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.293 U	0.302 JEMPC	0.217 U	0.022 U	0.374 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.537 JEMPC	0.714 J	0.554 JEMPC	0.012 U	2.43
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.324 U	1.52	0.391 J	0.025 U	1.29 EMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.259 U	0.156 U	0.127 J	0.012 U	0.906 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	--	0.336 U	0.454 JEMPC	0.268 JEMPC	0.025 U	0.501 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.348 U	0.205 U	0.254 U	0.018 U	0.313 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	--	0.264 U	0.265 J	0.203 U	0.085 U	0.449 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	--	0.182 U	0.168 JEMPC	0.270 JEMPC	0.0090 U	0.637 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	--	0.249 U	0.154 U	0.180 U	0.012 U	0.228 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	--	0.205 U	0.186 U	0.190 U	0.144 J	0.366 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	--	0.173 U	0.136 U	0.149 U	0.113 U	0.214 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	--	0.163 U	0.185 U	0.222 J	0.014 U	0.352 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	--	24.1	62.9	20.2	9.74	65.9
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	--	6.88	11.2	4.97	1.76	20.9
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	--	1.84	4.84	1.19	0.518 J	4.09
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	--	1.81	6.27	1.42	-- U	9.90
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	--	0.302	0.530 J	-- U	0.168	0.318
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	--	-- U	1.18	-- U	-- U	1.64

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

		DMMU Surface or Subsurface Location ID Sample Date Sample ID Matrix				WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
Chemical	Method	D/F TEF	DMMP SL	DMMP BT	DMMP ML					
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	--	-- U	0.177 J	-- U	-- U	-- U
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	--	-- U	0.145 J	0.222 J	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	4	10	--	0.21 J	0.993 J	0.298 J	0.113 J	1.13 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	4	10	--	0.57 J	1.13 J	0.537 J	0.219 J	1.51 J
PCB Aroclors (mg/kg-OC)										
Aroclor 1016	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1221	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1232	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1242	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1248	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1254	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1260	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	1.8 J	1.9 U
Aroclor 1262	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Aroclor 1268	SW8082A	--	--	--	--	2.9 U	4.4 U	2.7 U	2.2 U	1.9 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	--	38	--	2.9 U	4.4 U	2.7 U	1.8 J	1.9 U
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U
Aroclor 1262	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	--	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Total DMMP PCB Aroclors (U = 0 max limit)	Calculated	--	130	--	3100	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U

Table 1
Sediment Core Sample Analytical Results Compared to DMMP Criteria

Notes:

- Detected concentration is greater than DMMP SL screening level
- Detected concentration is greater than DMMP BT screening level
- Detected concentration is greater than DMMP ML screening level
- Non-detected concentration is above one or more identified screening levels

Bold: Detected result

Analysis included total solids, total volatile solids, total organic carbon, ammonia, sulfide, metals, butyltins, semivolatile organic compounds, pesticides, PCBs, and D/F.

Calculated values have been rounded to laboratory-reported significant digits.

EMPC: Estimated maximum possible concentration

J: Estimated value

R: Rejected

U: Compound analyzed for but not detected above detection limit

UJ: Compound analyzed for, but not detected above estimated detection limit

--: not applicable/no data

µg/kg: microgram per kilogram

BT: bioaccumulation trigger

D/F: dioxins/furans

D/F TEF: total dioxin/furan TEQ 2005 (mammal) (TEF)

DDx: total dichlorodiphenyltrichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyldichloroethane

DMMP: Dredged Material Management Program

DMMU: Dredged Material Management Unit

HPAH: high-molecular-weight polycyclic aromatic hydrocarbon

ID: identification

LPAH: low molecular weight polycyclic aromatic hydrocarbon

mg/kg: milligram per kilogram

ML: maximum level

ng/kg: nanogram per kilogram

OC: organic carbon

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

pct: percent

QC: quality control

SE: sediment

SL: screening level

TEQ: toxic equivalence

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Surface or Subsurface			Surface	Surface	Surface	Surface	Surface	Subsurface
		Location ID			HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B
		Sample Date			11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024
		Sample ID			HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	3.92	0.89	2.99	0.93	1.44	0.55
Sulfide	SM4500S2D	--	--	--	128	1.9 J	11.2 J	49.0	41.4 J	1.08 UJ
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.41	0.25	0.18	0.32	0.22	0.2
Total solids	D2216 / SM2540G	--	--	--	66.76	76.62	75.21	80.06	76.57	84.48
Total volatile solids	PSEP-TVS	--	--	--	2.56	1.46	1.55	1.80	1.52	1.14
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.29 U	0.26 UJ	0.26 U	0.25 U	0.26 UJ	0.23 UJ
Arsenic	SW6020	--	57	93	3.12	1.56 J	2.09	2.10	2.17 J	1.03 J
Cadmium	SW6020	--	5.1	6.7	0.07 J	0.13 U	0.13 U	0.05 J	0.13 U	0.12 U
Chromium	SW6020	--	260	270	11.0	8.7 J	9.77	11.1	8.56 J	7.59 J
Copper	SW6020	--	390	390	21.6	11.8	13.8	16.8	14.2	8.65
Lead	SW6020	--	450	530	3.66	1.49	2.34	2.77	2.8 J	1.04 J
Mercury	SW7471B	--	0.41	0.59	0.0184 J	0.00829 J	0.0164 J	0.0190 J	0.0211 J	0.0264 U
Selenium	SW6020	--	--	--	0.59 J	0.24 J	0.54 J	0.52 J	0.4 J	0.34 J
Silver	SW6020	--	6.1	6.1	0.05 J	0.04 J	0.04 J	0.05 J	0.06 J	0.03 J
Zinc	SW6020	--	410	960	31.4	18.8	24.2	24.4	21.2	16.3
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	3.85 U	3.86 UJ	6.81	3.84 U	3.85 UJ	3.84 UJ
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
2,4-Dimethylphenol	SW8270ESIM	--	29	29	20.0 U	20.0 UJ	20.0 UJ	20.0 UJ	19.9 UJ	20.0 UJ
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	6.6	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
Benzoic acid	SW8270ESIM	--	650	650	75.9 J	99.9 UJ	100 U	54.0 J	99.3 UJ	99.8 UJ
Benzyl alcohol	SW8270ESIM	--	57	73	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	58.9	50.0 U	50.0 U	50.0 U	49.7 U	49.9 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	6.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	12.7 J	20 U	20.0 U	20 U	19.9 U	20 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	Surface	Surface	Surface	Surface	Surface	Subsurface
					Location ID	Location ID	Location ID	Location ID	Location ID	Location ID
					Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date
					Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs	HT-01CS-A 11/14/2024 HT-01CS-A-241114 SE	HT-02CS-A 10/30/2024 HT-02CS-A-241030 SE	HT-03CS-A 11/7/2024 HT-03CS-A-241107 SE	HT-04CS-A 11/12/2024 HT-04CS-A-241112 SE	HT-05CS-A 10/29/2024 HT-05CS-A-241029 SE	HT-06CS-B 10/30/2024 HT-06CS-B-241030 SE
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 UJ	5.0 UJ
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	360	690	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	29.5 UJ
Phenol	SW8270ESIM	--	420	1200	6.9	5.0 UJ	9.9	5.0 U	5.0 UJ	21.4 J
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	670	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Acenaphthene	SW8270E	--	500	500	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	20.0 U	20.0 UJ	20.0 U	20.0 U	19.9 UJ	20.0 UJ
Anthracene	SW8270E	--	960	960	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	10.9 J	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	13.1 J	20.0 U	11.4 J	20.0 U	14.2 J	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Carbazole	SW8270E	--			20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Chrysene	SW8270E	--	1400	2800	14.7 J	20.0 U	12.3 J	11.1 J	13.9 J	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	3.0 J	5.0 U	10.0 U	5.0 U	5.0 U	5.0 U
Dibenzofuran	SW8270E	--	540	540	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	19.1 J	15.8 J	15.3 J	12.4 J	17.8 J	20.0 U
Fluorene	SW8270E	--	540	540	20.0 U	20.0 U	20.0 U	20.0 UJ	19.9 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	20.0 U	20.0 U	20.0 U	20.0 U	19.9 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	20.0 U	20.5 J	20.0 U	20.0 U	19.9 UJ	10.3 J
Phenanthrene	SW8270E	--	1500	1500	12.8 J	14.7 J	11.8 J	20.0 U	10.7 J	20.0 U
Pyrene	SW8270E	--	2600	3300	21.7	27.5	25.2	17.8 J	25.3	10.7 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	40.0 U	40.0 U	40.0 U	40.0 U	39.7 U	39.9 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	83 J	43.3 J	64.2 J	41.3 J	71.2 J	10.7 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	12.8 J	35.2 J	11.8 J	20.0 UJ	10.7 J	10.3 J
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Surface or Subsurface			Surface	Surface	Surface	Surface	Surface	Subsurface
		Location ID			HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B
		Sample Date			11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024
		Sample ID			HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030
			Matrix	SE	SE	SE	SE	SE	SE	
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
Oxychlordane	SW8081B	--	--	--	1.00 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.0 UJ
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.93 J
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 U	1 UJ	1.00 UJ	1.00 UJ	1 UJ	1 UJ
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.93 J
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	206	62.1	198	147	138	18.9
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	9.97	3.22	5.71	6.84	8.71	0.915 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	25.0	6.84	18.4	15.8	18.2	2.38 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	5.36	1.63 J	2.67	3.92 J	3.94	0.743 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.673 JEMPC	0.0020 U	0.312 U	0.394 J	0.691 J	0.0020 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.395 U	0.022 U	0.230 U	0.183 U	0.027 U	0.016 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.859 J	0.461 J	0.397 J	0.923 J	1.38	0.010 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	1.18	0.024 U	0.890 J	0.788 J	0.949 J	0.127 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.529 JEMPC	0.018 U	0.240 J	0.137 U	0.461 J	0.010 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.691 J	0.025 U	0.488 J	0.594 J	0.505 J	0.018 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.363 U	0.021 U	0.207 U	0.248 J	0.026 U	0.013 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.410 U	0.135 U	0.323 U	0.175 U	0.105 U	0.073 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.471 J	0.223 J	0.174 J	0.443 J	0.832 J	0.0070 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.268 U	0.017 U	0.146 U	0.128 U	0.268 J	0.010 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.348 U	0.090 U	0.186 U	0.170 U	0.393 J	0.073 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.309 U	0.103 U	0.144 U	0.105 U	0.123 U	0.077 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.550 JEMPC	0.138 J	0.239 U	0.389 J	0.84 J	0.010 U
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	56.4	14.3	41.5	42.2	42.6	5.09
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	14.8	2.95	9.20	10.9	12.2	1.32
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	4.77	1.07	4.87	3.56	4.96	0.575 J

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-01	HT-02	HT-03	HT-04	HT-05	HT-06
		Surface or Subsurface			Surface	Surface	Surface	Surface	Surface	Subsurface
		Location ID			HT-01CS-A	HT-02CS-A	HT-03CS-A	HT-04CS-A	HT-05CS-A	HT-06CS-B
		Sample Date			11/14/2024	10/30/2024	11/7/2024	11/12/2024	10/29/2024	10/30/2024
		Sample ID			HT-01CS-A-241114	HT-02CS-A-241030	HT-03CS-A-241107	HT-04CS-A-241112	HT-05CS-A-241029	HT-06CS-B-241030
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	3.14	1.58	4.37	2.80	6.51	0.275 J
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	1.32	-- U	0.202 J	0.142 J	0.45 J	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	2.02	-- U	1.14	0.977 J	1.63	-- U
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	-- U	-- U	-- U	0.875 J	0.75	0.134 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	-- U	0.646 J	1.5	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.770 J	0.171 J	0.479 J	0.555 J	0.86 J	0.0499 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	1.23 J	0.310 J	0.783 J	0.743 J	0.97 J	0.140 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.3	4.0 U	4.0 U	3.6 J	4 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
Total D/F			Marine AET	Marine CSL						
TEF			SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	2.16	8.67	1.92	7.22	1.32	0.44 U
Sulfide	SM4500S2D	--	--	--	2.26 J	16.8 J	2.66	1.79 J	5.30	3.54
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.15	0.25	0.06	0.24	0.15	0.16
Total solids	D2216 / SM2540G	--	--	--	81.31	73.73	83.59	80.51	82.88	83.39
Total volatile solids	PSEP-TVS	--	--	--	1.58	1.67	1.34	1.27	1.15	1.14
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.24 U	0.25 U	0.22 U	0.24 UJ	0.23 U	0.24 U
Arsenic	SW6020	--	57	93	1.63	1.51	0.94	1.12 J	2.81	3.17
Cadmium	SW6020	--	5.1	6.7	0.12 U	0.13 U	0.11 U	0.1 J	0.04 J	0.04 J
Chromium	SW6020	--	260	270	9.74	9.63	8.16	9.49 J	12.0	9.18
Copper	SW6020	--	390	390	13.1	16.3	11.2	10.4	14.6	15.1
Lead	SW6020	--	450	530	1.86	1.67	1.30	1.38	2.25	2.22
Mercury	SW7471B	--	0.41	0.59	0.0120 J	0.0235 J	0.00900 J	0.0135 J	0.0110 J	0.0148 J
Selenium	SW6020	--	--	--	0.57 J	0.55 J	0.39 J	0.41 J	0.52 J	0.49 J
Silver	SW6020	--	6.1	6.1	0.03 J	0.04 J	0.22 U	0.03 J	0.04 J	0.04 J
Zinc	SW6020	--	410	960	21.2	22.4	18.4	22.1	24.4	25.9
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	2.78 J	3.84 U	3.85 U	3.85 UJ	3.86 U	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 U	5.0 U	5.0 UJ	2.7 J	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 U	5.0 U	5.0 UJ	3.1 J	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	29	20.0 UJ	20.0 UJ	19.9 U	20.0 UJ	20.0 U	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	650	100 U	100 U	499 UJ	99.9 UJ	99.9 U	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	73	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	50.0 U	50.0 U	49.9 U	50.0 U	49.9 U	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	5.0 U	5.0 U	19.9 U	5.0 U	3.4 J	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	20.0 U	20.0 U	21.9 U	20 U	20.0 U	20.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	SW8270ESIM	--	360	690	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U
Phenol	SW8270ESIM	--	420	1200	5.2	8.3	5.0 U	5.0 UJ	5.1	6.9
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	SW8270E	--	670	670	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	500	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Anthracene	SW8270E	--	960	960	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	20.0 U	20.0 U	19.9 U	20.0 U	12.0 J	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	40.0 U	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Carbazole	SW8270E	--			20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	2800	20.0 U	20.0 U	19.9 U	20.0 U	19.0 J	20.0 U
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	10.0 U	10.0 U	5.0 U	5.0 U	10.0 U	10.0 U
Dibenzofuran	SW8270E	--	540	540	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	17.8 J	20.0 U	19.9 U	20.0 U	45.1	20.0 U
Fluorene	SW8270E	--	540	540	20.0 U	20.0 U	19.9 UJ	20.0 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	1500	10.6 J	20.0 U	19.9 U	20.0 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	3300	15.8 J	20.0 U	19.9 U	20.0 U	50.0	11.2 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	40.0 U	40.0 U	39.9 U	40.0 U	39.9 U	40.0 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	33.6 J	40.0 U	39.9 U	40.0 U	126 J	11.2 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	10.6 J	20.0 U	19.9 UJ	20.0 UJ	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
Oxychlordane	SW8081B	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.0 UJ	1.00 U	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	0.71 J	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1 UJ	1.00 U	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	0.71 J	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	74.2	11.1	3.34 J	32	388	218
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	2.19 J	0.396 U	0.361 U	2.34 J	10.5	7.34
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	7.04	0.779 J	0.235 J	4.31	36.1	22.3
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	1.23	0.216 J	0.144 UJ	1.43	4.61	3.98
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.309 U	0.314 U	0.224 UJ	0.0030 U	0.356 JEMPC	0.481 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.281 U	0.236 U	0.199 U	0.024 U	0.374 JEMPC	0.224 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.146 U	0.146 U	0.119 U	0.642 J	0.990 J	1.11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.323 J	0.247 U	0.231 U	0.026 U	1.34 EMPC	1.05
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.133 U	0.152 U	0.120 U	0.017 U	0.311 JEMPC	0.198 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.304 U	0.263 U	0.234 U	0.027 U	0.558 J	0.503 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.198 U	0.190 U	0.173 U	0.024 U	0.294 JEMPC	0.241 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.278 U	0.223 U	0.168 U	0.102 U	0.259 JEMPC	0.227 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.159 U	0.199 U	0.189 U	0.321 J	0.329 JEMPC	0.288 JEMPC
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.140 U	0.153 U	0.115 U	0.017 U	0.170 U	0.196 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.169 U	0.216 U	0.201 U	0.094 U	0.202 JEMPC	0.306 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.134 U	0.168 U	0.118 U	0.111 U	0.151 U	0.172 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.183 U	0.170 U	0.168 U	0.321 J	0.378 JEMPC	0.423 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	15.8	2.83	0.235 J	9.77	78.0	52.5
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	3.84	-- U	-- U	3.1	16.2	12.5
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	0.440 J	0.186 J	-- U	0.471 J	8.15	3.22

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			HT-07	HT-08	HT-09	HT-10	WUT-20	WUT-21
		Surface or Subsurface			Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface
		Location ID			HT-07CS-B	HT-08CS-B	HT-09CS-B	HT-10CS-B	WUT-20CS-A	WUT-21CS-A
		Sample Date			11/1/2024	11/7/2024	11/12/2024	10/29/2024	11/6/2024	11/7/2024
		Sample ID			HT-07CS-B-241101	HT-08CS-B-241107	HT-09CS-B-241112	HT-10CS-B-241029	WUT-20CS-A-241106	WUT-21CS-A-241107
Matrix			SE	SE	SE	SE	SE	SE		
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	1.68	-- U	-- U	1.2	7.15	5.84
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	-- U	-- U	-- U	0.278 J	-- U	-- U
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	0.127 J	0.178 J	-- U	-- U	0.182 J	1.00
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	0.268 J	-- U	-- U	-- U	0.413 J	0.656 J
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	-- U	0.321 J	0.126 J	0.501 J
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.138 J	0.0133 J	0.00335 J	0.17 J	1.28 J	0.739 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	0.442 J	0.324 J	0.249 J	0.30 J	1.37 J	0.984 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.0 U	4.0 U	4 U	4.0 U	4.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
Matrix			SE	SE	SE	SE	SE	SE	SE	
		Total D/F	Marine AET	Marine CSL						
		TEF	SCOs	SCOs						
Conventional Parameters (mg/kg)										
Ammonia as nitrogen	SM4500NH3H	--	--	--	0.57	3.23	1.61	0.58	0.40 U	4.16
Sulfide	SM4500S2D	--	--	--	16.3	1.40	1.72	1.06 U	1.1 UJ	78.4
Conventional Parameters (pct)										
Total organic carbon	SW9060AM	--	--	--	0.11	0.14	0.09	0.15	0.19 J	0.21
Total solids	D2216 / SM2540G	--	--	--	80.03	81.28	84.95	85.41	85.38	77.09
Total volatile solids	PSEP-TVS	--	--	--	1.25	1.29	1.02	1.07	1.3	1.49
Metals (mg/kg)										
Antimony	SW6020	--	--	--	0.24 U	0.24 U	0.22 U	0.22 U	0.23 U	0.25 U
Arsenic	SW6020	--	57	93	3.28	3.75	2.42	2.32	2.62	4.30
Cadmium	SW6020	--	5.1	6.7	0.12 U	0.06 J	0.03 J	0.11 U	0.12 U	0.09 J
Chromium	SW6020	--	260	270	7.63	8.21	8.63	8.95	8.29	9.26
Copper	SW6020	--	390	390	12.0	13.3	13.8	12.8	10.9	17.7
Lead	SW6020	--	450	530	1.68	1.76	1.83	1.64	1.26	2.61
Mercury	SW7471B	--	0.41	0.59	0.0104 J	0.0148 J	0.0103 J	0.00997 J	0.00631 J	0.0213 J
Selenium	SW6020	--	--	--	0.42 J	0.45 J	0.50 J	0.50 J	0.37 J	0.44 J
Silver	SW6020	--	6.1	6.1	0.03 J	0.04 J	0.03 J	0.03 J	0.03 J	0.05 J
Zinc	SW6020	--	410	960	18.5	23.1	22.8	22.2	18.6	25.6
Organometals (µg/kg)										
Tributyltin (ion)	SW8270ESIM	--	--	--	19.0	3.85 U	3.85 U	3.81 U	3.85 UJ	3.85 U
Semivolatile Organics (µg/kg)										
1,2,4-Trichlorobenzene	SW8270ESIM	--	31	51	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	SW8270ESIM	--	35	50	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
1,4-Dichlorobenzene	SW8270ESIM	--	110	110	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
2,4-Dimethylphenol	SW8270ESIM	--	29	29	19.9 U	20.0 U	20.0 U	19.9 U	-- R	20.0 U
2-Methylphenol (o-Cresol)	SW8270ESIM	--	63	63	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
4-Methylphenol (p-Cresol)	SW8270ESIM	--	670	670	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzoic acid	SW8270ESIM	--	650	650	99.6 U	100 U	99.9 U	99.6 U	99.9 UJ	99.9 U
Benzyl alcohol	SW8270ESIM	--	57	73	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Bis(2-ethylhexyl)phthalate	SW8270E	--	1300	1900	49.8 U	50.0 U	49.9 U	49.8 U	62.0	50.0 U
Butylbenzyl phthalate	SW8270E / SW8270ESIM	--	63	900	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-butyl phthalate	SW8270E	--	1400	1400	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Di-n-octyl phthalate	SW8270E	--	6200	6200	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Diethyl phthalate	SW8270ESIM	--	200	1200	19.9 U	21.8	20.0 U	19.9 U	22.9 U	24.8

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Dimethyl phthalate	SW8270ESIM	--	71	160	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	SW8270ESIM	--	22	70	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	SW8270ESIM	--	11	120	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Nitrosodiphenylamine	SW8270ESIM	--	28	40	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	2.5 J
Pentachlorophenol	SW8270ESIM	--	360	690	19.9 U	20.0 U	20.0 U	19.9 U	20.0 UJ	20.0 U
Phenol	SW8270ESIM	--	420	1200	10.4	5.0 U	8.2	8.4	5.0 UJ	5.0 U
Polycyclic Aromatic Hydrocarbons (µg/kg)										
1-Methylnaphthalene	SW8270E	--	--	--	--	20.0 U	--	--	--	20.0 U
2-Methylnaphthalene	SW8270E	--	670	670	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthene	SW8270E	--	500	500	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Acenaphthylene	SW8270E	--	1300	1300	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Anthracene	SW8270E	--	960	960	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)anthracene	SW8270E	--	1300	1600	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Benzo(a)pyrene	SW8270E	--	1600	1600	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	10.3 J
Benzo(b,j,k)fluoranthenes	SW8270E	--	3200	3600	39.9 U	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Benzo(g,h,i)perylene	SW8270E	--	670	720	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Carbazole	SW8270E	--			19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Chrysene	SW8270E	--	1400	2800	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	11.2 J
Dibenzo(a,h)anthracene	SW8270ESIM	--	230	230	10.0 U	5.0 U	10.0 U	10.0 U	5.0 J	5.0 U
Dibenzofuran	SW8270E	--	540	540	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Fluoranthene	SW8270E	--	1700	2500	18.0 J	20.0 U	16.0 J	19.9 U	20.0 U	11.1 J
Fluorene	SW8270E	--	540	540	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Indeno(1,2,3-c,d)pyrene	SW8270E	--	600	690	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Naphthalene	SW8270E	--	2100	2100	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Phenanthrene	SW8270E	--	1500	1500	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pyrene	SW8270E	--	2600	3300	14.2 J	20.0 U	17.3 J	19.9 U	15.1 J	15.6 J
Total Benzofluoranthenes (b,j,k) (U = 0 max limit)	Calculated	--	3200	3600	39.9 U	40.0 U	40.0 U	39.9 U	40.0 U	40.0 U
Total HPAH (SMS) (U = 0 max limit)	Calculated	--	12000	17000	32.2 J	40.0 U	33.3 J	39.9 U	20 J	48.2 J
Total LPAH (SMS) (U = 0 max limit)	Calculated	--	5200	5200	19.9 U	20.0 U	20.0 U	19.9 U	20.0 U	20.0 U
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDE (o,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
2,4'-DDT (o,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
4,4'-DDD (p,p'-DDD)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
4,4'-DDE (p,p'-DDE)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Chemical	Method	DMMU			WUT-22 Surface WUT-22CS-A 11/4/2024 WUT-22CS-A-241104 SE	WUT-23 Surface WUT-23CS-A 10/24/2024 WUT-23CS-A-241024 SE	WUT-24 Subsurface WUT-24CS-B 11/6/2024 WUT-24CS-B-241106 SE	WUT-25 Subsurface WUT-25CS-B 11/7/2024 WUT-25CS-B-241107 SE	WUT-26 Subsurface WUT-26CS-B 10/25/2024 WUT-26CS-B-241025 SE	WUT-27 Subsurface WUT-27CS-B 10/24/2024 WUT-27CS-B-241024 SE
		Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
4,4'-DDT (p,p'-DDT)	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Aldrin	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, alpha- (Chlordane, cis-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Chlordane, beta- (Chlordane, trans-)	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Dieldrin	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Endrin ketone	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Heptachlor	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Hexachlorocyclohexane (BHC), beta-	SW8081B	--	--	--	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 U
Nonachlor, cis-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.00 U
Nonachlor, trans-	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Oxychlordane	SW8081B	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.0 UJ	1.00 U
Sum 4,4 DDT, DDE, DDD (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
Total Chlordane (DMMP) (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1 UJ	1.00 U
Total DDx (U = 0 max limit)	Calculated	--	--	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U
D/F (ng/kg)										
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	E1613B	0.0003	--	--	118	110	308	94.0	66.5	276
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	E1613B	0.0003	--	--	4.53	4.70 EMPC	5.34	2.85	1.86 J	14.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	0.01	--	--	11.6	10.2	29.4	8.97	4.08	30.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	2.22	2.43	3.61	1.54	0.874 J	6.63
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	E1613B	0.01	--	--	0.255 U	0.407 U	0.253 U	0.240 U	0.0020 U	0.552 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.185 U	0.293 U	0.302 JEMPC	0.217 U	0.022 U	0.374 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.681 J	0.537 JEMPC	0.714 J	0.554 JEMPC	0.012 U	2.43
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.586 JEMPC	0.324 U	1.52	0.391 J	0.025 U	1.29 EMPC
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.155 U	0.259 U	0.156 U	0.127 J	0.012 U	0.906 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	0.1	--	--	0.337 JEMPC	0.336 U	0.454 JEMPC	0.268 JEMPC	0.025 U	0.501 JEMPC
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.200 U	0.348 U	0.205 U	0.254 U	0.018 U	0.313 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	1	--	--	0.254 U	0.264 U	0.265 J	0.203 U	0.085 U	0.449 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.03	--	--	0.309 JEMPC	0.182 U	0.168 JEMPC	0.270 JEMPC	0.0090 U	0.637 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	E1613B	0.1	--	--	0.156 U	0.249 U	0.154 U	0.180 U	0.012 U	0.228 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	E1613B	0.3	--	--	0.180 JEMPC	0.205 U	0.186 U	0.190 U	0.144 J	0.366 JEMPC
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	1	--	--	0.152 U	0.173 U	0.136 U	0.149 U	0.113 U	0.214 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	E1613B	0.1	--	--	0.212 JEMPC	0.163 U	0.185 U	0.222 J	0.014 U	0.352 JEMPC
Total Heptachlorodibenzo-p-dioxin (HpCDD)	E1613B	--	--	--	26.4	24.1	62.9	20.2	9.74	65.9
Total Heptachlorodibenzofuran (HpCDF)	E1613B	--	--	--	7.48	6.88	11.2	4.97	1.76	20.9
Total Hexachlorodibenzo-p-dioxin (HxCDD)	E1613B	--	--	--	-- U	1.84	4.84	1.19	0.518 J	4.09

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

		DMMU			WUT-22	WUT-23	WUT-24	WUT-25	WUT-26	WUT-27
		Surface or Subsurface			Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface
		Location ID			WUT-22CS-A	WUT-23CS-A	WUT-24CS-B	WUT-25CS-B	WUT-26CS-B	WUT-27CS-B
		Sample Date			11/4/2024	10/24/2024	11/6/2024	11/7/2024	10/25/2024	10/24/2024
		Sample ID			WUT-22CS-A-241104	WUT-23CS-A-241024	WUT-24CS-B-241106	WUT-25CS-B-241107	WUT-26CS-B-241025	WUT-27CS-B-241024
		Matrix			SE	SE	SE	SE	SE	SE
Chemical	Method	Total D/F TEF	Marine AET SCOs	Marine CSL SCOs						
Total Hexachlorodibenzofuran (HxCDF)	E1613B	--	--	--	3.83	1.81	6.27	1.42	-- U	9.90
Total Pentachlorodibenzo-p-dioxin (PeCDD)	E1613B	--	--	--	-- U	0.302	0.530 J	-- U	0.168	0.318
Total Pentachlorodibenzofuran (PeCDF)	E1613B	--	--	--	0.107 J	-- U	1.18	-- U	-- U	1.64
Total Tetrachlorodibenzo-p-dioxin (TCDD)	E1613B	--	--	--	0.321 J	-- U	0.177 J	-- U	-- U	-- U
Total Tetrachlorodibenzofuran (TCDF)	E1613B	--	--	--	-- U	-- U	0.145 J	0.222 J	-- U	-- U
Total D/F TEQ 2005 (Mammal) (U = 0 max limit)	Calculated	--	--	--	0.420 J	0.21 J	0.993 J	0.298 J	0.113 J	1.13 J
Total D/F TEQ 2005 (Mammal) (U = 1/2 max limit)	Calculated	--	--	--	0.659 J	0.57 J	1.13 J	0.537 J	0.219 J	1.51 J
PCB Aroclors (µg/kg)										
Aroclor 1016	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1221	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1232	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1242	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1248	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1254	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1260	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U
Aroclor 1262	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Aroclor 1268	SW8082A	--	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.2 U	4.0 U
Total PCB Aroclors (SMS Marine 2019) (U = 0 max limit)	Calculated	--	130	1000	4.0 U	4.0 U	4.0 U	4.0 U	3.4 J	4.0 U

Table 2
Sediment Core Sample Analytical Results Compared to SMS Criteria for Beneficial Use

Notes:

TOC out of range

- Detected concentration is greater than Marine AET SCO
- Detected concentration is greater than Marine AET CSL
- Non-detected concentration is above one or more identified screening levels

Bold: Detected result

Calculated values have been rounded to laboratory-reported significant digits.

Organic carbon normalized results are not reported if TOC concentration of the sample is outside of 0.5% to 3.5%.

EMPC: Estimated maximum possible concentration

J: Estimated value

R: Rejected

U: Compound analyzed for but not detected above detection limit

UJ: Compound analyzed for but not detected above estimated detection limit

--: not applicable/no data

µg/kg: microgram per kilogram

AET: apparent effects threshold

CSL: cleanup screening level

D/F: dioxins/furans

D/F TEF: total dioxin/furan TEQ 2005 (mammal) (TEF)

DDx: total dichlorodiphenyltrichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyldichloroethane

DMMP: Dredged Material Management Program

DMMU: Dredged Material Management Unit

HPAH: high-molecular-weight polycyclic aromatic hydrocarbon

LPAH: low molecular weight polycylic aromatic hydrocarbon

mg/kg: milligram per kilogram

ng/kg: nanogram per kilogram

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

pct: percent

SCO: sediment cleanup objective

SE: sediment

TEQ: toxic equivalence

TOC: total organic carbon

Appendix F - Department of Ecology Water Quality Certification 23740



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

June 5, 2025

Port of Tacoma
Attn: Kristin Evered
1 Sitcum Way
Tacoma, WA 98421

Re: Water Quality Certification Order No. **23740** (Corps No. **NWS-2024-446**), Port of Tacoma
Programmatic Maintenance, Repair and Scientific Sampling, Pierce County, Washington

Dear Kristin Evered:

On 6/7/2024, the Port of Tacoma submitted a request for a Section 401 Water Quality Certification (WQC) under the federal Clean Water Act for Port of Tacoma (POT) Programmatic Maintenance, Repair and Scientific Sampling, Pierce County, Washington.

On behalf of the state of Washington, the Department of Ecology certifies with conditions that the work described in the Water Quality Certification Request and supplemental documents complies with applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, as amended, and applicable state laws. **This certification is subject to the enclosed Water Quality Certification Order (WQC Order).**

Please ensure that anyone doing work under this WQC Order has read, is familiar with, and is able to follow all of the provisions within the attached WQC Order.

If you have any questions about this decision, please contact Laura Inouye at 360-515-8213. The enclosed WQC Order may be appealed by following the procedures described within.

Sincerely,

Brenden McFarland on behalf of
Loree' Randall, Section Manager
Aquatic Permitting & Protection Section

WQC Order No. 23740, Corps No. NWS-2024-446

Aquatics ID No. 143975

June 5, 2025

Page 2 of 2

Shorelands and Environmental Assistance Program

Enclosure (1)

By certified mail: 91 7199 9991 7036 9386 8642

Sent via e-mail: Kevered@portoftacoma.com

E-cc: LeeAnn Simmons, U.S. Army Corps of Engineers

Erin Hanlon Brown, Ecology

Laura Inouye, Ecology

ecyrefedpermits@ecy.wa.gov

In The Matter of Granting a Water Quality
Certification with Conditions to Port of Tacoma
pursuant to 33 U.S.C. 1341 (FWPCA § 401), RCW 90.48.120,
RCW 90.48.260 and Chapter 173-201A WAC

Port of Tacoma
Attn: Kristin Evered
1 Sitcum Way
Tacoma, WA 98421

WQC Order No.	23740
Corps Reference No.	NWS-2024-446
Site Location	Port of Tacoma Programmatic Maintenance, Repair and Scientific Sampling, located within Commencement Bay, Tacoma, Pierce County, Washington.

The Port of Tacoma submitted a request for a Section 401 Water Quality Certification (WQC) under the federal Clean Water Act to the Department of Ecology (Ecology) for the Port of Tacoma (POT) Programmatic Maintenance, Repair and Scientific Sampling, Pierce County, Washington. The following required processing dates are listed below:

- On 12/21/2023, the Port of Tacoma submitted a pre-filing meeting request.
- On 6/7/2024, Ecology received a request for Clean Water Section 401 Water Quality Certification.
- On 7/17/2024, the Port of Tacoma submitted additional information, and the Department of Ecology (Ecology) considered the Request valid on this date.
- On 10/24/2024, the U.S. Army Corps of Engineers (Corps) and Ecology issued a joint public notice.
- Ecology's "Reasonable Period of Time" for this project has been established as 6/7/2025.

The project proposes to conduct needed maintenance, repair, and replacement of portions of existing Port structures on an as-needed basis to maintain the function and structural integrity of piers, pier structures (e.g., fenders, etc.), dolphins, bulkheads, shoreline protection armor, docks and wharves, outfalls, and berths along with sediment sampling to support these Port maintenance and cleanup obligations. The Port's facilities are subject to normal wear and tear and weather and vessel-related damage. As a result, routine maintenance of Port facilities is necessary. These activities include maintenance of existing structures, including pile systems, fender systems and rub strips, cathodic protection systems, decks, piles/ramps/float assemblages, overwater safety equipment, shoreline

stabilization (including alternative shoreline stabilization in place of hard armoring), outfalls and tide gates, boat ramps and launches, under pier utilities, navigational aids, and on-dock structures (minor overwater construction).

The project also includes maintenance dredging of existing vessel berths, geotechnical/sediment sampling to support dredging and cleanup projects, pile and overwater structure removal, and debris/vessel removal.

This certification does not cover new structures, new areas of shoreline stabilization, wetland impacts, or dredging projects that are currently covered under an active individual WQC including Order No. 23248 - Middle Blair Navigation Safety Improvement, Order No. 20113 - Port of Tacoma Maintenance Dredge - Husky and WUT, Order No. 23234 - Pierce County Terminal Maintenance Dredge, and Order No. 23235 -TOTE Maritime Alaska Maintenance Dredge.

The project site is located in Commencement Bay, Pierce County, Washington, Section 34, Township 21 N., Range 3 E., within Water Resource Inventory Area (WRIA) 10 Puyallup-White.

Authorities

In exercising authority under 33 U.S.C. §1341, 40 CFR Part 121, RCW 90.48.120, RCW 90.48.260, and Chapter 173-201A, Ecology has reviewed this WQC request pursuant to the following:

1. Conformance with applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. §§1311, 1312, 1313, 1316, and 1317.
2. Conformance with the state water quality standards contained in Chapter 173-201A WAC and authorized by 33 U.S.C. §1313 and by Chapter 90.48 RCW, and with other applicable state laws; and
3. Conformance with the provision of using all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.
4. Conformance with Washington's prohibition on discharges that cause or tend to cause pollution of waters of the state of Washington. RCW 90.48.080.
5. The Project Proponent of the project authorized is responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, local or tribal authorities.

With this Water Quality Certification Order (WQC Order), Ecology is granting with conditions the Port of Tacoma's request for a Section 401 Water Quality Certification for the POT Programmatic Maintenance, Repair and Scientific Sampling, located within Commencement Bay, Tacoma, Pierce County. Ecology has determined that the proposed discharges will comply with all applicable state water quality and other appropriate requirements of State law, provided the program is conducted in

accordance with the WQC request that Ecology received on 6/7/2024 the supporting documents referenced in Table 1 below, **and the conditions of this WQC Order.**

Table 1 Supporting Documents

Date Received	Document Type	Title and Date	Author
6/7/2024	Joint Aquatic Resources Permit Application (JARPA) Form	JARPA, 5/16/2024	Kristin Evered, Port of Tacoma
10/2/2024	Biological Evaluation	POS and POT Combined Biological Evaluation	Ports of Seattle and Tacoma
3/14/2025	State Environmental Policy Act	SEPA DNS (activities except dredging), 11/15/2024	Kristin Evered, Port of Tacoma
5/2/2025	State Environmental Policy Act	SEPA DNS (dredging),	Kristin Evered, Port of Tacoma
5/2/2025	Activity Table	Activity table, dated 5/2/2025	Kristin Evered, Port of Tacoma
5/2/2025	Water Quality Monitoring and Protection Plan	Water Quality Monitoring and Protection Plan, Port of Tacoma, Programmatic Maintenance, Repair, and Scientific Sampling, 5/2/2025	Port of Tacoma
5/9/2025	Hydraulic Project Approval (HPA)	Hydraulic Project Approval (HPA), activities except dredging and shoreline stabilization, dated 3/20/2025	Miles Penk, WDFW
5/9/2025	Biological Opinion	Endangered Species Act Section 7(a)(2) Biological Opinion, dated 4/10/2025	Kathleen Wells, National Oceanic and Atmospheric Administration

5/9/2025	Biological Opinion	Endangered Species Act- Section 7 Consultation, Programmatic Biological Opinion, Port of Seattle and Port of Tacoma Comprehensive Mitigated Permits, 4/10/2025	Bradley Thompson, U.S. Fish and Wildlife Service
5/21/2025	Project Information Form	Project Information Form (fillable Excel spreadsheet)	Kristin Evered, Port of Tacoma

Issuance of this Section 401 Water Quality Certification for this proposal does not authorize the Port of Tacoma to exceed applicable state water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC) or sediment quality standards (Chapter 173-204 WAC) or other appropriate requirements of State law. Furthermore, nothing in this Section 401 Water Quality Certification absolves the Port of Tacoma from liability for contamination and any subsequent cleanup of surface waters, ground waters, or sediments resulting from project construction or operations.

Water Quality Certification Conditions

The following conditions will be incorporated into the Corps permit and strictly adhered to by the Port of Tacoma. Specific condition justifications and citations are provided below.

A. General Conditions

1. In this WQC Order, the term “Project Proponent” shall mean the Port of Tacoma and its agents, assignees, and contractors.
 - Justification - Ecology needs to identify that conditions of this WQC Order apply to anyone conducting work on behalf of the Project Proponent to ensure compliance with the water quality standards and other applicable state laws.
 - Citation - 40 CFR 121.1(j), Chapter 90.48 RCW, RCW 90.48.080, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, and WAC 173-225-010.
2. All submittals required by this WQC Order shall be sent to Ecology’s Headquarters Office, Attn: Federal Permit Manager, via e-mail to fednotification@ecy.wa.gov and cc to Laura.Inouye@ecy.wa.gov. The submittals shall be identified with WQC Order No. 23740 and include the Project Proponent’s name, Corps permit number, project name, project contact, and the contact phone number. (See conditions A6, A10, B1, B2, C3, D6, D9, E13, E31, E44, E46, E47).

- Justification - Ecology needs to identify where information and submittals are to be submitted to be in compliance with the requirements of this WQC Order.
 - Citation - Chapter 90.48 RCW, RCW 90.48.120, RCW 90.48.260, Chapter 173-201A WAC, and WAC 173-225-010.
3. Work authorized by this WQC Order is limited to the work described in the WQC request package received by Ecology on 6/7/2024 and the supporting documentation identified in Table 1.
- Justification - Ecology has the authority to prevent and control pollution of state waters. By authorizing a discharge into a water of the state, through a WQC, Ecology is certifying the project as proposed will not negatively impact water quality. Therefore, it is imperative the project is conducted as it was presented during the review process. Any deviations from information within the WQC Request package and this WQC Order must be disclosed prior to the initiation of the planned work, and may require a new WQC request.
 - Citation - 40 CFR 121.5, 40 CFR 121.10, 40 CFR 121.11, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, Chapter 173-204 WAC, and WAC 173-225-010.
4. The Project Proponent shall keep copies of this WQC Order on the job site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and lead workers, and state and local government inspectors.
- Justification - All parties (including on-site contractors) must be aware of and comply with the WQC Order for the protection of water quality.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, Chapter 173-201A WAC, and WAC 173-225-010.
5. The Project Proponent shall provide access to the project sites and all mitigation sites upon request by Ecology personnel for site inspections, monitoring, and/or necessary data collection, to ensure that conditions of this WQC Order are being met.
- Justification - Ecology must be able to investigate and inspect construction sites and facilities for compliance with all state rules and laws.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.090, RCW 90.48.120, Chapter 173-201A WAC, and WAC 173-225-010.

6. The Project Proponent shall ensure that all project engineers, contractors, and other workers at the project site with authority to direct work have read and understand relevant conditions of this WQC Order and all permits, approvals, and documents referenced in this WQC Order. The Project Proponent shall provide Ecology a signed statement (see Attachment A for an example) before construction begins.

- Justification - Ecology needs to ensure that anyone conducting work at the project, on behalf of the Project Proponent, are aware of and understand the required conditions of this WQC Order to ensure compliance with the water quality standards and other applicable state laws.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, Chapter 173-201A WAC, and WAC 173-225-010.

7. This WQC Order does not authorize direct, indirect, permanent, or temporary impacts to waters of the state or related aquatic resources, except as specifically provided for in conditions of this WQC Order.

- Justification - Ecology has the authority to prevent and control pollution of state waters, and to protect designated uses. By authorizing a discharge into a water of the state, through a water quality certification, Ecology is certifying the project as proposed will not negatively impact state water quality and will comply with the state's water quality requirements. Therefore, it is imperative the project is conducted as it was presented during the review process, and as conditioned herein.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, Chapter 173-200 WAC, Chapter 173-201A WAC, WAC 173-201A-300(2)(e)(i), WAC 173-201A-310, WAC 173-204-120, and WAC 173-225-010.

8. Failure of any person or entity to comply with the WQC Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the state's water quality standards and the conditions of this WQC Order.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses. Ecology has independent state authority to ensure protection of state water quality. Civil penalties and other enforcement actions are the primary means of securing compliance with water quality requirements.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.037, RCW 90.48.080, RCW 90.48.120, RCW 90.48.140, RCW 90.48.142, RCW 90.48.144, and WAC 173-225-010.

9. The Project Proponent shall provide Ecology documentation for review before undertaking any major changes to the proposed project that could significantly and adversely affect water quality, other than those project changes required by this WQC Order.

- Justification - Ecology has independent authority to enforce our 401 certification conditions issued through this WQC Order pursuant to RCW 90.48, and has independent state authority to ensure protection of state water quality. In order to ensure the project will comply with water quality standards in the event of any major changes, Ecology must be able to review the scope of work involved in the construction and operation of the project, otherwise all work must stop and a new 401 certification pre-filing meeting, followed by a new WQC request (after requisite 30-days) is required.
- Citation - 40 CFR 121.1(k) and (n), 40 CFR 121.3, 40 CFR 121.5, 40 CFR 121.11, Chapter 90.48 RCW, and Chapter 173-201 WAC.

10. The Project Proponent shall send (per A.2.) a copy of the final Federal permit via e-mail to fednotification@ecy.wa.gov and cc to Federal Permit Manager prior to the starting of any work authorized by this WQC Order. If the Federal Agency determines the proposed project does not require a Federal permit, the Project Proponent shall immediately inform Ecology.

- Justification - This condition is needed to ensure that the federal permit has been issued and all the conditions of the WQC Order have been included into the federal permit.
- Citation - 40 CFR 121.10, 40 CFR 121.11, and Chapter 90.48 RCW.

11. No temporary or permanent impacts to wetlands are authorized under this WQC Order.

- Justification – Proposed wetland impacts must be analyzed on a case-by-case basis to ensure that the mitigation sequence is followed. Alteration of water quality necessitates the use of mitigation as a method of controlling pollution. When adequate mitigation is provided, the impacts are not considered significant enough to water quality, at least in the long-term. The water quality standards, along with mitigation, protect wetlands as well as permitting some level of degradation where unavoidable or necessary.
- Citation – 33 CFR 332, 40 CFR 131.12, 40 CFR 230, subpart J, Chapter 90.48 RCW, Chapter 90.54 RCW, Chapter 90.74 RCW, Chapter 173-201A WAC, WAC 173-201A-260 (3)(i-ii), WAC 173-201A-300, and WAC 173-225-010.

12. The Project Proponent is responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, local or tribal authorities.

- Justification –Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses. The temporary disturbance of sediments during and immediately following in-water construction activities may only occur after the activity has received all other necessary local and state permits and approvals, and after the implementation of appropriate best management practices to avoid or minimize disturbance of in-place sediments and exceedances of the turbidity criteria.
- Citation – Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010

13. To transfer this WQC Order to a new owner or operator the Project Proponent shall:

- a. Complete a Request for Transfer of Order with a specific transfer date of the WQC Order's obligations, coverage, and liability and submit it to Ecology per condition A.2. Link to form: <https://apps.ecology.wa.gov/publications/SummaryPages/ECY070695.html>;
 - b. Provide a copy of this WQC Order to the new owner or operator; and
 - c. The transfer is not considered valid until the Project Proponent receives written notification from Ecology that the transfer has been approved.
- Justification – Ecology has independent state authority to ensure protection of state water quality. Ecology needs to ensure that anyone conducting work on the project, including any new owners or operators, are aware of and understand the required conditions of this WQC Order to ensure compliance with the water quality standards and other applicable state laws.
 - Citation – 40 CFR 121.5, Chapter 90.48 RCW, RCW 90.48.030, Chapter 173-201A WAC, and WAC 173-225-010.

B. Notification Requirements

1. The following notifications shall be made via phone or e-mail (e-mail is preferred) to Ecology's Federal Permit Manager via e-mail to fednotification@ecy.wa.gov and cc to Laura.Inouye@ecy.wa.gov. Notifications shall be identified with WQC Order No. 23740, Corps Reference No. NWS-2024-446, and include the Project Proponent name, project name, project location, project contact and the phone number.
 - a. Immediately following a violation of state water quality standards or when the project is out of compliance with any conditions of this WQC Order;

- b. At least ten (10) days prior to all pre-construction meetings (Condition D47, pre-dredge meeting);
- c. At least ninety (90) days prior to conducting in-water work activities via the Port's Project Information Form for those activities indicated on the Activity Table in Table 1; and
- d. Within seven (7) days of completion of all activities for each in-water work window.
 - Justification - Ecology has independent state authority to ensure protection of state water quality. Ecology must be aware of when a project starts and ends and whether there are any issues. This allows Ecology to evaluate compliance with the state water quality requirements.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, Chapter 173-201A WAC, WAC 173-201A-300 - 330, Chapter 173-204 WAC, and WAC 173-225-010.

2. In addition to the phone or e-mail notification required under B.1.a. above, the Project Proponent shall submit a detailed written report to Ecology within five (5) days that describes the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

- Justification - Ecology has independent state authority to ensure protection of state water quality. This condition is intended to assure the Project Proponent remains in full compliance with state water quality requirements for the duration of the Project.
- Citation - Chapter 90.48 RCW, RCW 90.48.120, Chapter 173-201A WAC, and WAC 173-225-010.

C. Timing

1. This WQC Order is effective upon issuance of the U.S. Corps of Engineers (Corps) individual permit for this program and will remain valid for until June 5, 2035.

- Justification – Certifications are required for any license or permit that authorizes an activity that may result in a discharge or fill material into waters. This WQC Order is not valid until the Federal agency issues a permit. Additionally, Ecology needs to be able to specify how long the WQC Order will be in effect.
- Citation – Chapter 90.48 RCW, Chapter 173-201A WAC, and WAC 173-225-010.

2. The following in-water work windows apply:

- a. All activities within the wetted perimeter of Commencement Bay may be conducted between July 15 and February 15 of any year, unless otherwise approved in writing by Ecology.
 - Justification - This condition is reaffirming the project will take place during a time period that will not harm fish or other aquatic species.
 - Citation - Chapter 77.55 RCW, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300, WAC 173-201A-330, WAC 173-225-010, and Chapter 220-660 WAC.
3. Any project activity that requires a new or revised Hydraulic Project Approval (HPA) from the Department of Fish and Wildlife should be sent to Ecology for review before the action or change is implemented.
 - Justification - This condition is reaffirming the project will take place during a time period that will not harm fish or other aquatic species.
 - Citation - Chapter 77.55 RCW, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300, WAC 173-201A-330, WAC 173-225-010, and Chapter 220-660 WAC.

D. Water Quality Monitoring and Criteria

1. This WQC Order does not authorize the Project Proponent to exceed applicable water quality standards beyond the limits established in Chapter 173-201A WAC, except as authorized by this WQC Order.
 - Justification - This condition ensures compliance with water quality standards to protect surface waters of the state. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.
2. For in-water activities within fresh waters (including wetlands) turbidity shall not exceed 5 NTU over background when the background is 50 NTU or less; or a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
 - Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

3. For in-water activities within marine waters (inner Commencement Bay, south and east of a line bearing 225° true through Hylebos waterway light except the city waterway south and east of south 11th Street) turbidity shall not exceed 10 NTU over background when the background is 50 NTU or less; or a 20 percent increase in turbidity when the background turbidity is more than 50 NTU.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

4. For in-water activities within marine waters (Commencement Bay, south and east of a line bearing 258° true from "Brown's Point" and north and west of a line bearing 225° true through the Hylebos waterway light) turbidity shall not exceed 5 NTU over background when the background is 50 NTU or less; or a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

5. This WQC Order does not authorize the Project Proponent to exceed applicable turbidity standards beyond the limits established in Chapter 173-201A WAC as set forth below, unless otherwise authorized in this WQC Order:

- a. Temporary area of mixing for turbidity established within the state water quality standards for fresh waters (WAC 173-201A-200) is as follows:
 01. For waters up to 10 cfs flow at the time of construction, the point of compliance shall be one hundred feet downstream from the activity causing the turbidity exceedance.
 02. For waters above 10 cfs up to 100 cfs flow at the time of construction, the point of compliance shall be two hundred feet downstream of the activity causing the turbidity exceedance.

03. For waters above 100 cfs flow at the time of construction, the point of compliance shall be three hundred feet downstream of the activity causing the turbidity exceedance.
 04. For projects working within or along lakes, ponds, wetlands, or other non-flowing waters, the point of compliance shall be at a radius of one hundred fifty feet from the activity causing the turbidity exceedance.
 - Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.
 - b. Temporary area of mixing for turbidity established within the state water quality standards for marine waters (WAC 173-201A-210) is as follows:
 01. For estuaries or marine waters, the point of compliance for a temporary area of mixing shall be at a radius of one hundred fifty feet from the activity causing the turbidity exceedance.
 - Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.
6. The Project Proponent shall revise the Water Quality Monitoring and Protection Plan (WQMPP), identified in Table 1, to be consistent with the conditions of this WQC Order, as described in the WQMPP. The revised WQMPP shall be submitted to Ecology's Federal Permit Manager (per Condition A.2 of this Order) **for review** at least 90 days prior to beginning any work covered by this WQC Order. The WQMPP may be included in the Port's Project Information Form (identified in Table 1).
- Justification - This condition is necessary to ensure that the monitoring and BMPs that are proposed by the Project Proponent and authorized by Ecology are conducted to protect water quality. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

7. If water quality exceedances for turbidity are observed outside the point of compliance, work shall cease immediately and the Project Proponent or the contractor shall assess the cause of the water quality problem and take immediate action to stop, contain, and correct the problem and prevent further water quality turbidity exceedances.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

8. Visible turbidity anywhere beyond the temporary area of mixing (point of compliance) from the activity, shall be considered an exceedance of the standard.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

9. Monitoring results shall be submitted as required in the WQMPP (Table 1) to Ecology's Federal Permit Manager, per condition A.2.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and prevent exceedances of the water quality standards that protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

10. Ecology may ask or could use its discretionary authority to require the Project Proponent to provide mitigation and/or additional monitoring if the monitoring results indicate that the water quality standards have not been met.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution and ensure that aquatic life and beneficial uses are protected.

- Citation - RCW 90.48, RCW 90.48.010, RCW 90.48.030, RCW 90.48.080, RCW 90.48.120, Chapter 173-201A WAC, 173-201A-300-330 WAC, and Chapter 173-204 WAC.

E. Construction

General Conditions

1. All work in and near waters of the state shall be conducted to minimize turbidity, erosion, and other water quality impacts. Construction stormwater, sediment, and erosion control Best Management Practices (BMPs) suitable to prevent exceedances of state water quality standards shall be in place before starting maintenance and shall be maintained throughout the duration of the activity.
 - Justification - Disturbed areas without appropriate BMPs and construction methods can discharge excess sediment to waters of the state and degrade water quality. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, Chapter 90.48.030 RCW, Chapter 90.48.080 RCW, Chapter 173-201A WAC, Chapter 173-201A-300-330 WAC, Chapter 173-204-120 WAC, and Chapter 173-225-010 WAC.
2. All clearing limits, stockpiles, staging areas, and trees to be preserved shall clearly be marked prior to commencing construction activities and maintained until all work is completed for each project.
 - Justification -Ensures that the Project Proponent preserves sensitive areas from discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.
3. No stockpiling or staging of materials shall occur at or below the OHWM of any waterbody.
 - Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

4. If required the Project Proponent shall obtain and comply with the conditions of the Construction Stormwater General Permit (National Pollutant Discharge Elimination System - NPDES) issued for this project.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation – Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, RCW 90.48.260, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

5. Within the project limits¹ all environmentally sensitive areas including, but not limited to, wetlands, wetland buffers, shoreline riparian buffers and mitigation areas shall be fenced with high visibility construction fencing (HVF), prior to commencing construction activities. Construction activities include equipment staging, materials storage, and work vehicle parking. Note: This condition does not apply to activities such as pre-construction surveying and installing HVF and construction zone signage.

- a. If the project will be constructed in stages² a detailed description and drawings of the stages shall be sent to Ecology for review at least 20 days prior to placing HVF.
 - b. Condition 5.a. shall apply to each stage.
 - c. All field staff shall be trained to recognize HVF, understand its purpose and properly install it in the appropriate locations.
 - d. HVF shall be maintained until all work is completed for each project or each stage of a staged project.
- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

¹ Project limits include mitigation sites, staging areas, borrow sources, and other sites developed or used to support project construction.

² A stage is part of a project that has been separated into at least two distinct areas to be built during separate timeframes.

6. No petroleum products, fresh concrete, lime or concrete, chemicals, or other toxic or deleterious materials shall be allowed to enter waters of the state.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

7. All construction debris, excess sediment, and other solid waste material shall be properly managed and disposed of in an upland disposal site approved by the appropriate regulatory authority.

- Justification - Ecology must be assured that the Project Proponent is managing and disposing of material to protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

8. All equipment being used below the ordinary high water mark shall utilize biodegradable hydraulic fluid.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

9. Applicant shall ensure that fill (soil, gravel, or other material) placed for the proposed project does not contain toxic materials in toxic amounts.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300-330, WAC 173-204-120, and WAC 173-225-010.

10. Work within waters of the state shall be conducted in the dry or during periods of low flow, unless written approval is obtained by Ecology.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300-330, WAC 173-204-120, and WAC 173-225-010.

11. If temporary cofferdams, bladder dams, super sack dams, floating turbidity curtains, and bypasses used to divert water around the work area are required, they shall be in place prior to initiation of work below the OHWM. These shall be properly deployed and maintained in order to minimize turbidity and re-suspension of sediment.

- Justification - This condition ensures containment and limits movement of sediment that could cause water quality exceedances. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300-330, WAC 173-204-120, and WAC 173-225-010.

12. To minimize sediment releases, re-introduction of water into the isolated work area shall be done gradually, and at a rate not higher than the normal flow.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300-330, WAC 173-204-120, and WAC 173-225-010.

13. If contamination is discovered on site, it must be reported to Ecology (per Condition A.2.). Protective measures shall be implemented to isolate and remove the contaminated media and avoid escaping dust, soil, or sediment erosion, and water pollution during construction activities. Contaminated sediments/soils shall be managed and disposed of in accordance with state and local regulations

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 70.105D RCW, RCW 90.48, 90.48, RCW 90.48.030, Chapter 173-200 WAC, Chapter 173-201A WAC, WAC 173-201A-300-330, Chapter 173-204 WAC, and WAC 173-225-010.

Equipment and Maintenance

14. Staging areas will be located a minimum of 50 feet and, where practical, 200 feet, from waters of the state, including wetlands, unless otherwise requested by the Project Proponent and authorized by Ecology.

- Justification - Requiring a minimum setback ensures that material will not end up in waters of the state. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

15. Equipment used for this project shall be free of external petroleum-based products while used around the waters of the state, including wetlands. Accumulation of soils or debris shall be removed from the drive mechanisms (wheels, tires, tracks, etc.) and the undercarriage of equipment prior to its use around waters of the state, including wetlands.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

16. No equipment shall enter, operate, be stored or parked within any sensitive area except as specifically provided for in this WQC Order.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

17. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 173-200, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

18. Wash water containing oils, grease, or other hazardous materials resulting from washing of equipment or working areas shall not be discharged into state waters. The Project Proponent shall set up a designated area for washing down equipment.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

19. A separate area shall be set aside, which does not have any possibility of draining to surface waters, for the wash-out of concrete delivery trucks, pumping equipment, and tools.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

20. Barges shall not be allowed to ground-out during in-water construction.

- Justification - This condition is necessary to protect shallow water habitat and prevent suspension of sediment. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, Chapter 173-201A WAC, 173-201A-300-330 WAC, and Chapter 173-204 WAC.

21. Barges shall be kept free of material that could be blown into water.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

Dewatering

22. Turbid dewatering water associated with in-water work shall not be discharged directly to waters of the state, including wetlands. Turbid dewatering water shall be routed to an upland area for on-site or off-site settling.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

23. Clean dewatering water associated with in-water work that has been tested and confirmed to meet water quality standards may be discharged directly to waters of the state including wetlands. The discharge outfall method shall be designed and operated so as not to cause erosion or scour in the stream channel, banks, or vegetation.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

24. Dewatering water may not be discharged to Commencement Bay or conveyed to surface waters unless it meets Surface Water Quality Standards (Chapter 173-201A WAC) at the point of discharge, unless otherwise authorized by this WQC Order.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

25. All equipment associated with dewatering activities shall be properly operated and maintained.

- Justification - Maintained equipment is less likely to fail or leak pollutants. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

Bank Stabilization

26. Placement of rip-rap shall be conducted in compliance with water quality standards for turbidity.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

Ground Improvements

27. Ground improvement activities shall not cause exceedance of water quality standards.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

Dolphin Removal or Removal of Creosote Piles

28. Pile removal, handling, and disposal shall follow the EPA Region 10 Best Management Practices for Piling Removal and Placement in Washington State, dated February 18, 2016.

- Justification- Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citations- Chapter 77.55 RCW, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300, WAC 173-201A-330, WAC 173-225-010, and Chapter 220-660 WAC.

29. Piles removed from the substrate shall be moved immediately from the water onto a barge or onto upland.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

30. The pile shall not be shaken, hosed off, left hanging to drip or any other action intended to clean or remove adhering material from the pile over waters of the state.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

31. If pile removal fails, the pile stub must be cut at least 2 ft. below mudline, and the location (latitude and longitude) of all cut piling shall be reported to Ecology within 2 months of removal of all piles.

- Justification- This condition is necessary because pile stubs can release associated creosote if exposed, and stubs at the surface can result in localized erosion that leads to further exposure of the stubs. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citations- Chapter 77.55 RCW, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300, WAC 173-201A-330, WAC 173-225-010, and Chapter 220-660 WAC.

32. During pile removal, containment booms and absorbent sausage booms shall be placed around the perimeter of the in-water work area and upland storage area, if used, to capture wood debris, oil, and other materials from being released into waters of the state.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

33. All excavated piles and debris that is collected shall be disposed upland in an approved disposal site.

- Justification - Ecology must be assured that the Project Proponent is managing and disposing of piles and debris to protect water quality and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

34. If a barge is used during pile removal, the work surface on the barge deck shall include containment for piles and any liquid or sediment removed during pulling of the piling.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

35. Sediments spilled on work surfaces shall be contained and disposed of with the pile debris at an approved upland disposal site.

- Justification - Ecology must be assured that the Project Proponent is managing and disposing of sediment to protect water quality and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

36. Water left in the containment on the barge shall not be discharged into waters of the state.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

Geotechnical and Sediment Sampling

37. Geotechnical and sediment sampling as part of cleanup or restoration studies, for geotechnical testing to inform stability or constructability of designs, and to support DMMP Suitability Determination Memorandums shall follow the BMPs listed in the combined Biological Evaluation (section 1.3.7).

- Justification - Ecology must be assured that the Project Proponent is managing and disposing of excess sediment appropriately and to protect water quality and beneficial uses.
- Citation - Chapter 70.105D RCW, Chapter 90.48 RCW, RCW 90.48.030, Chapter 173-200 WAC, Chapter 173-201A WAC, WAC 173-201A-300 - 330, Chapter 173-204 WAC and WAC 173-225-010.

Dredging

38. All dredging is to be done using a mechanical (clamshell) dredge. Ecology must approve any other dredging method prior to its use.

- Justification - Ecology has reviewed the project and the BMPs for a specific type of dredging. Changes to the dredging method would require different BMPs. If new dredging methods are proposed, a new WQC pre-filing meeting request, followed by a new WQC request (after requisite 30-days) is required.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.52-040 RCW, Chapter 90.54.020(2)(b) RCW, Chapter 173-201A WAC, Chapter 173-201A-240(5)(b) WAC, and Chapter 173-204-400(2) WAC, and WAC 173-225-010.

39. Only suitable dredged material will be disposed of by bottom dump barge at the Commencement Bay open-water disposal site.

- Justification - Ecology has reviewed the project and the BMPs for a specific type of disposal technique and disposal location. If different in-water disposal sites are proposed, a new WQC pre-filing meeting request, followed by a new WQC request (after requisite 30-days) is required.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.52-040 RCW, Chapter 90.54.020(2)(b) RCW, Chapter 173-201A WAC, Chapter 173-201A-240(5)(b) WAC, and Chapter 173-204-400(2), and WAC 173-225-010.

40. All unsuitable material will be transloaded at an approved facility and disposed of at a permitted upland disposal site.

- Justification - Use of a permitted trans loading facility ensures that appropriate BMPs, including appropriate containment and spill plans, are implemented. Additionally, use of a permitted disposal location ensures appropriate BMPs will be implemented to prevent contaminants from migrating into groundwater or surface waters.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.52-040 RCW, Chapter 90.54.020(2) (b) RCW, Chapter 173-200 WAC, Chapter 173-201A WAC, Chapter 173-201A-240(5)(b) WAC, and Chapter 173-204-400(2), and WAC 173-225-010.

41. Dredging operations shall be conducted in a manner that minimizes the disturbance and siltation of adjacent waters and prevents the accidental discharge of petroleum products, chemicals or other toxic or deleterious substances into state waters.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

42. Dredged material shall not be temporarily or permanently stockpiled below the OHWM.

- Justification - Stockpiles below the OHWM can discharge excess sediment to waters of the state and degrade water quality. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

43. All debris larger than two (2) feet in any dimension shall be removed from the dredged sediment prior to disposal at the open water site. Similar-sized debris floating in the dredging or disposal area shall be removed.

- Justification - Ecology must be assured that the Project Proponent is managing and disposing of material to protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

44. A pre-dredge meeting is required to be convened prior to the start of dredging. A **Dredging and Disposal Work plan**, season-specific Water quality Monitoring Plan (WQMP)(condition C6), and DMMP Suitability Determination Memorandum (SDM)(condition E46) shall be submitted to Ecology per Condition A2 at least two weeks prior to the pre-dredge meeting. The Dredging and Disposal work plan shall include the following:

- a. General information including schedule, primary contact, and hours of operation.
- b. Dredged quantities and disposal location, including any upland locations (transloading and disposal).
- c. Dredging procedures and sequence.
- d. Equipment list.

e. A description of the BMPs to be used for dredging, dewatering, transloading, and disposal.

- Justification - Ecology needs to meet with the Project Proponent and contractor to go over the work plan prior start of work to ensure that the plan reflects the project that has been authorized by this WQC Order. This condition is intended to assure the Project Proponent remains in full compliance with state water quality requirements for the duration of the project.
- Citation - Chapter 70A.200 RCW, Chapter 77.55 RCW, RCW 79.02.300, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.52-040 RCW, RCW 90.54.020(2)(b), Chapter 173-201A WAC, WAC 173-201A-240(5)(b), WAC 173-201A-300, WAC 173-201A-330, WAC 173-204-400(2), WAC 173-225-010, and Chapter 220-660 WAC.

45. All dredging and disposal shall have a valid suitability determination prior to in-water work.

- Justification - The DMMP process confirms that material is suitable for in-water disposal and that the project meets state anti-degradation regulations.
- Citation - Chapter 173-201A WAC, Chapter 173-201A-230 WAC, WAC 173-201A-240(1), WAC 173-201A-240(2), Chapter 173-204 WAC, WAC 173-204-110-120, WAC 173-204-400(2), WAC 173-204-410(7), WAC 173-204-350(d), and Chapter 173-225 WAC.

46. Any deviations from the authorized dredging footprint, depths, or volumes must be reported to the Project Manager within 24 hours of discovery.

- Justification - Ecology has the authority to prevent and control pollution of state waters. By authorizing a discharge into a water of the state, through a WQC, Ecology is certifying the project as proposed will not negatively impact water quality. Therefore, it is imperative the project is conducted as it was presented during the review process.
- Citation - 40 CFR 121.5, 40 CFR 121.10, 40 CFR 121.11, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, Chapter 173-204 WAC, and WAC 173-225-010.

47. A post-dredge report shall be submitted to the Project Manager within 30 days of completion of dredging shall include:

- a. The final dredge volume
- b. location(s) of in-water placement
- c. volume and location(s) of material placed in uplands.

- d. Plotted results of the post-dredge bathymetric survey. Results must clearly display the post-dredge sediment surface in relation to the permitted dredge boundary and depth, as well as the location of project features such as docks, wharfs and other landmarks. The vertical datum must be clearly indicated.
 - Justification - Ecology has the authority to prevent and control pollution of state waters. By authorizing a discharge into a water of the state, through a WQC, Ecology is certifying the project as proposed will not negatively impact water quality. Therefore, it is imperative the project is conducted as it was presented during the review process.
 - Citation - 40 CFR 121.5, 40 CFR 121.10, 40 CFR 121.11, Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, RCW 90.48.260, Chapter 173-200 WAC, Chapter 173-201A WAC, Chapter 173-204 WAC, and WAC 173-225-010.

F. Emergency/Contingency Measures

1. The Project Proponent shall develop and implement a spill prevention and containment plan for all aspects of this project.
 - Justification - Ecology must ensure that the Project Proponent has a plan to prevent pollution from entering waterways. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, Chapter 90.56.280 RCW, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, WAC 173-225-010, and WAC 173-303-145.
2. The Project Proponent shall have adequate and appropriate spill response and cleanup materials available on site to respond to any release of petroleum products or any other material into waters of the state.
 - Justification - Ecology must have assurance that the Project Proponent has the material readily available in WQC Order to address any spills that might occur to protect waters of the state. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
 - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, RCW 90.56.280, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, WAC 173-225-010, and WAC 173-303-145.

3. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters.

- Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, RCW 90.56.280, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, WAC 173-225-010, and WAC 173-303-145.

4. Work causing distressed or dying fish and discharges of oil, fuel, or chemicals into state waters or onto land with a potential for entry into state waters is prohibited. If such work, conditions, or discharges occur, the Project Proponent shall notify Ecology's Federal Permit Manager, per condition A2, and immediately take the following actions:

1. Cease operations at the location of the non-compliance.

Assess the cause of the water quality problem and take appropriate measures to correct the problem and prevent further environmental damage.

In the event of a discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of any spilled material and used cleanup materials.

Immediately notify Ecology's Regional Spill Response Office and the Washington State Department of Fish and Wildlife with the nature and details of the problem, any actions taken to correct the problem, and any proposed changes in operation to prevent further problems.

Immediately notify the National Response Center at 1-800-424-8802, for actual spills to water only.

- Justification - This condition is necessary to prevent oil and hazardous materials spills from causing environmental damage and to ensure compliance with water quality requirements. The sooner a spill is reported, the quicker it can be addressed, resulting in less harm. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.

- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, RCW 90.56.280, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, WAC 173-225-010, and WAC 173-303-145.

5. Notify Ecology's Regional Spill Response Office immediately if chemical containers (e.g. drums) are discovered on-site or any conditions present indicating disposal or burial of chemicals on-site that may impact surface water or ground water.

- Justification - Oil and hazardous materials spills cause environmental damage. The sooner a spill is reported, the quicker it can be addressed, resulting in less harm. Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.
- Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 90.56 RCW, RCW 90.56.280, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, WAC 173-225-010, and WAC 173-303-145.

Your right to appeal

You have a right to appeal this WQC Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do all of the following within 30 days of the date of receipt of this WQC Order:

- File your notice of appeal and a copy of this WQC Order with the PCHB (see filing information below). "Filing" means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. "Notice of appeal" is defined in WAC 371-08-340.
- Serve a copy of your notice of appeal and this WQC Order on the Department of Ecology mail, in person, or by email (see addresses below).

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Filing an appeal

Filing with the PCHB

For the most current information regarding filing with the PCHB, visit: <https://elaho.wa.gov/> or call: 360-664-9160.

Service on Ecology

Street Addresses:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

Americans with Disabilities Act Information

Accommodation Requests

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit <https://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Contact Information

Please direct all questions about this WQC Order to:

Laura Inouye
Department of Ecology
360-515-8213
Laura.Inouye@ecy.wa.gov

More Information

- **Pollution Control Hearings Board Website**
<https://elaho.wa.gov>

- **Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board**
<http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<http://app.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**
<http://app.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 90.48 RCW – Water Pollution Control**
<http://app.leg.wa.gov/RCW/default.aspx?cite=90.48>
- **Chapter 173.204 WAC – Sediment Management Standards**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=173-204>
- **Chapter 173-200 WAC – Water Quality Standards for Ground Waters of the State of Washington**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=173-200>
- **Chapter 173-201A WAC – Water Quality Standards for Surface Waters of the State of Washington**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A>

Signature

Dated this 5th day of June, 2025 at the Department of Ecology, Lacey, Washington.



Brenden McFarland on behalf of
Loree' Randall, Section Manager
Aquatic Permitting & Protection Section
Shorelands and Environmental Assistance Program

Attachment A

Statement of Understanding Water Quality Certification Conditions

POT Programmatic Maintenance, Repair and Scientific Sampling

Water Quality Certification WQC Order No. 23740

As the Project Proponent for the POT Programmatic Maintenance, Repair and Scientific Sampling program, I have read and understand the conditions of Washington State Department of Ecology WQC Order No. 23740, and any permits, plans, documents, and approvals referenced in the WQC Order. I have and will continue to ensure that all program engineers, contractors, and other workers at the project sites with authority to direct work have read and understand the conditions of this WQC Order and any permits, plans, documents, and approvals referenced in the WQC Order.

Signature

Date

Title

Phone

Company

**Appendix G - Department of
Natural Resources Site Used
Authorization XX-XXXXXX**

Appendix H - Water Quality Monitoring and Protection Plan



November 2025
Blair Waterway Berth Deepening



Water Quality Monitoring Plan

Prepared for Port of Tacoma

November 2025
Blair Waterway Berth Deepening

Water Quality Monitoring Plan

Prepared for
Port of Tacoma
One Sitcum Plaza
P.O. Box 1837
Tacoma, Washington 98401-1837

Prepared by
Anchor QEA
1201 3rd Avenue, Suite 2600
Seattle, Washington 98101

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ABBREVIATIONS

BGS	Background Station
BMP	best management practice
CS	Compliance Station
FC	Field Coordinator
FL	Field Lead
IWA	in-water work area
MLLW	mean lower low water
NTU	nephelometric turbidity unit
NWSA	Northwest Seaport Alliance
PM	Project Manager
QA/QC	quality assurance/quality control
SPCC	Spill Prevention, Control, and Countermeasure
WAC	Washington Administrative Code
WQMP	Water Quality Monitoring Plan
WUT	Washington United Terminals

1 Introduction

The Port of Tacoma (Port) and Northwest Seaport Alliance (NWSA) are in the process of modernizing the Blair Waterway and associated container terminals to accommodate newer, larger container vessels. As part of this modernization, a deepened waterway and deepened berthing areas are required. The U.S. Army Corps of Engineers (USACE) is overseeing the deepening of the Blair Waterway navigation channel. The Port and NWSA are responsible for the deepening of the Blair Waterway berthing areas at Washington United Terminals (WUT) and Husky Terminal.

The Blair Waterway Berth Deepening (Project) proposes deepening of the berthing areas from -51 feet mean lower low water (MLLW) to -57 feet MLLW plus 2 feet of overdrudge allowance (to a maximum of -59 feet MLLW) at the north and south berths (the entirety) of WUT and at Piers 3 and 4 of Husky Terminal (Project Area). This will allow for handling the increased draft of modern container ships, a modernization vital for increasing container ship size and cargo volumes to maintain the Port's competitive edge in the global shipping industry. The deepening of the berthing areas requires that the existing slopes under the piers are supported with toe walls and the berthing areas dredged. To complete toe wall installation, a portion of the riprap toe will be removed, the toe wall installed, and then a riprap replaced as required. At Husky Pier 3 and 4 and at WUT, material will be removed to -63.5 feet MLLW plus 1 foot of overdrudge allowance (to a maximum of approximately -64.5 feet MLLW) in this area to allow for the replaced riprap. The dredged material is anticipated to be disposed of at the Commencement Bay open-water disposal site or at an approved in-water beneficial use site. Some material may also be placed on Port property or at an upland disposal facility.

This Water Quality Monitoring Plan (WQMP) proposes monitoring for conventional water quality standards as outlined in Washington Administrative Code (WAC) 173-201A. Monitoring for acute or chronic chemical toxicity as outlined in WAC 173-240 is not proposed as chemical concentrations are not anticipated to be a concern at the proposed dredging locations. Water quality monitoring will be conducted to assess the contractor's compliance with the Washington State Department of Ecology's (Ecology's) water quality standards according to WAC 173-201A, and federal, state, and local regulations pertaining to water quality. This WQMP describes the monitoring to be implemented during dredging activities to verify compliance with applicable water quality criteria and the corrective measures to be implemented if there are confirmed exceedances during water quality monitoring. Metered water quality monitoring will only be conducted for dredging and will not be required for pile driving or riprap placement. Only visual monitoring will occur for pile driving or riprap placement. Any changes to this plan will be submitted to Ecology for review and approval prior to implementation.

1.1 WQMP Objectives

The objectives of the WQMP are as follows:

- Ensure that water quality conditions are within the prescribed limits required by Ecology's 401 water quality certification, WAC 173-201A, and described in this plan.
- Allow for appropriate adjustment of construction activities in a manner that ensures protection of the natural environment during construction.

1.2 Document Organization

The remainder of this document includes the following information:

- **Section 2 Water Quality Monitoring Team and Responsibilities:** This section describes Project organization and team member responsibilities for implementing the WQMP.
- **Section 3 Project Locations:** This section describes the dredging location, elevation, and anticipated volumes, and the toe wall location.
- **Section 4 Field Monitoring:** This section describes the field monitoring frequency, schedule, methods, and equipment for conducting the water quality monitoring program.
- **Section 5 Corrective Actions and Notifications:** This section describes response actions if there are confirmed water quality exceedances.
- **Section 6 Best Management Practices:** This section describes procedures the contractor is anticipated to employ to minimize negative impacts to the aquatic environment during dredging.
- **Section 7 Quality Assurance/Quality Control:** This section describes quality assurance/quality control (QA/QC) procedures.
- **Section 8 Reporting:** This section provides water quality monitoring reporting requirements.

2 Water Quality Monitoring Team and Responsibilities

This section describes WQMP team member roles and responsibilities for oversight and field monitoring during dredging activities and pile driving activities.

2.1 Project Oversight

The Project Manager (PM) will be responsible for coordinating activities between the Port and other parties for each dredging and pile driving event. The PM will provide oversight for the water quality monitoring program and any other considerations associated with planning, dredging, and disposal operations, and will coordinate as necessary with the Port to verify that all QA/QC goals are met. The PM may be Port staff or the Port may delegate this role to a consultant responsible for implementing the WQMP.

The Field Coordinator (FC) will be responsible for coordinating and verifying the timely and successful completion of water quality monitoring. The FC will prepare the weekly reports and Water Quality Monitoring Results Report described in Section 8. The FC will report to and be directed by the PM.

2.2 Field Monitoring

The Field Lead (FL) will be responsible for day-to-day field operations. The FL will be responsible for conducting the field monitoring at the required frequency, ensuring accurate positioning and recording of monitoring stations, depths, and water quality parameters in accordance with this WQMP. The FL will direct field crew and will report to and be directed by the FC.

At no point will field monitoring staff direct, interfere, or communicate directly with the contractor, unless expressly asked to do so by the Port's Project Representative.

3 Project Locations

The Project proposes deepening of the berthing areas from -51 feet MLLW to -57 feet MLLW plus 2 feet of overdredge allowance (to a maximum of -59 feet MLLW) at Husky Terminal and the north and south berths (the entirety) of WUT. Toe wall installation is required along the entire length of the existing pier at WUT to accommodate the deepening. To complete toe wall installation, a portion of the existing riprap toe will be removed, the new toe wall installed, and then riprap replaced as required. At the Husky Terminal, the realigned and upgraded Pier 4 structure was built to be able to accommodate a deeper berth and therefore is not anticipated to require additional structural toe wall improvements to accommodate the deepening. Husky Terminal Pier 3 will require a toe wall to accommodate the deepening. Similar to WUT, a portion of the existing riprap toe will be removed, the new toe wall installed, and then riprap replaced as required. In addition, existing fenders will be replaced at both terminals.

Dredged material is anticipated to be disposed of at an approved open-water disposal site or at an approved in-water beneficial use site. Some material may also be placed on Port property or at an approved upland disposal facility.

3.1 Washington United Terminals

The Project at WUT includes dredging the Blair Waterway berthing areas at the north and south berths of WUT. Water quality monitoring will only be conducted for dredging and will not be required for pile driving or riprap placement. Only visual monitoring will occur for pile driving or riprap placement. Work to be monitored includes the following:

- Installing a toe wall at the north berth and the south berth of WUT
- Dredging the WUT berthing area to -57 feet MLLW plus 2 feet of overdredge allowance
- Replacing riprap at the north berth and south berth of WUT. Material will be removed to -63.5 feet MLLW plus 1 foot of overdredge allowance (to a maximum of approximately -64.5 feet MLLW) in this area to allow for the replaced riprap

3.2 Husky Terminal

The Project at the Husky Terminal includes dredging the Blair Waterway berthing area from its northern entrance through the Husky Terminal. Water quality monitoring will only be conducted for dredging and will not be required for pile driving or riprap placement. Only visual monitoring will occur for pile driving or riprap placement. Work to be monitored includes the following:

- Installing the toe wall at Husky Terminal Pier 3
- Dredging the Husky Terminal berthing area to -57 feet MLLW plus two feet of overdredge allowance

- Replacing riprap at Husky Pier 3 and Pier 4. Material will be removed to -63.5 feet MLLW plus 1 foot of overdredge allowance (to a maximum of approximately -64.5 feet MLLW) in this area to allow for the replaced riprap

4 Field Monitoring

This section describes standards and field methods for conducting water quality monitoring during dredging and pile driving. Abbreviations for the monitoring stations will be as follows:

- BGS: Background Station
- EWS: Early Warning Station
- CS: Compliance Station

4.1 Water Quality Standards

The water quality standards in this plan are the requirements of Washington State's Water Quality Standards for Surface Water (WAC 173-201A) for inner Commencement Bay, which has an Aquatic Life Use of "good" (WAC 173-201A-612). Turbidity (in nephelometric turbidity units [NTU]) water quality conventional parameters will be monitored during dredging activities. Only visual monitoring will occur for pile driving or riprap placement.

4.1.1 Turbidity

Per WAC 173-201A-210 Table 210 (1)(e), turbidity measured as a 1-day maximum must not exceed 5 NTUs over background when the background is 50 NTUs or less, or a 10% increase in turbidity when the background turbidity is more than 50 NTUs.

4.2 Monitoring Stations and Depths

This section includes information regarding monitoring stations and depths.

4.2.1 Background Monitoring Station

The BGS will be located at least 300 feet up-current from the in-water work area (IWA) in an area unaffected by the active work. The BGS is to be determined in-field by the tide cycle. Monitoring should occur to the northwest of the IWA during the flow period or rising tide and should occur to the southeast of the IWA during the ebb period or falling tide (Figures 1 and 2). Measurements recorded at each BGS will be used as baseline data for determining the appropriate water quality compliance criteria and for comparison purposes.

4.2.2 Dredging Monitoring Stations

All monitoring station locations will be based on the location of the IWA, the tidal cycle, observations of the current, and whether a visible turbidity plume is observable (i.e., monitoring station will be located within a visible plume) (Figures 1 and 2). The monitoring stations will be located down-current of the IWA. Visual Monitoring will occur within a visually observational distance from the IWA.

The Early Warning Station (EWS) for water quality measurements are at a 100-ft radii from the IWA. Turbidity greater than standard at the EWS is considered an elevation. Measurements from the EWS that indicate an elevation will trigger a BMP check. The monitor will conduct BMP checks to verify that BMPs are in place and properly functioning.

The Compliance Station (CS) for water quality measurements is at a 150-ft radius from the IWA. Turbidity greater than standard at the CS is considered a potential exceedance, and a confirmed measurement 30 minutes later is considered a confirmed exceedance.

Measurements from the CS will be used to determine if water quality conditions comply with water quality criteria for the Project.

A description of how the operation will be modified if water quality measurements indicate a confirmed exceedance is provided in Sections 5.1 and 5.2.

4.2.3 Monitoring Depth

At each station, water quality parameter measurements will be recorded at 3 feet below the water surface, the mid-point of the water column, and at 3 feet above the sediment bed. Water depth will be determined by using a fathometer at the monitoring station and will be recorded on the Water Quality Monitoring Field Form (Appendix A).

4.3 Field Monitoring Frequency and Schedule

Water quality monitoring will be conducted during daytime work activities only. The frequency of monitoring will be phased to require more intensive monitoring at the start of work at each site and will be reduced if no confirmed exceedances are measured.

4.3.1.1 Visual Monitoring

Visual monitoring will occur continuously, defined as for the entire duration of the activity, including during pile driving and riprap placement. Results will be recorded on the Visual Monitoring Field Form twice daily (Appendix B).

4.3.1.2 Instrument-Based Monitoring

The monitoring is divided into two distinct phases, as described below:

- *Intensive*: Record water quality criteria measurements twice daily for the first 2 days of dredging. If no confirmed exceedances are recorded, monitoring will shift to the routine schedule. In the event of a confirmed exceedance at the CS or a change in work activities (i.e., dredging location changes from one terminal to another), intensive monitoring will restart.
- *Routine*: Routine monitoring will consist of visual monitoring only. A visual exceedance at the CS restarts the Intensive Monitoring.

If a confirmed exceedance at the CS is recorded, Ecology must be notified within 24 hours and the procedures described in Section 5.6 will be followed. The monitoring frequency will revert to Intensive Monitoring and the phased approach will be repeated from the first day of the triggered Intensive Monitoring..

Monitoring will begin 1 hour after the start of daily operations with the second monitoring event occurring no more than four hours later. Because site conditions and equipment measurements can be variable, when a regularly scheduled monitoring event shows an initial water quality exceedance, a second measurement will be taken approximately 30 minutes later to confirm that the exceedance persists due to the construction activity. Two measured exceedances are defined as a confirmed exceedance.

Dredging activities have the potential to occur concurrently. The FL will coordinate with the Contractor FL for full awareness of daily operations and will monitor all sites as applicable.

4.4 Field Monitoring Methods and Equipment

This section provides information regarding monitoring station determination, water quality monitoring methods, equipment calibration and use, and nomenclature.

4.4.1 Monitoring Station Determination and Documentation

A range finder, in conjunction with geographical positioning system (GPS), will be used to determine station locations at target monitoring distances in relation to the IWA. Once the vessel is on the station, the vessel operator will maintain the position while monitoring occurs. GPS coordinates and monitoring station name will be recorded on the Water Quality Monitoring Field Form (Appendix A). In each round of monitoring, the BGS will be monitored first, followed by the EWS, then the CS.

4.4.2 Water Quality Measurements

Water quality measurements will be taken using a Hydrolab MS5 multiparameter water quality sonde, YSI multimeter, or equivalent. The depth at each station will be measured and the water quality parameter measurements will be recorded at three depths at each of the monitoring stations (BGS and CS).

4.4.2.1 Monitoring Equipment Calibration and Use

Field monitoring equipment will be calibrated daily and allowed to equilibrate prior to use. Calibration information will be recorded on the Multimeter Calibration Worksheet (Appendix C). Monitoring equipment will be used according to the manufacturer's recommendations. Unusual or questionable readings will be noted and duplicate readings will be recorded.

4.4.3 Monitoring Documentation

All monitoring results will be entered directly on the Water Quality Monitoring Field Form (Appendix A). Field datasheets will be checked for completeness and accuracy. Data generated in the field on hard copy will be provided to the PM who will record and document the data.

5 Corrective Actions and Notifications

This section describes corrective actions to be initiated in response to a confirmed exceedance at the Compliance Stations.

5.1 Actions for an Elevation During Visual Monitoring

In the event that a turbidity plume is observed, the plume will be followed downstream to its endpoint, and its endpoint location and approximate downstream distance from the IWA will be recorded on the Visual Monitoring Field Form (Appendix B). If the plume is confirmed to not be caused by outside influences, instrument-based monitoring will begin at the EWS, which will inform if monitoring needs to occur immediately at the CS, as described below.

5.2 Corrective Actions for an Elevation at the Early Warning Station

If water quality measurements show there is an elevation at the EWS, the following sequence of responses will be initiated:

1. The FL will visually assess the station vicinity for potential outside influences, such as storm drains or sediment disturbance from nearby vessels.
2. A confirmation measurement will be taken 30 minutes after the initial reading. If outside influences are observed, the FL will inform the FC and PM. The PM will consult with the Port. Additional discretionary measurements may be taken to understand the nature of the outside influence.
3. If the confirmation measurement meets all the water quality criteria, the monitoring crew will return to monitoring, according to the assigned schedule.
4. If the confirmation measurement exceeds criteria, measurements will be taken at the CS (regardless of prior CS monitoring schedule) and the FL will contact the FC and PM to report the confirmed elevation. The PM will notify the Port. This will trigger a BMP check. The monitor will conduct BMP checks to verify that BMPs are in place and properly functioning.

5.3 Process to Confirm an Exceedance at the Compliance Station

If water quality measurements show there is an initial exceedance at the CS, the following sequence of responses will be initiated:

1. The FL will visually assess the station vicinity for potential outside influences, such as storm drains or sediment disturbance from nearby vessels.
2. A confirmation measurement will be taken 30 minutes after the initial reading.
3. If outside influences are observed, the FL will inform the FC and PM. The PM will consult with the Port. Additional discretionary measurements may be taken to understand the nature of the outside influence.

4. If the confirmation measurement meets all the water quality criteria, the monitoring crew will return to monitoring, according to the assigned schedule.
5. If the confirmation measurement does not meet criteria, the FL will contact the FC and PM to report the confirmed exceedance. The PM will notify the Port. The Port will notify the contractor to perform best management practice (BMP) checks and operational checks to reduce water quality impacts, and the contractor will modify its work activity using BMPs (see Section 6).
6. The FL will take measurements within 30 to 60 minutes after the contractor has implemented work modification(s) to assess the effectiveness of the contractor's work modification(s) to meet water quality criteria. Additional confirmation measurements will be taken if necessary.
 - a. If water quality criteria are met at the CS after 30 to 60 minutes, monitoring will continue according to the intensive monitoring frequency.
7. If water quality criteria are not met at the CS after 30 to 60 minutes, work shall cease immediately and the Port or the contractor shall assess the cause of the water quality problem and take immediate action to stop, contain, and correct the problem and prevent further water quality turbidity exceedances. On confirmation of exceedance, the Port will notify Ecology within 24 hours as described in Section 5.6.
8. In the event that a turbidity plume is observed, the plume will be followed downstream to its endpoint, and its endpoint location and approximate downstream distance from the IWA will be recorded on the Visual Monitoring Field Form (Appendix B).

5.4 Corrective Actions

Corrective actions will be implemented to address water quality criteria confirmed exceedance events associated with dredging. If a water quality criteria exceedance event is confirmed, the Port's Project Representative will notify the contractor as soon as possible (within 1 hour maximum) of the confirmed exceedance event and will direct the contractor to identify and implement its approach to return operations to compliance with water quality criteria. The approach may involve modifying operations or implementing additional BMPs.

Additional corrective actions may be required in the event of continued water quality criteria confirmed exceedance at the compliance boundary; these actions are described in Section 6. If the water quality criteria exceedance continues, even with additional BMPs and/or operational modifications, the Ports' Project Representative will discuss implementation of other BMPs or operational modifications, or a Stop Work directive to temporarily stop work to further assess the source of the confirmed exceedance event and identify effective measures to comply with water quality criteria.

Only the Port has the authority to initiate a Stop Work Order to the contractor. The conditions that can trigger a Stop Work Order include, but may not be limited to, the following:

- Evidence of a significant oil sheen

- Evidence of distressed or dying fish
- Repeated, confirmed exceedances of water quality criteria at the compliance boundary may require a Stop Work Order in order to investigate root cause for the ongoing exceedances to control impacts to water quality

5.5 Notifications

As addressed in Section 5.1, if a water quality criteria exceedance event is confirmed, the Port's Project Representative will notify the contractor as soon as possible (within 1 hour maximum) of the confirmed exceedance event and will direct the contractor to identify and implement its approach to return operations to compliance with water quality criteria. The Port will notify Ecology of the confirmed exceedance event(s) and corrective actions taken within 24 hours. Notification shall be to Ecology's Federal Permit Manager via email to fednotification@ecy.wa.gov and cc to laura.inouye@ecy.wa.gov. Notifications will be identified with the Water Quality Certification Order number and USACE reference number and include the Project Proponent name, project name, project location, project contact and the contact phone number. For up-to-date reporting information, refer to Ecology's "Report a Spill" webpage. The Port will, at a minimum, provide Ecology with the following information:

- A description of nature and cause of exceedance
- The period of non-compliance, including exact dates, duration, and times and/or the anticipated time when the Applicant will return to compliance
- The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of non-compliance
- In addition, within 5 days after notification of an exceedance, the Port shall submit a written report to Ecology that describes the nature of the exceedance, turbidity results and location, photographs, and any other pertinent information

If there is evidence of a significant oil sheen, the Port will immediately report to Ecology's Northwest Regional 24-hour Spill Response Office at (206) 594-0000.

6 Best Management Practices

BMPs will be employed during dredging to avoid or minimize potential water quality exceedances. The contractor will be responsible for selecting and implementing BMPs to comply with the 401 Water Quality Certification and State water quality criteria at the designated compliance boundary. The contractor's work must comply with Ecology's issued 401 Water Quality Certification and the following BMPs are included in the design specifications as contract requirements.

6.1 Dredging Best Management Practices

- Appropriate BMPs will be employed to minimize sediment loss and turbidity generation during dredging. BMPs may include, but are not limited to, the following:
 - Removing large debris where practicable prior to dredging in known debris areas
 - Avoiding overfilling of the dredge bucket
 - Eliminating multiple bites while the bucket is on the seafloor
 - No stockpiling of dredged material below the ordinary high water line and mean higher high water line
 - No seafloor leveling
- Depending on the results of the water quality monitoring program, enhanced BMPs may be implemented to control turbidity and may include, but are not limited to, the following:
 - Slowing the velocity (i.e., cycle time) of the ascending loaded clamshell bucket through the water column
 - Pausing the dredge bucket near the bottom while descending and near the water line while ascending
 - Placing filter material over the barge scuppers to clear return water
 - A floating silt curtain may be placed around the in-water dredge area to minimize the dispersion of suspended sediment during completion of dredging activities.
- Mechanical dredging equipment will be used for the dredging and sediment handling activities. Use of any other type of dredging techniques requires preapproval from Ecology.
- Slope dredging will be initiated at the top of the slope and then proceed in the down-slope direction.
- In-water activities will be limited to periods determined appropriate by participating state and federal agencies to avoid potential adverse effects on migratory fish.
- All equipment shall be inspected daily to ensure that it is in proper working condition.
- The contractor shall utilize real-time positioning control when implementing dredging.
- The contractor shall develop a Construction Workplan that will be submitted to the USACE and Ecology.

6.2 Barge Operation Best Management Practices

- Barges will be restricted to tide elevations adequate to prevent grounding of the barge.
- Barge anchors will not be placed in contaminated sediments unless specified by Ecology.
- Whenever feasible, the barge location will be fixed through the use of methods that do not disturb sediments (e.g., mooring dolphins, docks, piers, and upland structures).
- Motorized vessel operation will be restricted to tidal elevations adequate to prevent prop scour disturbance to the sediments.
- Minimal propulsion power will be used when maneuvering barges or other vessels to prevent prop scour disturbance to the sediments.
- Barges will be managed such that the dredged sediment load does not exceed the capacity of the barge. The load will be placed in the barge to maintain an even keel and avoid listing. All barges handling dredged materials within the site will have hay bales and/or filter fabric placed over the barge scuppers to help filter suspended sediment from the barge effluent. The contractor will not allow effluent to overflow or bypass these turbidity controls. If sealed barges are used within the site (rather than using the treatment BMPs), no overflow of untreated water or suspended sediment from the sealed barges shall be permitted within the site.
- Haul barges will be loaded evenly to maintain barge stability.
- Haul barges will be filled to less than 90% capacity to reduce the potential for spillage or overflow.
- Once the barge is loaded and stabilized, it will be inspected for sediment adhered to the outside of the barge that could fall off the barge during transport. Contractor personnel will conduct a visual inspection around the entire barge deck area to remove such sediment before moving the barge out of the site.
- No petroleum products or other deleterious materials will enter surface waters.

6.3 Spill Prevention, Control, and Countermeasures Best Management Practices

- Dredge vessel personnel will be trained in hazardous material handling and spill response and will be equipped with appropriate response tools, including adsorbent oil booms. If a spill occurs, spill cleanup and containment efforts will begin immediately and will take precedence over completion of normal work.
- The dredging contractor will be responsible for the preparation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan to be used for the duration of the Project. The plan will be submitted to the project engineer as a pre-construction submittal prior to the commencement of any construction activities. A copy of the plan with any updates will be maintained at the work site by the contractor.

- The SPCC Plan will identify construction planning elements and recognize potential spill sources at the site. The SPCC Plan will outline responsive actions in the event of a spill or release and will describe notification and reporting procedures. The SPCC Plan will outline contractor management elements, such as personnel responsibilities, project site security, site inspections, and training.
- The SPCC Plan will outline the measures that will be taken by the contractor to prevent the release or spread of hazardous materials, either found on site and encountered during construction but not identified in contract documents or any hazardous materials that the contractor stores, uses, or generates on the construction site during construction activities. These items include, but are not limited to, gasoline, oils, and chemicals.

7 Quality Assurance/Quality Control

The QA/QC objective for this Project is to ensure that the data collected are of known and acceptable quality, so that the goals of the water quality program can be achieved. Specific QA/QC requirements for field monitoring are provided below.

7.1 Field QA/QC

All field staff will be experienced in water quality monitoring. Staff will be trained in standardized field monitoring and data collection procedures, requirements, data management protocol, and QC. Data will be peer-reviewed before use in final deliverables. Staff will be fully trained in the calibration and standard operation procedures of field instruments. All field staff will have 40-hour Hazardous Waste Operations and Emergency Response certification with current 8-hour refresher, as necessary, to comply with Occupational Safety and Health Administration 29 Code of Federal Regulations 1910.120(e)(3).

Instruments and equipment will be inspected before each monitoring event. Any field equipment that is faulty or not functioning properly will not be used for monitoring or sample collection. A calibration check will be performed on the water quality meter and fathometer prior to monitoring each day using certified calibration standards. If water quality meter results are not consistent with standards, manufacturer's guidelines will be used to recalibrate the instrument. Standard instrument operating procedures will be used for all field instruments.

8 Reporting

This section describes reporting protocol for water quality monitoring activities, including communication responsibilities in the event of a confirmed exceedance event and summary reporting.

8.1 Daily Reporting

At the end of each monitoring day, a brief summary of water quality monitoring activities, field data sheets, and results of the monitoring will be provided by the FC to the PM. A daily log form is provided in Appendix D for use in recording general activities and observations, and other relevant information such as start and end times, and locations. A daily safety briefing form is provided in Appendix E to be completed at the start of each workday. A detailed description of each water quality standard to be monitored is provided in Section 4.1.

In the event of a water quality criteria confirmed exceedance the Port will report to the Ecology representative listed in the water quality certification within 24 hours.

If there is evidence of a significant oil sheen, the Port will immediately report to Ecology's Northwest Regional 24-hour Spill Response Office at (206) 594-0000.

8.2 Weekly Reporting

Weekly water quality monitoring data will be compiled into a summary table with a comparison to water quality compliance criteria. Weekly reports will be provided to Ecology. Weekly reports will summarize any confirmed exceedances, and corrective actions that were employed to achieve compliance with water quality criteria.

8.3 Water Quality Monitoring Completion Summary

After each dredging event is completed, water quality monitoring data will be summarized in a Water Quality Monitoring Results Report to be submitted to Ecology. The Water Quality Monitoring Results Report will include the following sections:

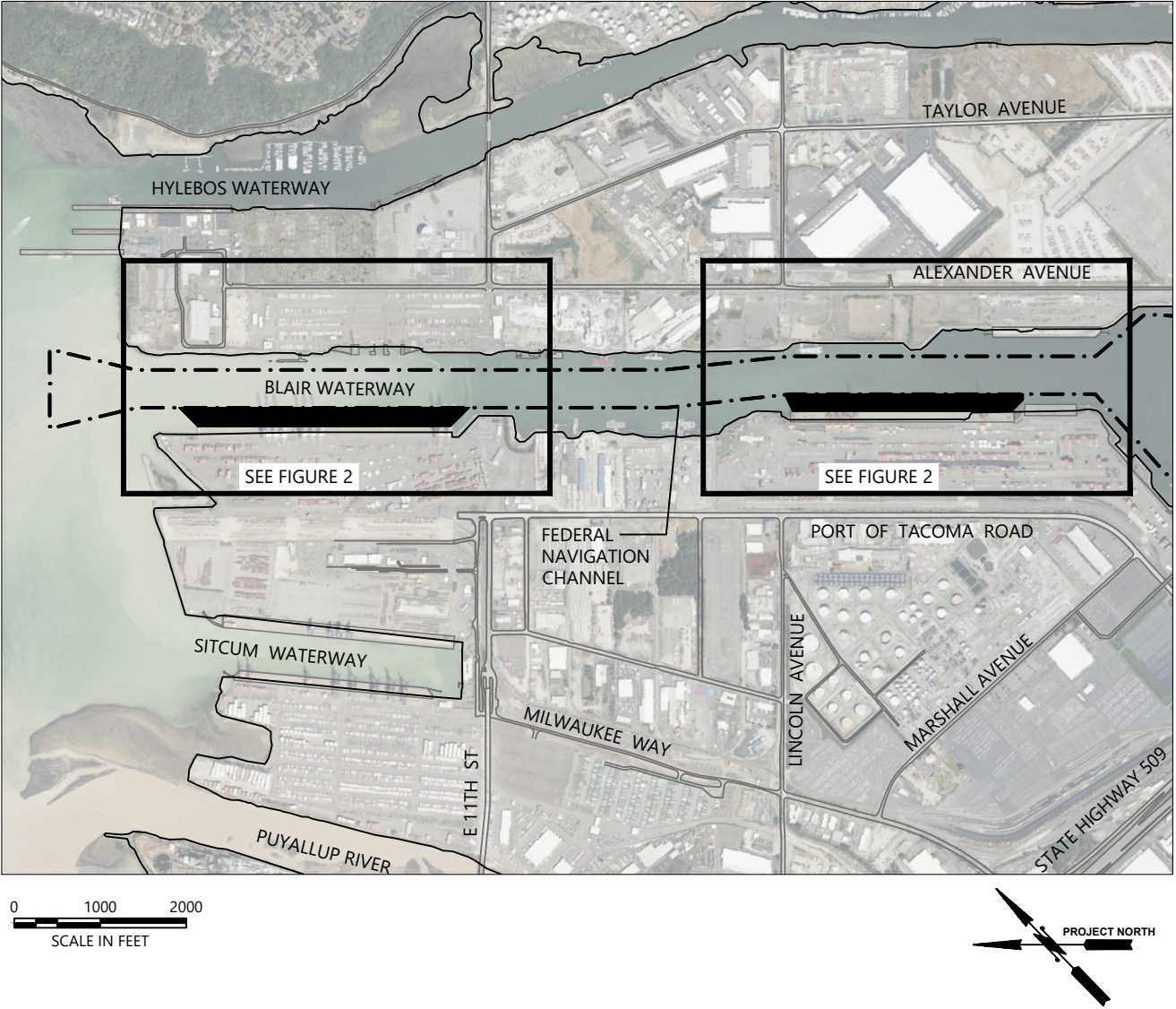
- Site background and content
- Field monitoring and sampling methods and actual sample locations
- Method deviations from this WQMP
- Results of monitoring, including data validation, and water quality measurements
- Summary of confirmed exceedances and description of corrective actions taken

Figures

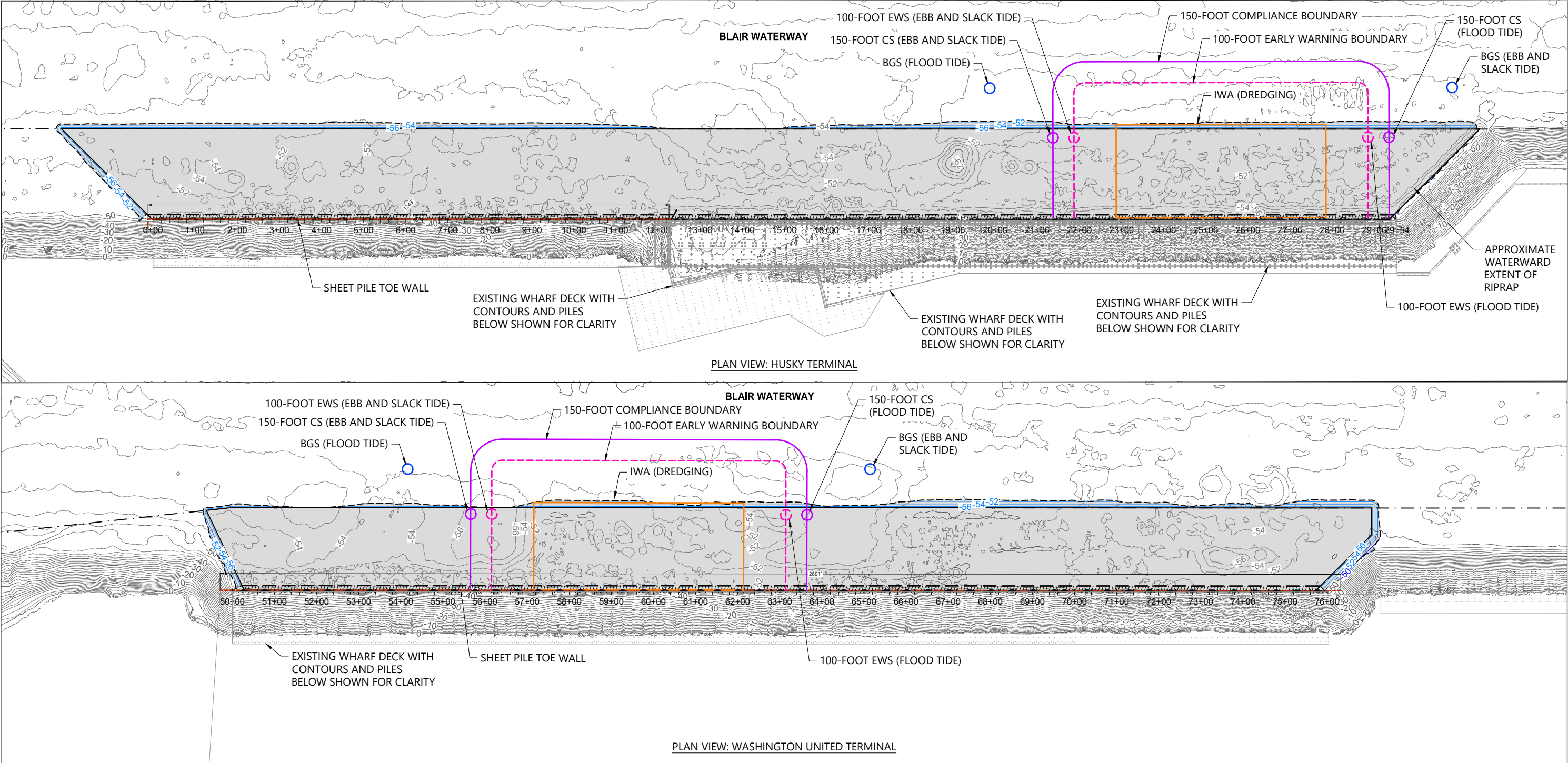
VICINITY MAP



LOCATION MAP



SOURCE: Line work provided by Port of Tacoma. Aerial by Bing Imagery.
HORIZONTAL DATUM: NAD83 (2011), WA, South Zone, U.S. feet
VERTICAL DATUM: MLLW, feet

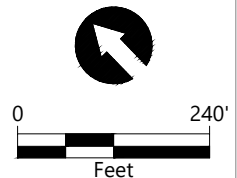


SOURCE: Line work provided by Port of Tacoma.
Aerial by Bing Imagery.
HORIZONTAL DATUM: NAD83 (2011), WA,
South Zone, U.S. feet
VERTICAL DATUM: MLLW, feet

- NOTES:**
1. The Background Station (BGS) to be located 300-ft up-current of the In-water Work Area (IWA).
 2. The Early Warning Station (EWS) and Compliance Station (CS) monitoring locations to be oriented based on current direction.
 3. During flood tides, the EWS and CS will be located South-East (down-current) of the IWA.
 4. During ebb and slack tides, the EWS and CS will be located North-West (down-current) of the IWA.
 5. The IWA will move within the proposed dredge area and along the sheet pile alignment based on activity and equipment location.
 6. Dredging activity and sheet pile installation may or may not be concurrent.

- LEGEND:**
- Pre-Engineering Design Federal Navigation Channel
 - Existing Contours (2' & 10' Intervals)
 - Proposed Contours (2' & 10' Intervals)
 - Approximate 3H:1V Daylight Slope from Dredge Elevation
 - Proposed Dredge Area to -57' MLLW plus Two Feet of Overdredge Allowance

- Sheet Pile Toe Wall
- Waterward Extent of Proposed Riprap
- In-water Work Area (IWA)
- Background Station (BGS)
- Early Warning Station (EWS)
- Compliance Station (CS)



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Filepath: K:\Projects\0092-Port of Tacoma\Berth Deepening and Habitat Restoration\Water Quality Monitoring\0092-WQM-002-Plans.dwg | Figure 2



Figure 2
Water Quality Monitoring Plan Views
Water Quality Monitoring Plan
Blair Waterway Berth Deepening, Port of Tacoma

Appendix A

Water Quality Monitoring Form



Water Quality Monitoring Form

1201 3rd Avenue, Suite 2600
Seattle, Washington 98101
Phone 206.287.9130
www.anchorqea.com

Date:			Monitoring Start Time:		Monitoring Personnel:				
Monitored Work Start Time:					Weather Observations:				
Station ID	Time	Water Depth (feet)	Coordinates		Turbidity Reading (NTU)			Exceed	Notes
			Northing Latitude	Easting Longitude	Surface	Middle	Bottom	Yes/No*	
Notes:									
*Water Quality Standard: Turbidity shall be < 5.0 NTU above BGS when BGS < 50 NTU, and less than 10% over BGS when BGS is > 50 NTU. CS = Compliance Station (150 feet from in-water work area [IWA]); BGS = Background Station (300 feet from IWA); NTU = Nephelometric Turbidity Unit									
Tidal Elevations		Elevation	Time	Elevation	Time	Page ____ of ____			
High:									
Low:									

Appendix B

Visual Monitoring Field Form

Visual Monitoring Field Form

Staff Initials	Date/Time	Tide Stage (ebb, flood, slack)	Sheen, Floating Debris, or Distressed or Dying Fish or Wildlife Observed (Y/N, brief description)	BGS Turbidity (note time of most recent record)	EWS Turbidity (note time of most recent record)	CS Turbidity (note time of most recent record)	Plume Chasing (approximate distance from IWA and GPS coordinates of endpoint of plume)

BGS = Background Station, EWS = Early Warning Station, CS = Compliance Station, IWA = In-Water Work Area

Appendix C

Multimeter Calibration Worksheet

Multimeter Calibration Worksheet

Project Name: _____

Project Number: _____

Date: _____

Reminder: Allow 2 minutes to warm up before calibration or use.

Turbidity		Date:	Calibration by:	
Initial 0 NTU	Final 0 NTU	Temp. (°C)	Initial NTU	Final NTU

Turbidity Std (_____) Lot # _____ Exp Date: _____

Turbidity Std (_____) Lot # _____ Exp Date: _____

Turbidity Std (_____) Lot # _____ Exp Date: _____

Dissolved Oxygen (DO)		Date:	Calibration by:
Temp. (°C)	BP (mm Hg)	Initial DO (mg / L)	Final DO (mg / L)

DO method (circle one) Saturated Air Saturated Water

Source of barometric pressure: _____

pH		Date:	Calibration by:
pH reading in 4.0 buffer	pH reading in 7.0 buffer	pH reading in 10.0 buffer	Meter successfully calibrated (Y / N), Notes

Notes:

Appendix D

Daily Log

Daily Log

PROJECT NAME: _____

DATE: _____

SITE ID(s): _____

PERSONNEL: _____

WEATHER:

WIND FROM:

N	NE	E	SE	S	SW	W	NW
SUNNY	CLOUDY	RAIN	?				

LIGHT MEDIUM HEAVY

TEMPERATURE: ° F . ° C

[Circle appropriate units]

TIME

COMMENTS

Signature: _____

Appendix E

Daily Safety Briefing

DAILY SAFETY BRIEFING

DATE: _____

PROJECT NAME: _____

PROJECT NO: _____

Meeting Conductor /
Company:

Health & Safety
Officer / Company:

Field Lead /
Company:

TOPICS COVERED:

- | | | |
|--|---|---|
| ☐ Emergency Procedures and Evacuation Route | ☐ Chain of Command | ☐ Lifting Techniques |
| ☐ Directions to Hospital | ☐ Communication | ☐ Slips, Trips, and Falls |
| ☐ HASP Review and Location | ☐ Site Security | ☐ Hazard Exposure Routes |
| ☐ Safety Equipment Location | ☐ Vessel Safety Protocols | ☐ Heat and Cold Stress |
| ☐ Proper Safety Equipment Use | ☐ Work Zones | ☐ Overhead and Underfoot Hazards |
| ☐ Employee Right-to-Know/MSDS Location | ☐ Vehicle Safety and Driving/Road Conditions | ☐ Chemical Hazards |
| ☐ Fire Extinguisher Location | ☐ Equipment Safety and Operation | ☐ Flammable Hazards |
| ☐ Eye Wash Station Location | ☐ Proper Use of PPE | ☐ Biological Hazards |
| ☐ Buddy System | ☐ Decontamination Procedures | ☐ Eating/Drinking/Smoking |
| ☐ Self and Coworker Monitoring | ☐ Other: | |

WEATHER CONDITIONS: _____

DAILY WORK SCOPE: _____

SITE-SPECIFIC HAZARDS: _____

SAFETY COMMENTS: _____

ATTENDEES

PRINTED NAME /
COMPANY

SIGNATURE

Appendix I - Department of Ecology Coastal Zone Management 143975

Port of Tacoma

Inadvertent Discovery Plan



The following Inadvertent Discovery Plan (IDP) outlines the procedures to be implemented if cultural resource materials are inadvertently discovered during construction, in accordance with state and federal laws. The separate protocol for discovery of human skeletal remains is also described below. The IDP shall be kept at the project site during all project activities. All staff, contractors, and consultants should be familiar with its contents and know where to find it.

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- An accumulation of shell (shell-midden) with associated bone, stone, antler or wood artifacts, burned rocks or charcoal.
- Animal bones that have been modified or associated with other artifacts.
- An area of charcoal or very dark stained soil with associated artifacts.
- Artifacts made of chipped or ground stone (i.e. an arrowhead, adze or maul) or an accumulation (more than one) of stone flakes (lithic debitage).
- Basketry, cedar garments, fish weir stakes or items made of plant materials.
- Clusters of tin cans or bottles, logging or agricultural equipment that appear to be older than 50 years.
- Buried railroad tracks, decking, or other industrial materials.

NRHP Eligibility

To be eligible for the National Register of Historic Places (NRHP) cultural resources identified during construction must be 50 years of age or older, meet one or more of the four criteria listed below, and retain sufficient physical integrity to convey historical significance (36 CFR 60.4). A building, site, object, or structure may be considered for inclusion in the NRHP if it meets at least one of the following criteria:

1. The property is associated with events that have made a significant contribution to the broad patterns of our history.
2. The property is associated with the lives of persons significant in our past.
3. The property embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components might lack individual distinction.

4. The property has yielded, or might be likely to yield, information important in prehistory or history.

The following archaeological resources will indicate potentially NRHP-eligible deposits and will be assumed NRHP-eligible until determined otherwise by the State Historic Preservation Officer (SHPO):

- Precontact deposits (such as midden) associated with Native American use or occupation.
- Historic-era artifacts from NRHP-eligible (or potentially NRHP eligible) deposits.
- Historic era non-Native American artifacts from non-eligible contexts, only if they are diagnostic or have educational value.
- Historic features consisting of stratified deposits with artifact concentrations that appear to be spatially or temporally distinct. This includes refuse deposits, privies, or discrete accumulations.
- Courses of brick or other architectural materials that are part of a building foundation or pavement in their original position.

Examples of deposits that will not be considered NRHP-eligible include:

- Isolated or loose construction materials (brick, mortar, window glass), bottles, cans, located within fill sediments (not located in primary context).
- Mass deposits of lumber, concrete, granite, coal, etc.
- Pilings, decking, trestle, and railroad track, unless of clearly unique construction.
- Historic-era artifacts not associated with a feature or stable surface.

Artifacts or deposits that are not potentially eligible, as described above, will only be noted in daily field logs, photographed, and documented on scaled site plans (if possible). The procedures for an inadvertent discovery will not be implemented for artifacts or deposits that are not potentially eligible for listing in the NRHP (including the stop-work clause, noted in the procedure below).

Examples of Potentially NRHP-Eligible Cultural Resources



Precontact Shell Midden



Precontact Animal Bone Tools



Precontact Stone Tools



Precontact Shell Midden



1885 Fish Weir (WA State Library)

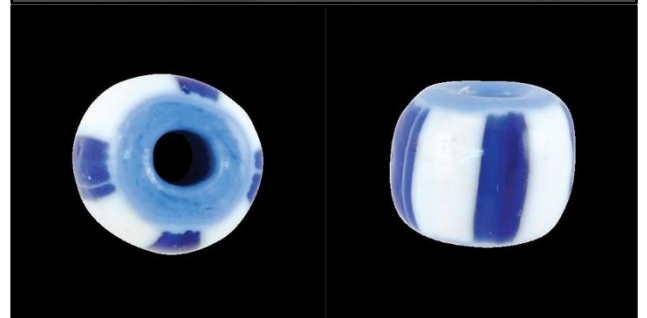


Historic house ruins



Historic Hearth Feature from Fort Vancouver

**Images Public Domain from National Park Service unless noted*



Historic Artifacts (from top to bottom: ceramic plate, glass bead, glass bottle)

2. PROTOCOL FOR DISCOVERY OF CULTURAL RESOURCES (EXCEPT FOR HUMAN SKELETAL REMAINS DISCOVERY)

STEP 1: STOP WORK & PROTECT THE DISCOVERY

If any employee, contractor, or subcontractor believes that a cultural resource has been uncovered during the project activities they shall instruct all work within 30 feet of the discovery to stop. If that perimeter impedes on health, safety, environmental, or legal requirements, the perimeter will be as near to 30 feet as practical. The discovery location should be secured at all times. The discovering party, or their direct on-site supervisor, shall implement Step 2.

STEP 2: NOTIFY MONITOR and PORT OF TACOMA (Port)

The discovering party shall notify the project's archaeological monitor (if applicable) and Port. If there is a cultural resource monitoring plan in place, the monitor will follow its provisions for monitoring (i.e. determine if the inadvertent discovery is an intact archaeological deposit) and proceed to Step 3 for notifications.

Port of Tacoma (Port)

<u>Engineering Contact (if PM unknown):</u> Thais Howard Director of Engineering 253.888.4718 desk / 253.209.3086 cell thoward@nwseaportalliance.com 253.383.5841 receptionist	<u>Environmental Contact:</u> Mark Rettmann Environmental Project Manager 253-592-6716 desk and cell (no text) mrettmann@portoftacoma.com
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STEP 3: Port WILL NOTIFY PTOI HPD

Puyallup Tribe of Indians (PTOI) Historic Preservation Department (HPD)

<u>Primary Contact:</u> Brandon Reynon Archaeologist/Historic Preservation Department 253-573-7965 (desk) / 253-442-9361 (cell) brandon.reynon@puyalluptribe-nsn.gov	<u>Alternative Contact:</u>	<u>Alternative Contact:</u> Mike Shong Archaeologist 253-573-7897 (desk) / 253-339-1967 (cell) Mike.Shong@puyalluptribe-nsn.gov
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STEP 4: PORT WILL NOTIFY DAHP and/or FEDERAL LEAD AGENCY (when applicable) – Except for discovery of human skeletal remains (see protocol below in section 3)

The Washington State Department of Archaeology and Historic Preservation (DAHP) will review eligibility criteria, make a recommendation to the artifact or deposits potential eligibility, and will proceed with agency and tribal notification as necessary (so long as the artifact or deposit is determined eligible). After consultation, DAHP will complete a written plan of action describing the treatment of cultural resources pursuant to 43 CFR Part 10 and will execute their prescribed duties within that plan of action.

DAHP

<u>Primary Contact:</u> Rob Whitlam, Ph.D. DAHP, State Archaeologist 360-890-2615 Rob.Whitlam@dahp.wa.gov	<u>Alternative Contact:</u> Allyson Brooks, Ph.D. DAHP, SHPO 360-586-3066 Allyson.Brooks@dahp.wa.gov	<u>Alternate Contact:</u> Stephanie Jolivet Local Gov't Archaeologist 360-628-2755 Stephanie.Jolivet@dahp.wa.gov
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3. PROTOCOL FOR DISCOVERY OF HUMAN SKELETAL REMAINS

In the event that human remains are discovered during the construction, the following procedures are to be followed to ensure compliance with RCW 68.60: Abandoned and Historic Cemeteries and Historic Graves, and RCW 27.44: Indian Graves and Records. Washington State law requires immediate notification of known or suspected human remains to county and/or municipal law enforcement agencies, county medical examiner or coroner's offices, DAHP, and federal and local agencies involved directly with the project or having jurisdiction over the subject properties.

If ground-disturbing activities encounter human skeletal remains during construction, then all activity that may cause further disturbance to those remains must immediately cease and the area of the find must be secured and protected from further disturbance. Any human remains that are discovered will be treated with dignity and respect. The remains should not be touched, moved, or further disturbed. If, however, handling of human remains is unavoidable, the archaeological monitor and/or professional archaeologist will use cloth gloves. All remains will remain covered with a tarp that will not be removed until such time that the coroner or DAHP assumes jurisdiction of the find.

Upon the discovery of human skeletal remains, the above Steps 1-3 will be implemented. The Port will notify and report to the County Sheriff, County Medical Examiner, and the Port Security in the most expeditious manner possible. The County Medical Examiner will determine if the remains are human and whether the discovery constitutes a crime scene. If the remains are determined to not be a crime scene, the County Medical Examiner will notify DAHP. The DAHP will be responsible for informing the affiliated tribes regarding the discovery. Contact information for the County Medical Examiner and the DAHP is provided below.

CONTACT INFORMATION IF HUMAN SKELETAL REMAINS ARE DISCOVERED

Port to contact the following in the most expeditious manner possible:

<u>Pierce County Sheriff:</u> Ed Troyer Non-emergency (253)798-7530	<u>Pierce County Medical Examiner:</u> Karen Cline-Parhamovich, DO (253) 798-6494
<u>Port Security:</u> Fabulich Center, 3600 Port of Tacoma Rd, 24 hr, 7 days a week 253-383-9472	

The County Medical Examiner will contact DAHP if they determine the remains are not a crime scene/non-forensic and DAHP will be responsible for informing the affiliated tribes regarding the discovery.

<u>Primary DAHP</u> : Guy Tasa, Ph.D. State Physical Anthropologist (360) 790-1633 Guy.Tasa@dahp.wa.gov	<u>Alternative DAHP</u> : Jackie Berger, Ph.D., RPA Assistant State Physical Anthropologist (360) 890-2633 Jackie.Berger@dahp.wa.gov
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4. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A Cultural Resources Specialist (either from DAHP, a consulting Tribe, or a professional consultant) must determine the boundaries of the discovery location. In consultation with DAHP and affected tribes, the project lead will determine the appropriate level of documentation and treatment of the resource. If federal agencies are involved, the agencies will make the final determinations about treatment and documentation.

Construction may continue at the discovery location only after the process outlined in this plan is followed, and DAHP (and the federal agencies, if any) determine that compliance with state and federal laws is complete.

5. CONFIDENTIALITY

All parties, including Port and its employees, contractors, and consultants, shall keep inadvertent discoveries confidential. Parties shall not contact the press, post social media, or share information with any third party or member of the public. Prior to releasing any information about the inadvertent discovery, the Port, concerned Tribe(s), and DAHP will concur on the procedures and the level of information which may be released, as allowed by law.

Appendix J - Port of Tacoma Archaeological Monitoring and Inadvertent Discovery Plan

Port of Tacoma

Inadvertent Discovery Plan



The following Inadvertent Discovery Plan (IDP) outlines the procedures to be implemented if cultural resource materials are inadvertently discovered during construction, in accordance with state and federal laws. The separate protocol for discovery of human skeletal remains is also described below. The IDP shall be kept at the project site during all project activities. All staff, contractors, and consultants should be familiar with its contents and know where to find it.

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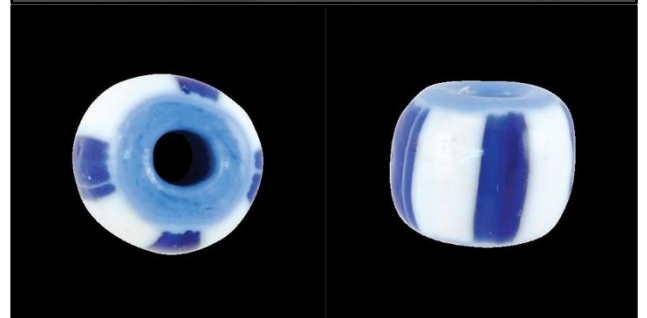


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