

MEMORANDUM OF UNDERSTANDING
between the
WESTERN STATES PETROLEUM ASSOCIATION and the
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO
REGION

This Memorandum of Understanding (“MOU”) memorializes the understandings of the California Regional Water Quality Control Board, San Francisco Bay Region (the “Water Board”) and Western States Petroleum Association (the “WSPA”) regarding WSPA’s contribution to the development of components of a proposed Total Daily Maximum Load (“TMDL”) for selenium in North San Francisco Bay (“North San Francisco Bay Selenium TMDL”) for Water Board consideration and use. The Water Board and the WSPA are at times referred to herein together as the “Parties.”

RECITALS

- A. Clean Water Act Section 303(d) establishes a water quality assessment and planning process through which states are required to identify waterbodies not meeting water quality standards, set priorities for addressing such waters, and develop load allocations designed to achieve applicable water quality standards. The TMDL is the maximum load a waterbody can receive and still meet applicable water quality standards.
- B. In California, the State Water Resources Control Board (“State Water Board”), through the nine regional water quality control boards, is responsible for the identification of waterbodies not meeting water quality standards and for the development of TMDLs, which must be submitted to and approved by the United States Environmental Protection Agency (“U.S. EPA”).
- C. The State and the San Francisco Bay Water Boards identified San Francisco Bay in their 1998 California 303(d) List and TMDL Priority Schedule as impaired due to presence of selenium. As a result, the Water

Board is required to adopt a TMDL for selenium which will address loads to the San Francisco Bay. The Water Board staff intends to develop a proposed North San Francisco Bay Selenium TMDL for consideration by the Water Board that, if adopted, will address impairment in the North Bay area only, which is defined for the purposes of this TMDL as extending from the Sacramento/San Joaquin Delta to Central Bay. This northern part of the Bay differs significantly from South Bay as it receives most of the fresh water and sediment inflow discharged into the Bay.

- D. The Water Board staff has agreed to create North San Francisco Bay Selenium TMDL Advisory Committee (“Advisory Committee”) for the purpose of serving as the primary vehicle for stakeholder participation in the development of the proposed North San Francisco Bay Selenium TMDL.

The Advisory Committee will provide technical advice and comments that will aid the Water Board staff efforts to develop the proposed North San Francisco Bay Selenium TMDL. The Advisory Committee will reflect a variety of interests related to selenium conditions in North San Francisco Bay and will consist of representative of WSPA and its member companies, WSPA’s consultant Tetra Tech, Inc., and other stakeholders, members of the community and/or interested parties to be identified by the Water Board staff. Members of the Advisory Committee will participate on a voluntary basis in support of the proposed North Bay San Francisco Bay Selenium TMDL planning phases.

- E. North San Francisco Bay Selenium TMDL Phases. The State Water Board has developed a statewide standard eight phase TMDL project phasing process, summarized as follows:

1. Phase 1: Definition of project, pollutant(s)/waterbody(s), justification; Product(s): Project Definition.

2. Phase 2: Compile existing information, identify data needs, develop study plans, and engage stakeholders; Product(s): Project Plan.
3. Phase 3: Data collection and analyses; Product(s): Progress Report(s), Study Report(s).
4. Phase 4: Project report(s) with data and analysis findings; may include impairment assessment, source and loading analysis, implementation alternatives; Product(s): Preliminary Project Report(s).
5. Phase 5: Develop recommendations for regulatory action, compile results/findings; Product(s): Project Report (Phases 3-5 Inclusive).
6. Phase 6: Water Board regulatory action process; may include workshop(s), hearing(s), and referral back to Water Board staff; Product(s): Basin Plan Amendment or Other Regulatory Action (e.g., Permit).
7. Phase 7: Other regulatory approval; Product(s): State Water Board, Office of Administrative Law, U.S. EPA Approvals.
8. Phase 8: Implementation.

F. The Advisory Committee will review and comment on the North San Francisco Bay Selenium TMDL Project Plan that has already been developed by the Water Board staff. Portions of that Project Plan will serve as the basis for the Scope of Work described in this MOU.

G. WSPA will contribute to the development of the proposed North San Francisco Bay Selenium TMDL by participating in the Advisory Committee and by funding data collection tasks that are intended to be used to provide a scientifically sound technical basis for the proposed North San Francisco Bay Selenium TMDL.

- H. The primary purpose of this MOU is to set forth the respective roles and responsibilities of the Parties with respect to the initial development of the proposed North San Francisco Bay Selenium TMDL, and to establish the scope, schedule, terms and principles which govern the WSPA's contribution to the development of the proposed North San Francisco Bay Selenium TMDL for Water Board consideration and possible adoption. .
- I. The Parties understand that time is of the essence in the performance of each Party's respective obligations under this MOU and in developing the proposed North San Francisco Bay Selenium TMDL.

NOW, THEREFORE, the Parties hereby set forth the following understandings:

I. GENERAL PRINCIPLES

- A. The primary purposes of the proposed North San Francisco Bay Selenium TMDL will be to identify and characterize selenium sources, quantify selenium loads, develop and assign among sources waste load and load allocations designed to implement applicable water quality standards and develop an implementation plan.
- B. The State and the San Francisco Bay Water Boards have identified North San Francisco Bay (specific waterbodies include Central Basin, San Francisco Bay, Suisun Bay, San Pablo Bay, Carquinez Strait, Sacramento, San Joaquin Delta) as impaired due to selenium.
- C. The proposed North San Francisco Bay Selenium TMDL will address all sources of selenium to the waters of the State within North San Francisco Bay and processes controlling the uptake of selenium by biota. Implementation actions which result in load reductions to the North Bay will be recognized.
- D. The Parties agree that the process of preparing the proposed North San Francisco Bay Selenium TMDL will involve opportunities for public

participation, including public meetings or other vehicles for sharing information with and receiving comments from other participants and non-participating stakeholders (e.g., individuals or groups concerned with local environmental protection, environmental justice, and recreation issues, and Native American, municipal, business, and development community interests). Although WSPA will contribute to the development of many of the proposed North San Francisco Bay Selenium TMDL deliverables pursuant to this MOU, the Water Board will retain certain responsibilities, as described further below, and will have the primary responsibility under this MOU to identify appropriate interested persons and communicate with such persons to ensure that they are provided with reasonable opportunity to participate in the development of the proposed North San Francisco Bay Selenium TMDL.

- E. The Parties agree the North San Francisco Bay Selenium TMDL will meet all applicable state and federal TMDL requirements, and agree to use sound science, adaptive management, and public participation with respect to the development of the proposed North San Francisco Bay Selenium TMDL for consideration by the Water Board.

II. ROLES AND RESPONSIBILITIES OF THE PARTIES

- A. Role and Responsibilities of the Water Board. The Water Board is required to establish TMDLs at a level necessary to attain and maintain the applicable narrative and numerical water quality objectives, considering seasonal variations and a margin of safety. Any TMDL ultimately adopted by the Water Board must be submitted to and approved by U.S. EPA. Any TMDL requiring an amendment to the Water Board's Basin Plan must also be submitted to the State Water Board and the Office of Administrative Law for approval. The Water Board and the State Board are legally responsible for development and adoption of a North San Francisco Bay Selenium TMDL. WSPA's contribution to the development of the proposed North San Francisco Bay Selenium TMDL

to be considered by the Water Board shall in no way be construed as the Water Board abrogating this legal responsibility, or as a delegation of the Water Board's regulatory authorities to WSPA. The Water Board retains full authority to accept, modify or reject portions of the proposed North San Francisco Bay Selenium TMDL that is developed. The Water Board staff shall oversee and shall work collaboratively with WSPA with respect to WSPA's efforts contributing to the development of the proposed North San Francisco Bay Selenium TMDL. Specifically, the Water Board staff will:

1. Have the primary responsibility for ensuring public participation in the development of the proposed North San Francisco Bay Selenium TMDL, including sending meeting notices and leading meetings. The Water Board staff will maintain decision authority for, but will work with WSPA or its consultant on support services tasks, including, but not limited to, maintaining contact lists, preparing draft meeting notices, coordinating locations, dates and times, taking minutes and, if necessary, cost effective contracting for mediation services to organize and facilitate public meetings.
2. Assign a Water Board staff project manager to provide on-going input, direction and guidance with respect to the technical content and sufficiency of the proposed North San Francisco Bay Selenium TMDL as it is being developed and completed, and to administer this MOU. The Water Board staff project manager will be Barbara Baginska. The Water Board staff may designate a different project manager and will provide written notice to WSPA if it does.

B. Role and Responsibilities of WSPA. WSPA desires to and will contribute to the development of the proposed North San Francisco Bay Selenium TMDL as set forth in this MOU and will submit associated work products to the Water Board for its consideration and use in considering whether to

adopt the proposed North San Francisco Bay Selenium TMDL. WSPA will work collaboratively with and under the guidance of the Water Board staff including its project manager. In addition, WSPA will:

1. Participate in the development of the proposed North San Francisco Bay Selenium TMDL in accordance with the Scope of Work and Schedule provided below.
2. Hire any consultants it sees fit to undertake the work contemplated by this MOU. WSPA has already selected Tetra Tech, Inc., as the consultant (the "Consultant") to provide services related to implementation of WSPA's responsibilities for the development of the proposed North San Francisco Bay Selenium TMDL pursuant to this MOU. The Water Board staff has concurred with the selection and approved Tetra Tech's Statement of Work and Project Description.
3. Fund the services of Consultant and any other consultants associated with WSPA's contribution to the development of the proposed North San Francisco Bay Selenium TMDL pursuant to this MOU and WSPA's staff to support and oversee these efforts.
4. Provide support services, as described in Section II.A.1 above.
5. Assign a WSPA representative and representatives of WSPA member companies to serve on the Advisory Committee.
6. Assign a WSPA project manager to implement and administer this MOU. The WSPA project manager will be Mr. Kevin Buchan. WSPA may designate a different project manager and will provide written notice to the Water Board if it does.

7. Engage the Water Board staff as necessary during the process to resolve any issues relating to development of the proposed North San Francisco Bay Selenium TMDL.

III.SCOPE OF WORK

A. Phases.

1. The Phases of the proposed North San Francisco Bay TMDL will be completed pursuant to a Development Schedule to be established by the Parties within four (4) weeks of the execution of this MOU. The Parties shall reach agreement on a schedule for the delivery of the work products outlined in Section III (4) below.
2. WSPA agrees to provide resources for completion of several project deliverables associated with Phases 3 and 4 and portions of Phase 5 of the proposed North San Francisco Bay Selenium TMDL, pursuant to the Development Schedule established pursuant to Section III (1) above, and to submit the associated work product to the Water Board for its consideration and use in adopting the North San Francisco Bay Selenium TMDL. The work will involve primarily data compilation, including the identification, characterization, and quantification of selenium sources/activities and loads. In consultation with the Water Board staff, and with input from the Advisory Committee, the WSPA will manage and supervise this data compilation effort.
3. The Parties recognize that the ability of WSPA and any consultant it may employ to compile relevant data may be constrained by their limited access to individuals/organizations outside of WSPA's control. To the extent that the Advisory Committee or the Water Board staff desires additional data acquisition the Water Board staff will consider using its authorities to secure access rights for the data collection effort or compel the third person to submit technical reports.

4. The work to be conducted by WSPA or its consultants will produce the following work products that are intended to support the technical basis for the proposed North San Francisco Bay Selenium TMDL:
 - a. Project Database: A database of water, sediment, and biota selenium concentration data collected in North Bay will be developed, so that all project participants have access to a consistent set of data. To the extent feasible from the original datasets, the above data will be georeferenced for inclusion as a GIS layer in maps.
 - b. Technical Memorandum 1 - Habitat Maps: Available data on sensitive species occurrence and habitat in North Bay will be compiled and reviewed to produce maps of sensitive species occurrence and habitats in the North Bay. A short description of the data and the rationale used to produce the maps will be prepared. The information developed on sensitive species and habitats, potential selenium related risks, and key foodwebs in those sensitive habitats will be summarized.
 - c. Technical Memorandum 2 - Source Characterization: Loads of selenium in the North Bay from various sources, including internal sediment sources, as derived from the data evaluation will be summarized in a technical memorandum that will form the basis of the Source Analysis section for the TMDL. The importance of atmospheric sources and loads will be included in the characterization. The analysis of internal sediment sources will include the calculation of fluxes from sediment. The source characterization will update the source identification and load assessment in the Conceptual Model/Impairment Assessment Report. The technical

memorandum will present trends in selenium data in graphical and tabular format.

- d. Technical Memorandum 3 - Toxicological Assessment. A memorandum will be prepared summarizing the toxicological information on selenium for input to the numeric target section in the TMDL
- e. Technical Memorandum 4 - Revised Conceptual Model. Using the data developed in Task 1, a technical memorandum will be prepared that highlights the key selenium transformation and biological uptake processes occurring in North Bay. The memorandum will be an update to the existing conceptual models of selenium in North Bay and will emphasize the current level of understanding/quantification of these processes. The technical memorandum will present the results of the evaluation of alternative models and select the conceptual model most appropriate to the North Bay.
- f. Technical Memorandum 5 - Model Selection. Candidate models will be identified and evaluated based on the criteria identified above. The capabilities and data requirements of the candidate models will be explicitly identified. The recommended model or models will be identified and the rationale for selection will be specified.
- g. Technical Memorandum 6 - Simulation Model Results. The selected model(s) will be applied to generate the results needed to generate the TMDL. The model results will include water column and sediment concentrations, as well as biota concentrations using a site specific model of bioaccumulation as described above. A key consideration will be the evaluation of options for actions that can be taken to meet established

numeric targets for selenium in different environmental compartments. The modeling will provide estimates of outcomes for different load reduction scenarios. This information will provide the basis for an evaluation of extent of load reduction that will be required to meet the desired targets in the implementation plan.

h. Technical Memorandum 7 – Implementation Plan. Multiple load reduction actions may be implemented as part of a North San Francisco Bay Selenium TMDL. This technical memorandum will utilize the modeling results to evaluate the benefits of different implementation options. This analysis will also describe and evaluate best management practices and control measures to reduce selenium loads from all internal and external sources. Economic considerations and technical feasibility as well as management actions already underway to reduce selenium loads in the Central Valley will also be addressed.

5. Technical Memorandum 8 – Technical Review Committee. A Technical Review Committee will be established by the Water Board staff to provide specialized expert consultation at specific points in the development of the proposed North San Francisco Bay Selenium TMDL, to ensure that key decisions and assumptions that go into its development are technically sound. Development of the Technical Review Committee process will include the design of the framework for the technical review process, preparation of review guidelines, the identification of candidate reviewers, response to requests for additional information during the review process, and the preparation of a summary of the Committee's findings.

B. Stakeholder and Public Participation Process.

The successful North San Francisco Bay Selenium TMDL process will require a significant level of stakeholder involvement. Under the direction of the Water Board staff, stakeholder workshops will be conducted at key stages of the TMDL development process, to provide opportunities for stakeholder input and to communicate to the public the progress of the TMDL development. The specific objectives of each proposed workshop are described below in terms of the projected outcomes.

1. Workshop 1. Presentation of Project Plan to develop the proposed North San Francisco Bay Selenium TMDL. The objective is to obtain input and comments on the Project Plan, including the proposed technical approach and schedule, and to initiate discussion on implementation actions.
2. Workshop 2. Presentation of technical background for the Project and Preliminary Findings The results of the data compilation and analysis task will provide the basis for decisions on the technical approach for the required TMDL elements: numeric targets, source analysis, linkage analysis, allocations and implementation plan. A revised conceptual model will be presented. Also, the strategy for modeling that will be conducted to demonstrate how allocations will result in standards attainment will also be presented. The objective is to obtain stakeholder input and comment of the data collection task and modeling approach.
3. Workshop 3. Review of modeling results, preliminary allocations and best management practices to implement the TMDL. The modeling results provide the technical basis for the establishment of TMDL allocations and the implementation strategy. The objective is to obtain input concerning the data interpretation and the preliminary allocations that were developed.
4. Workshop 4. CEQA Scoping. The objective is to present the Water Quality Attainment Strategy including the Implementation Plan and the CEQA analysis results.

IV. CONSIDERATION FOR WSPA'S CONTRIBUTIONS AND ACTIVITIES

- A. The Water Board acknowledges that the work WSPA will be funding under this MOU will provide a technical basis for the proposed North San Francisco Bay Selenium TMDL, and as such, will assist the Water Board staff in developing a proposal that is anticipated to include scientifically sound load allocations and an appropriate implementation plan. In addition, the Water Board staff recognizes that WSPA's overall leadership and contributions to the development of the proposed North San Francisco Bay Selenium TMDL may address implementation actions for TMDL.

V. DISPUTE RESOLUTION

- A. This MOU requires that the Parties work together in good faith to achieve the intent of this MOU. In the event that a dispute arises as to the proper interpretation of the respective rights and responsibilities of the Parties under this MOU, or as to any other aspect of this MOU, the Parties agree that they each will assign the appropriate individuals to meet and make good faith efforts to negotiate for no more than ten (10) days to arrive at a resolution of the dispute, and, if necessary, the Executive Officer of the Water Board and the Chief Operating Officer of WSPA shall undertake additional efforts to resolve the dispute, including by agreeing to request an independent, mutually agreed upon mediator to facilitate further negotiations, at WSPA's expense.
- B. Nothing herein shall prevent the Parties from exercising their respective rights under Section VI (F) below.

VI. MISCELLANEOUS

- A. Submission of Documents and Deliverables. Any and all documents, reports, plans and other deliverables required to be submitted by WSPA to the Water Board hereunder shall be submitted in both electronic and hard copy. Document hard copies shall consist of one reproduction-ready

master, and at least one complete copy. The database shall be provided in electronic format.

B. Notices/Correspondence.

1. Except as otherwise provided elsewhere in this MOU, all written correspondence from the Water Board staff to WSPA relevant to the proposed North San Francisco Bay Selenium TMDL and this MOU shall be addressed to the Project Manager, Kevin Buchan, Western States Petroleum Association, 1415 L Street, Suite 600, Sacramento, CA 95814.

2. Except as otherwise provided elsewhere in this MOU, all written correspondence from WSPA to the Water Board staff relative to the proposed North San Francisco Bay Selenium TMDL and this MOU shall be addressed to the Water Board project manager designated pursuant to Section II.A.4.

C. No Rights For Non-Parties. No rights or privileges are created or intended to be created by this MOU in anyone not a signatory to the MOU.

D. No Admissions. By entering into this MOU, WSPA makes no admission of fact or law with regard to any issue relevant to any selenium discharge limitations or requirements, including but not limited to any admission as to having responsibilities for creating or implementing a proposed TMDL for the North San Francisco Bay, that the North San Francisco Bay is impaired due to the presence of selenium, for addressing or implementing any waste load allocation or load allocation thereunder, or as to having any other responsibility or liability associated with the Water Board's legal obligations.

E. Modification. This MOU may be modified by the Parties hereto only by executing a written modification to this MOU.

- E. Work for other participants in TMDL proceeding. WSPA shall notify the Board staff if any consultant (including any division or office thereof) hired by it to perform work under this MOU also performs work for any other participant in the Board's proceeding to develop and consider the proposed TMDL for the North San Francisco Bay.
- F. Termination and Use of Work Products. The Parties may withdraw from this MOU upon thirty (30) days written notice to the other Party. Upon termination, WSPA will provide the Water Board with the most up-to-date versions, if any, of all deliverables currently underway pursuant to the Scope of Work which have not previously been provided to the Water Board, including updates to the electronic database. Notwithstanding any termination of this MOU, the Water Board may use and rely upon any of the information and/or work product generated by WSPA during the development of the proposed North San Francisco Bay Selenium TMDL. The Water Board's obligation under Section IV of this MOU will continue with respect to activities already undertaken by WSPA prior to the effective date of the termination.

Signatures presented on next page

Western States Petroleum Association



Signature

7/30/07

Date

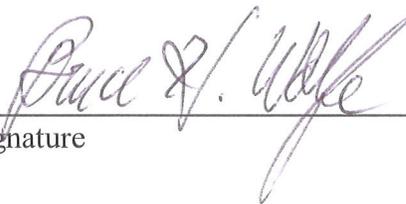
Catherine H. Rehers-Boyd

Name

Chief operating officer

Title

California Regional Water Quality Control Board, San Francisco Bay Region



Signature

8/20/07

Date

Bruce N. Wolfe

Name

Executive Officer

Title