

**CITY OF ANGELS
PURDY ROAD WATER AND SEWER
IMPROVEMENTS PROJECT**

**CONTRACT DOCUMENTS AND
TECHNICAL SPECIFICATIONS**



Bid Set

June 2025



CITY OF ANGELS

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IMPROVEMENTS PROJECT**

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TECHNICAL SPECIFICATIONS**



Bid Set

June 2025

Submitted to:

City of Angels
P.O. Box 667
584 South Main Street
Angels Camp, CA 95222

Prepared by:

Dewberry Engineers Inc.
903 West Center Street, Suite 201
Manteca, CA 95337
(209) 707-3330

CITY OF ANGELS
PURDY ROAD WATER AND SEWER IMPROVEMENT
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CITY OF ANGELS
PURDY ROAD WATER AND SEWER IMPROVEMENTS

Division 0 – Bidding and Contract Requirements

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SECTION 00020

**REQUEST FOR PROPOSAL
CITY OF ANGELS
PURDY ROAD WATER AND SEWER IMPROVEMENTS**

Sealed Bids will be received until **July 29, 2025, at 2:00 p.m.**, by the City of Angels at 200 Monte Verda Street, #B, Angels Camp, for the Purdy Road Water and Sewer Improvement Project – WWCS-6 (Project) by the City of Angels.

As soon as practical thereafter, sealed bids for the project will be publicly opened and read for performing work as follows:

Installation of approximately 580 linear feet of 8-inch waterlines, blowoff, air release valve and fire hydrant; installation of connection to existing waterline; installation of residential services from new waterline; flushing, testing, disinfection, and placing into service new waterline and appurtenances; and rehabilitation of approximately 50 ft of 8-inch sanitary sewer including temporary bypass pumping/piping.

Project shall comply with the Milestone dates and Final Completion within 120 calendar days from the date specified in the Notice to Proceed. Time is of the essence for commencement and completion of the work.

A mandatory pre-bid meeting is scheduled for this project. The pre-bid meeting shall be held **July 10, 2025, at 10 a.m.** at 744 Purdy Road, Angels Camp.

The Engineer's Estimate for the Project is \$450,000.

There are no disadvantage, women-owned, or veteran business hiring requirements for this project.

Contract documents in PDF format are available for download on the City website. Documents are in the Public Notices section – angelscamp.gov/city-hall/public-notice/. Hard copies are not available for purchase.

Each bid must conform and be fully responsive to this request for proposal, the plans and specifications, and all other documents comprising the pertinent contract documents.

Bidders must submit bids on a hard copy of the bid proposal form provided in the Contract Documents. Signed forms to be submitted by the Bidders include the following and are to be acknowledged in Section 00300, BID FORM:

- Bidder Questionnaire (Section 00160)
- Bidder's Signature and Authority (Section 00170)
- Statement Acknowledging Penal and Civil Penalties Concerning the Contractor's Licensing Laws (Section 00180)
- Insurance Acknowledgement (Section 00190)
- Bid Form (Section 00300)

- Bid Bond Affidavit (Section 00400)
- Bid Guaranty Bond (Section 00410)
- Certification of Bidder's Experience and Qualifications (Section 00420)
- Proposed Subcontractors (Section 00430)
- Site Visit Affidavit (Section 00450)
- Non-Collusion Affidavit to be Executed by Bidder and Submitted with Bid (Section 00480)
- Department of Industrial Relations and SB 854 Compliance Affidavit (Section 00490)

Questions regarding the contract documents shall be submitted in writing to:

Dave Richard, PE
On-Call City Engineer, Water/Wastewater
Dewberry Engineers Inc.
903 West Center Street, Suite 201
Manteca, CA 95337
drichard@dewberry.com

Bid-related questions must be submitted no later than **5 p.m. on July 03, 2025**. Responses to questions will be provided on the City website. The questions and responses shall form part of the Contract Documents.

Bidding procedures are prescribed in the contract documents. Bids shall only be executed upon the bid form provided, which are a part of said Contract Documents. Bid guarantee in an amount not less than ten percent (10%) of the total bid dollar amount and conforming to the prescribed bidding procedures is required to be submitted with each bid, as a guaranty to be forfeited should the bidder, if awarded the contract, fail to enter into the same, or fails to furnish in a timely manner the bonds and/or proof of insurance.

Pursuant to the provisions of California Labor Code Section 6707, each bid submitted in response to this Request for Proposal shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation, which shall conform to applicable safety orders. By listing this sum, the bidder warrants that its actions pursuant to this bid item shall not impose tort liability on the City, the Design Engineer, and their employees, agents, and subconsultants.

Pursuant to Section 1770, et. seq., of the California Labor Code, the successful bidder shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations.

No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5).

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. All contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement).

Pursuant to Public Contract Code Section 22300, for moneys earned by the Contractor and withheld by the City to ensure the performance of the Contract, the Contractor may, at its option, choose to substitute securities meeting the requirements of said Public Contract Code Section 22300.

All bidders shall be licensed under the provisions of Chapter 9, Division 3 of the Business and Professions Code of the State of California to do the type of work contemplated in the project. In accordance with provisions of California Public Contract Code Section 3300, the City has determined that the **Contractor shall possess a valid Class A license** at the time that the bid is submitted. Failure to possess the specified license shall render the bid non-responsive.

The successful bidder will be required to furnish a Payment bond in the amount equal to one hundred percent (100%) of the Contract price as well as a Faithful Performance Bond, in the amount equal to one hundred percent (100%) of the Contract price. All bonds submitted shall be from admitted sureties.

Each bidder shall submit with its bid a statement setting forth its experience on the forms included in the Bid Proposal.

Telephones will not be available to bidders for the preparation of the bids or for calling in bid results. Bid forms received after the designated time will not be accepted. Bidders and their authorized agents are invited to attend the bid opening.

No bidder may withdraw its bid for sixty (60) days after the date set for the opening of bids.

The successful bidder must ensure that employees and applicants for employment are not discriminated against on the basis of age, color, race, national origin, ancestry, religion, sex, sexual preference, marital status, and comply with the Americans with Disabilities Act.

The City reserves the right to reject any or all bids; to make any awards or any rejections in what it alone considers to be in the best interest of the City; and waive any irregularities in the bids. Each bid must be signed by or on behalf of the bidder and must be enclosed in a SEALED ENVELOPE.

1. Name and address of bidder
2. Project for which the bid is being submitted
3. Date and time of bid opening

The envelope shall be addressed to the City of Angels:

If by mail (USPS) address to:

P.O. Box 667
Angels Camp, CA 95222

If delivery by courier, UPS, FedEx, etc. address to:

200 Monte Verda Street, #B
Angels Camp, CA 95222

Dated: _____, 202__

City of Angels

Pamela Caronongan
City Administrator

SECTION 00100

INSTRUCTIONS TO BIDDERS

1.00 WORK TO BE DONE

It is the intention of the City to construct improvements as shown and set forth on the plans, and in the particular locations shown on the plans. All of the work is particularly set forth in the plans and specifications, and all of said work, together with all other work incidental thereto, is included.

The work includes the furnishing of labor, materials, incidentals and equipment necessary for the construction of the Purdy Road Water and Sewer Improvement Project. The Bidder shall be required to provide, at its own cost and expense, all necessary insurance, as required by law or these specifications, and shall pay the cost and expense of any and all incidental matters herein required.

2.00 EXAMINATION OF CONTRACT DOCUMENTS

Each bidder shall thoroughly examine and be familiar with the contract documents. The submission of a bid shall constitute an acknowledgment, upon which the City may rely, that the bidder has thoroughly examined and is familiar with the contract documents. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve it from any obligation with respect to its proposal or to the Contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract documents.

3.00 INSPECTION OF SITE

Bidders are required to inspect the site of the work to satisfy themselves by personal examination or by such other means, as they may prefer, of the location of the proposed work, and of the actual conditions, including subsurface, of and at the site of work. If, during the course of its examination, a bidder finds facts or conditions which appear to be in conflict with the letter or spirit of the bidding documents, the Bidder may apply to the City, in writing, for additional information and explanation before submitting its bid.

Submission of a bid by the bidder shall constitute conclusive evidence that, if awarded the Contract, it has relied and is relying on its own examination of (1) the site of the work, (2) access to the site, (3) all other data and matters requisite to the fulfillment of the work and on its own knowledge of existing facilities on and in the vicinity of the site of the work to be constructed under the Contract, (4) the conditions to be encountered, (5) the character, quality and scope of the proposed work, (6) the quality and quantity of the materials to be furnished, and (7) the requirements of the bid, the plans, the specifications, and the other contract documents.

The information provided by the City is not intended to be a substitute for, or a supplement to the independent verification by the bidder to the extent such independent investigation of site conditions is deemed necessary or desirable by the bidder.

4.00 **INTERPRETATION OF CONTRACT DOCUMENTS**

No oral representations or interpretations will be made to any bidder as to the meaning of the contract documents. Requests for an interpretation shall be made in writing and received at the time provided previously to:

Dave Richard, PE
On-Call City Engineer, Water/Wastewater
Dewberry Engineers Inc.
903 West Center Street, Suite 201
Manteca, CA 95337
drichard@dewberry.com

Requests to clarify possible ambiguous or incomplete statements or designs require issuance of an addendum by the City for the interpretation to become effective. All requests for clarifications shall be made in writing. Any addenda issued for the Project will be posted on the City website.

5.00 **POSTPONEMENT OF OPENING**

The City reserves the right to postpone the date and time for receiving and/or opening of bids at any time prior to the date and time established in the Request for Proposal. Postponement notices shall be provided in the form of an addendum.

6.00 **OPENING OF BIDS**

All bids, irrespective of any irregularities or informalities, if received on time, will be opened and publicly read aloud at the time and place set forth in the Request for Proposal. Bidders, their representatives and other interested persons may be present at the opening and reading of bids.

Any bids received after the scheduled closing time as set forth in the Request for Proposal or as postponed by addenda will be considered non-responsive and will not be opened. Any such bids will be returned unopened to the Bidder. The public reading of each bid will include at least the following:

- A. Name and address of bidder.
- B. The total amount of bid.
- C. The nature and amount of the security furnished with the bid.

7.00 PREPARATION OF BID FORMS

Bid shall be made on the bid forms provided in the contract documents and must be submitted at the time and place stated in the Request for Proposal. All blanks in the bid forms must be appropriately filled in either in ink or typed, and all prices must be stated in figures. All bid forms must be submitted in sealed envelopes bearing on the outside the name of the bidder, its address, and the name of the project for which the bid is submitted. It is the sole responsibility of the bidder to see that its bid is received in proper time. Any bid received after the scheduled closing time for receipt of bids will be returned to the bidder unopened. City shall not be responsible for errors or omissions in the bid. Bidders shall write their names on each bid form at the space provided.

8.00 BIDDER'S SIGNATURE AND AUTHORITY

If the bid is made by an individual, this person's name, signature, and post office address must be shown; if made by a firm or partnership, the name and post office address of the firm or partnership, a list of the general partners, and the signature of at least one of the general partners must be shown, if made by a corporation, the bid shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. If the bid is made by the corporation, a certified copy of the bylaws or resolution of the Board of Directors of the corporation shall be furnished showing the authority of the officer or agent signing the bid to execute Contracts on behalf of the corporation. If the bid is made by a joint venture, the bid shall be signed by a representative of one of the joint venture firms. Additionally, the bid shall include a copy of the resolution or agreement empowering the representative to execute the bid and bind the joint venture.

9.00 ERASURES AND CORRECTIONS

The bid submitted must not contain any erasure, interlineations, or other corrections unless each such correction is suitably authenticated by affixing, in the margin immediately opposite the correction, the initials of the person or persons submitting the bid.

10.00 BID IRREGULARITIES

Changes in or additions to the bid form, recapitulations of the work bid upon, alternative bids, omissions, or any other modifications of the bid form which are not specifically called for in the contract documents may result in rejection of the bid by the City, as not being responsive to the Request for Proposal. No oral or telephonic modification of any bid submitted will be considered.

11.00 MODIFICATION OF BID

On written request filed with the City, a bid already received may be modified or withdrawn at any time prior to the time established for receiving bids. The request must be executed by the bidder or its authorized representative as described in Paragraph 00100-8.00, BIDDER'S

SIGNATURE AND AUTHORITY. Modifications shall be made in writing, executed, and submitted in the same form and manner as the original bid. Withdrawal of a bid does not prejudice a bidder's right to submit a new bid within the time designated for the submission of bids. No bid may be withdrawn after the scheduled closing time except as provided in Paragraph 00100-12.00, **WITHDRAWAL OF BIDS**.

12.00 WITHDRAWAL OF BIDS

In accordance with Public Contract Code 5103, within five days after the opening of bids, a bidder may withdraw its bid providing the bidder can establish to the City's satisfaction that a mistake was made in preparing the bid. A bidder desiring to withdraw shall give written notice to the City, specifying, in detail, how the mistake occurred and how the mistake made the bid materially different than it was intended to be. Withdrawal will not be permitted for mistakes resulting from errors in judgment or carelessness in inspecting the site of the work or in reading the contract documents.

13.00 ADDENDA

Addenda issued during the time of bidding shall become a part of the documents furnished bidders for the preparation of bids, shall be covered in the bids, and shall be made a part of the Contract. Each bid shall include specific acknowledgment in the space provided of receipt of all Addenda issued during the bidding period. Failure to so acknowledge may result in the bid being rejected as not responsive. Failure of any bidder to receive such Addenda shall not be grounds for non-compliance with the terms of the instructions.

14.00 BID PRICES

Bid prices shall include everything necessary for the completion of the work including but not limited to providing the materials, equipment, tools, plant and other facilities, and the management, superintendence, labor and services. Bid prices shall include allowance for all federal, state and local taxes.

In the event of a difference between a price quoted in words and a price quoted in figures for the same quotation, the words shall be the amount bid. In the event that the product of a unit price and an estimated quantity does not equal the extended amount quoted, the unit price shall govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. If the sum of two or more items in a bidding schedule does not equal the total amount quoted, the individual item amounts shall govern and the correct total shall be deemed to be the amount bid.

The award of contract, if it is awarded, will be awarded to the lowest responsive, responsible Bidder whose proposal complies with all the requirements prescribed.

15.00 **BID GUARANTY**

The bid form shall be accompanied by a bid guaranty bond provided by an admitted surety insurer authorized to carry on business in the State of California with a minimum A – Class IV rating with Best's Rating Guide for payment to the City or meeting the following minimum requirements:

If the Best's Rating for any surety company who has furnished a bid guaranty for the bidder is less than A - Class IV and/or not Treasury Rated, bidder may be required to, within five working days of bid opening, submit to the City an original or certified copy of each of the following documents for each surety company which has furnished a bid guaranty for that bidder:

- A. Appropriate authorization of the signatory to execute each bid guaranty.
- B. A certificate of authority issued by the State Insurance Commissioner.
- C. A certificate from the County Clerk that the above certificate is not ineffective; and
- D. The surety company's financial statement for the prior quarter as specified in Section 995.670 of the California Code of Civil Procedure.

Simultaneously with the submission of the documents described in the preceding paragraphs, the bidder shall also submit an affidavit or declaration, under penalty of perjury under the laws of the State of California, demonstrating the following facts for each bid guaranty submitted or to be submitted on the bidder's behalf.

- A. That the surety company's assets exceed its liabilities by more than the amount of the bid guaranty or guaranties submitted on the bidder's behalf, and
- B. That in issuing the bid guaranty or guaranties submitted on the bidder's behalf, the surety company shall be in full compliance with California Insurance Code Section 12090, supported by appropriate references to the surety company's most recent financial statement on file in the office of the State Insurance Commissioner.

Any bidder wishing to object to the sufficiency of any surety company used by another bidder shall comply fully with the provisions of Section 995.650 of the California Code of Civil Procedure.

The bid guaranty bond shall be in the sum of at least ten percent (10%) of the total amount of the bid price, or, alternatively, by a certified or cashier's check, payable to the City in the sum of at least ten percent (10%) of the total amount of the bid price. The bid guaranty bond shall be provided on the form included in Section 00410, BID GUARANTY BOND, of these contract documents.

The amount payable to the City under the bid guaranty bond, or the certified or cashier's check and the amount thereof, as the case may be, shall be forfeited to the City as liquidated damages in case of a failure or neglect of the bidder to furnish, execute, and deliver to the City the required performance and payment bonds, evidences of insurance, and to enter into, execute, and deliver to the City the Agreement on the form provided herewith, within ten (10) calendar days after receiving written notice from the City that the award has been made and the Agreement is ready for execution.

The bid guarantees of the three lowest bidders will be retained until the Agreement is signed, evidence of insurance provided, and satisfactory bonds furnished or other disposition made thereof. The bid guarantees of all bidders except the three lowest responsive bids will be returned within 15 calendar days after the bids are opened.

16.00 **QUALIFICATION OF BIDDER**

Each bidder shall complete and submit with their bid Section 00420, CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS.

Upon the request of City, any bidder whose bid is under consideration for the award of the Contract shall promptly submit satisfactory evidence showing the bidder's financial resources, its construction experience, and its organization's availability for the performance of the Contract.

The bidder may be required to establish, to the satisfaction of the City, the reliability and responsibility of the persons or entities proposed to furnish and perform the work described in the contract documents.

17.00 **SUBCONTRACTORS**

In accordance with California Public Contracting Code Section 4100, et. seq., the bidder shall list, in Section 00430, PROPOSED SUBCONTRACTORS, the name, portion of work to be performed, and location of the place of business for the following.

- A. Each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work or improvement, in an amount in excess of one-half of one percent of the bidder's total bid.
- B. Any subcontractor licensed by the State of California who, under subcontract to the bidder, will specially fabricate and install a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the bidder's total bid.

Failure to list the subcontractors defined in subparts 1) and 2) above will render the bid non-responsive and will be grounds for rejection of the bid. Failure to comply with the provisions of the California "Subletting and Subcontracting Fair Practices Act" shall make the Contractor subject to the sanctions as set forth in the Act.

18.00 SUBSTITUTIONS DURING BIDDING

Manufacturers or suppliers of materials and equipment may offer an alternative product to the Contractor and request that alternatives to specified products be considered equal. Inclusion of such alternatives in the bid is the responsibility of the Contractor. Inclusion should only be considered if the Contractor believes the offered alternative is equal in quality and performance to the specified product. After award of the Contract, such offers of alternative products will be reviewed and processed as a substitution as provided under Section 00700, GENERAL CONDITIONS.

19.00 BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation, under the same or different name, shall make, file, or be interested in more than one bid for the same work unless alternate bids are called for. Pursuant to Public Contract Code Section 7106, bidders shall execute and furnish with their bids Section 00480, NON-COLLUSION AFFIDAVIT. Reasonable grounds to believe that any individual, partnership, corporation, or combination is interested in more than one bid for the proposed work may cause rejection of all bids in which that individual, partnership, corporation, or combination is interested,

A person, firm, or corporation may, however, submit subproposals or quote prices on materials to more than one bidder.

20.00 SHEETING, SHORING AND BRACING

Pursuant to the provisions of California Labor Code Section 6707, each bid submitted shall contain, in the bid item indicated, the amount included in the bid for adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation, which shall conform to applicable safety orders. By listing this sum, the bidder warrants that its actions pursuant to this bid item shall not impose tort liability on the City, the Design Engineer, and their employees, agents, and subconsultants.

Pursuant to California Labor Code Section 6705, the Contractor shall submit a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

21.00 WAGE RATES

Pursuant to provisions of the Labor Code Section 1770, et. seq., of the State of California, the Director of the Department of Industrial Relations has ascertained the prevailing rate of wages of the locality in which the Work is to be performed and applicable to the work to be done. Copies of these wage determinations are on file with the City.

Bidders shall promptly notify the City, in writing, about all the classifications of labor not listed in the prevailing wage determinations but necessary for the performance of the Work, before bids are submitted.

22.00 OFFER OF ASSIGNMENT OF ANTITRUST ACTIONS

As provided by Section 7103.5, of the California Public Contract Code, in entering into a public works contract or subcontract, the Contractor or subcontractor offers and agrees to assign to the City all rights, title and interest in, and all causes of action it may have under Section 4 of the Clayton Act (15 U. S.C. Section 15) or under the Cartwright Act (Chapter 2) commencing with Section 16700 (of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or subcontract. This assignment shall be made and become effective at the time the City tenders final payment to the Contractor, without further acknowledgment by the parties.

23.00 ASSIGNMENT OF CONTRACT

Any attempted assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor, is void unless such assignment has had prior written approval of City and the Surety has been given due notice of such assignment in writing and has consented thereto in writing.

24.00 AWARD OR REJECTION OF BIDS

The contract, if awarded, will be awarded to the lowest, responsive, responsible bidder based on the lowest total bid in compliance with these instructions and the Notice Inviting Bids, provided the bid is reasonable and it is to the interest of the City to accept the bid.

The City reserves the right, at its sole discretion, to reject any and all bids and further reserves the right to reject any bids which are: a) non-responsive (e.g.: bids which are incomplete, obscure, or irregular-, bids which omit a bid on any one or more items on which the bids are required, bids which are unbalanced-, bids accompanied by insufficient or irregular bid guaranties), b) any bids from bidders who have previously failed to perform properly or to complete on time contracts of any nature with the City; or c) any bid which fails to provide satisfactory documentation of the bidder's qualifications as required by Section 00100-16.00, QUALIFICATION OF BIDDER. The City reserves the right to waive irregularities.

25.00 BONDS AND INSURANCE

The successful bidder, simultaneously with the execution of the Agreement, will be required to furnish a Payment Bond on forms provided by the City in an amount equal to one hundred percent (100%) of the Contract Price, a Faithful Performance Bond in an amount equal to one hundred percent (100%) of the Contract Price, the Workers Compensation Insurance Certificate, and evidences of insurance. Said insurance and bonds shall only use

the forms attached and shall be secured from a surety company satisfactory to City with a minimum A - Class IV rating with Best's Rating Guide or meeting the following minimum requirements:

If the Best's Rating for any surety company from which the bidder intends to procure the payment bond, performance bond, or both, is less than A - Class IV and/or not Treasury Rated, bidder may be required to, within 5 working days after bid opening, submit to the City an original or certified copy of each of the following documents for each surety company from which the bidder intends to procure such bond or bonds:

- A. Appropriate authorization of the signatory to execute each bond.
- B. A certificate of authority issued by the State Insurance Commissioner.
- C. A certificate from the County Clerk that the above certificate is not ineffective; and
- D. The surety company's financial statement for the prior quarter as specified in Section 995.670 of the California Code of Civil Procedure.

Simultaneously with the submission of the documents described in the preceding paragraphs, the bidder shall also submit an affidavit or declaration, under penalty of perjury under the laws of the State of California, demonstrating the following facts for the bond or bonds submitted or to be submitted on the bidder's behalf

- A. That the surety company's assets exceed its liabilities by more than the amount of the bond or bonds submitted on the bidder's behalf, and
- B. That in issuing the bond or bonds submitted on the bidder's behalf, the surety company shall be in full compliance with California Insurance Code Section 12090, supported by appropriate references to the surety company's most recent financial statement on file in the office of the State Insurance Commissioner.

Any bidder wishing to object to the sufficiency of any surety company used by another bidder shall comply fully with the provisions of Section 995.650 of the California Code of Civil Procedure.

The form of Agreement, as provided in Section 00500, AGREEMENT, which the successful bidder as Contractor will be required to execute, and the forms of bonds as provided in Sections 00610, FAITHFUL PERFORMANCE BOND and 00620, PAYMENT BOND, which it will be required to furnish, shall be carefully examined by the bidder. The Faithful Performance Bond is to secure the faithful performance of the Contract and the Payment Bond is to secure the payment of those to whom the bidder may become legally indebted for labor, materials, tools, equipment, or services of any kind used or employed by the bidder in performing the work.

26.00 AWARD OF CONTRACT

Within sixty (60) calendar days after the time of opening of the bids, the City will act either to accept a bid, to reject all bids or with the consent of the bidders and their sureties to extend the time in which the City may act. The acceptance of a bid will be evidenced by a Notice of Award of Contract in writing, delivered in person or by certified mail to the bidder whose bid is accepted. No other act of City will constitute acceptance of a bid. The issuance of a Notice of Award of Contract shall obligate the bidder whose bid is accepted to furnish performance and payment bonds and evidences of insurance, and to execute the Agreement in the form set forth in the contract documents. The Agreement will require the completion of the work according to the contract documents.

If award is made, it will be based on the lowest responsive, responsible bid.

Upon review of bids and determination of the lowest responsive, responsible bidder, the goal of the City is to recommend award of the contract at the August 5, 2025, City Council meeting. Assuming the City Council approves award of the contract at the August 5, 2025, City Council meeting and subsequent execution of the agreement and receipt of bonds and evidence of issuance, a Notice to Proceed could be issued by the City by August 18.

27.00 CITY OF ANGELS BUSINESS LICENSE

At the time the Contractor submits the Contract Documents, Contractor is required to possess or have submitted all documentation to the City to obtain a City of Angels Business License. A copy of the license or documentation verifying submittal to obtain the license shall be provided.

28.00 EXECUTION OF CONTRACT

The Agreement shall be executed by the successful bidder and returned, together with the Contract, bonds, business license, and evidences of insurance, within ten days after receiving written Notice of the Award of the Contract. Time is of the essence in this regard. After execution by City, one copy of the Agreement shall be returned to Contractor.

Failure or refusal to enter into a Contract as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and the forfeiture of the proposal guaranty. If the successful bidder refuses or fails to execute the agreement, the City may award the contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the agreement, the City may award the contract to the third lowest responsible bidder. On the failure or refusal of such second or third lowest bidder to execute the agreement, such bidder's guarantees shall be likewise forfeited to the City. The work may then be re-advertised.

29.00 CONSTRUCTION DOCUMENTS

Within five days after the execution of the Agreement by the City, the City will furnish the Contractor five copies of the Specifications, full and, if available, half-size plans.

****END OF SECTION****

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SECTION 00160

BIDDER QUESTIONNAIRE

In accordance with Government Code Section 14310.5, the bidder shall complete, under penalty of perjury, the following questionnaire:

1. Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of the law or a safety regulation?	YES____ NO____
2. Has a contractor's license held by your firm and/or any owner, officer or partner of your firm been revoked at any time in the last five years?	YES____ NO____
3. Within the last five years, has a surety firm completed a contract on your firm's behalf, or paid for completion of a contract to which your firm was a party, because your firm was considered to be in default or was terminated for cause by the project owner?	YES____ NO____
4. At the time of submitting this questionnaire, is your firm ineligible to bid on or be awarded a public works contract, or perform as a contractor on a public works contract, pursuant to either California Labor Code Section 1777.1 (prevailing wage violations) or Labor Code Section 1777.7 (apprenticeship violations)?	YES____ NO____
5. At any time in the last five years, has your firm, or any of its owners, officers or partners been convicted of a crime involving the awarding of a contract for a government/public construction project, or the bidding or performance of a government/public contract?	YES____ NO____
6. Within the last five years, has your firm been assessed liquidated damages on any public contract?	YES____ NO____
7. Within the last three years has your firm or representatives been debarred from bidding on, or completing any public works construction contract for any reason?	YES____ NO____
8. Has CAL OSHA assessed penalties against your firm for any serious or willful violation occurring on a construction project at any time in the last three years?	YES____ NO____
9. In the past three years, have civil penalties or Notice of Complaint (letter of warning) been issued or assessed against your firm pursuant to California Labor Code 1777.7 for violation of California public works apprenticeship requirements by the California Division of Apprenticeship Standards (DAS)?	YES____ NO____
10. In the past three years, has a public agency in California withheld contract payments or assessed penalties against your firm for violation of public works prevailing wage requirements?	YES____ NO____
11. Has your firm been assessed penalties for violation of public works prevailing wage requirements by the DLSE (Labor Commissioner)?	YES____ NO____

12. Does your firm have any pending complaints or investigations by a regulatory authority?	YES____ NO____

I, the undersigned, certify and declare that I have read and understood the questionnaire. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date _____ Signature _____

****END OF SECTION****

SECTION 00170

BIDDER'S SIGNATURE AND AUTHORITY

Bidder to complete and submit the appropriate signature and authority format for the legal entity submitting the bid.

BIDDER IS AN INDIVIDUAL

Legal Name: _____

Signature: _____

Address:

Physical Address: _____

Mailing address: _____

BIDDER IS A CORPORATION

Corporation Name: _____

Corporation Address:

Physical Address: _____

Mailing address: _____

State of Incorporation: _____

Bidder's Signature: _____

Signer's Title: _____

A certified copy of the bylaws or a resolution of the Board of Directors of the corporation shall be furnished showing the authority of the officer or agent signing the bid to execute Contracts on behalf of the corporation.

BIDDER IS A PARTNERSHIP

Partnership Name: _____

General Partners
in the Partnership: _____

Partnership Address:

Physical Address: _____

Mailing address: _____

If any/all of the General Partners are a Corporation:

Firm Name	State of Incorporation	Address	Person Authorized to Sign on Behalf of the Corporation

Bidder's Signature: _____

Signer's Title: _____

Firm Signing on Behalf
of the Partnership: _____

A certified copy of the bylaws or a resolution of the Board of Directors of the corporation shall be furnished showing the authority of the officer or agent signing the bid to execute Contracts on behalf of the corporation.

BIDDER IS A JOINT VENTURE

Joint Venture Name: _____

Partners in the
Joint Venture: _____

Joint Venture Address:

Physical Address: _____

Mailing Address: _____

If any/all of the Partners are a Corporation:

Firm Name	State of Incorporation	Address	Person Authorized to Sign on Behalf of the Corporation

Bidder's Signature: _____

Signer's Title: _____

Firm Signing on Behalf
of the Joint Venture: _____

A certified copy of the resolution or agreement shall be furnished showing the authority of the officer or agent signing the bid to execute Contracts on behalf of the Joint Venture.

****END OF SECTION****

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SECTION 00180

**STATEMENT ACKNOWLEDGING
PENAL AND CIVIL PENALTIES CONCERNING
THE CONTRACTORS' LICENSING LAWS**

[Business & Professions Code § 7028.15]
[Public Contract Code § 20103.5]

I, the undersigned, certify that I am aware of the following provisions of California law and that I, or the entity on whose behalf this certification is given, hold a currently valid California contractor's license as set forth below:

Business & Professions Code § 7028.15:

- (a) It is a misdemeanor for any person to submit a bid to a public agency in order to engage in the business or act in the capacity of a contractor within this state without having a license therefor, except in any of the following cases:
 - (1) The person is particularly exempted from this chapter.
 - (2) The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or on any local agency project governed by Section 20104 [now § 20103.5] of the Public Contract Code.
- (b) If a person has been previously convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contracting work, or four thousand five hundred dollars (\$4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.

In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purposes of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.
- (c) This section shall not apply to a joint venture license, as required by Section 7029.1. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his or her individual licensure.
- (d) This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed contractors to render services within the scope of their respective practices.
- (e) Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a contractor who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing

exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the contractor was properly licensed when the contractor submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a contractor who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 to 7028.13, inclusive. Any contract awarded to, or any purchase order issued to, a contractor who is not licensed pursuant to this chapter is void.

- (f) Any compliance or noncompliance with subdivision (e) of this section, as added by Chapter 863 of the Statutes of 1989, shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.
- (g) A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or contractor and the board failed to respond to the inquiry within three business days. For purposes of this section, a telephone response by the board shall be deemed sufficient.

Public Contract Code § 20103.5:

In all contracts subject to this part where federal funds are involved, no bid submitted shall be invalidated by the failure of the bidder to be licensed in accordance with the laws of this state. However, at the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material under any contract shall not be made unless and until the Registrar of Contractors verifies to the agency that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractors' State License Board. The agency shall include a statement to that effect in the standard form of pre-qualification questionnaire and financial statement. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder.

License No.: _____ Class: _____ Expiration Date: _____

Date _____ Signature _____

****END OF SECTION****

SECTION 00190

INSURANCE ACKNOWLEDGMENT

I have reviewed the City of Angels' insurance requirements and I am aware of the types and amounts of insurance coverages that are required. I am also aware that my insurance company is required to use the Certificate of Insurance Form, and General Liability Special Endorsement, Automobile Liability Special Endorsement, and Workers' Compensation and Employer's Liability Special Endorsement Forms, provided herein. I have reviewed the City of Angels' insurance requirements with my insurance carrier and I will be able to provide the required insurance coverages on the specified forms if awarded this project.

Bidder's Signature _____

Date _____

****END OF SECTION****

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SECTION 00220

CCTV DATA INFORMATION USE ACKNOWLEDGEMENT

CCTV investigations have been conducted at the site of the work. Investigations were conducted for design purposes and the information represents conditions found at the time and place of the investigation.

The City disclaims responsibility for the bidder's interpretation of the information. Use of the information by the Contractor shall be in accordance with Paragraph 00700-4.02B.

PROJECT: PURDY ROAD WATER AND SEWER IMPROVEMENTS

ACKNOWLEDGEMENT:

I hereby acknowledge that the CCTV information provided by the City of Angels for the **Purdy Road Water and Sewer Improvements**:

1. cannot be used as a basis for future claims of changed conditions, and
2. is only representative of the time and location that the information was obtained.

I further acknowledge that the City of Angels strongly recommends to me that I should not rely on this information exclusively for any purpose, and that I should seek independent analysis for this project.

SPECIAL NOTE:

Sign, date, and scan/return this acknowledgement via email to Dave Richard (drichard@dewberry.com). The information will not be released until the signed acknowledgement has been received. A link to download the information will be provided.

END OF INFORMATION USE ACKNOWLEDGEMENT

FIRM _____ DATE _____

SIGNATURE _____ PRINT NAME _____

PHONE NUMBER _____

DATA LINK SHOULD BE EMAILED TO _____

****END OF SECTION****

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SECTION 00300

BID FORM

DATE: _____

1. Enter Into Agreement

The undersigned, as bidder, declares that we have received and examined the Contract Documents entitled Purdy Road Water and Sewer Improvement Project – WWCS-6, and will contract with the City, on the form of Agreement provided herewith, to do everything required for the fulfillment of the Contract Document for the construction of the Purdy Road Water and Sewer Improvement Project at the prices and on the terms and conditions herein contained.

2. Bidder Accepts

Bidder accepts all of the terms and conditions of the Request for Proposal and Instructions to Bidders, including, without limitation, those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for the period specified for Notice of Award after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 10 days after the date of City's Notice of Award.

3. Bidder's Representations

In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

- a. Bidder has examined and carefully studied the Bidding Documents and the Addenda.

We acknowledge that the following addenda numbers have been received and have been examined as part of the Contract Documents.

<u>Addenda No.</u>	<u>Date Received</u>	<u>Initials</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

- b. Bidder has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
- c. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- d. Bidder acknowledges that City and Design Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to existing underground facilities at or contiguous to the site.

- e. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto.

Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

- f. Bidder is aware of the general nature of Work to be performed by City and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- g. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- h. Bidder has given City written notice of all conflicts, errors, ambiguities or discrepancies in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

Where conflicts, errors, ambiguities or discrepancies have been discovered in or between Contract Documents and/or other related documents, and where said conflicts, etc., have not been resolved through the interpretations or clarifications by Engineer as described in the Instructions to Bidders, because of insufficient time or otherwise, Bidder has included in the Bid the greater quantity or better quality of Work, or compliance with the more stringent requirement resulting in a greater cost.

- i. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over City.

Bid Prices

Bidder will complete the Work in accordance with the Contract Documents for the following prices(s):

BID SCHEDULE

BID ITEMS

Bid Item	Description	Unit	Approx. Quantity	Unit Price	Extended Price
1	Mobilization and Demobilization	LS	1		
2	SWPPP Implementation	LS	1		
3	Traffic Control – Purdy Road	LS	1		
4	Construct 8-inch Waterline – Purdy Road	LF	590		
5	Install Fire Hydrant Assembly	LS	1		
6	Install Air Release Valve	EA	1		
7	Install Dead-End Blow-Off	EA	1		
8	Construct Connection to Existing Waterline – Purdy Road	LS	1		
9	Install Residential Water Services	EA	2		
10	Sewer Bypass Pumping MH 55-7 to MH 55-5	LS	1		
11	Sewer Bypass Pumping MH 55-5 to MH 55-2	LS	1		
12	Rehabilitation of 8-inch Sanitary Sewer	LF	50		
13	Sheeting, Shoring, and Bracing	LS	1		
TOTAL BID ITEMS 1-13					\$ _____

TOTAL BID (ITEMS 1-13) WRITTEN OUT _____

4. Attached Documents

By initialing below, we acknowledge that the following are attached hereto and made a part of this bid.

Bidder Initials	Section	Title
	00160	Bidder Questionnaire
	00170	Bidder's Signature and Authority

Bidder Initials	Section	Title
	00180	Statement Acknowledging Penal and Civil Penalties Concerning the Contractor's Licensing Laws
	00190	Insurance Acknowledgement
	00300	Bid Form
	00400	Bid Bond Affidavit
	00410	Bid Guaranty Bond
	00420	Certification of Bidder's Experience and Qualifications
	00430	Proposed Subcontractors
	00450	Site Visit Affidavit
	00480	Non-Collusion Affidavit to be Executed by Bidder and Submitted with Bid
	00490	Department of Industrial Relations and SB 854 Compliance Affidavit

5. Completion

We agree, if our bid is accepted and a Contract for Performance of the Work is entered into with the City, to so plan work and to prosecute it with such diligence that the work shall be completed within the time stipulated.

If our bid is accepted, we agree to sign the Agreement without qualifications and to furnish the performance and payment bonds and the required evidences of insurance within 10 calendar days after receiving written Notice of Award of the Contract.

Attached is a bid guaranty bond as required.

Name of Bidder

6. Contractor's License and Address for Communications

The undersigned certifies that the undersigned holds California Contractor's License, Class _____, number _____, expiration date _____.

Name of Bidder

Signature of Bidder

Title of Signator

Address of Bidder

Witness

Title of Witness

State of Incorporation

Phone Number

Fax Number

****END OF SECTION****

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SECTION 00400

BID BOND AFFIDAVIT

Accompanying this proposal is _____ (*Note: Insert the words "Cash", "Cashier's Check", "Certified Check", or "Bidder's Bond" as the case may be*) in an amount equal to at least ten percent (10%) of the total of the bid amount.

The undersigned further agrees that in case of default in executing the required contract together with the necessary bonds within the period of time provided by the Proposal Requirements, the proceeds of the security accompanying this proposal shall become the property of the City of Angels, and this proposal and the acceptance thereof may be considered null and void.

Name, address, and telephone number of surety company and agent who will provide the required bonds for this contract:

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if bidder or other interested person is an individual, state firm name and individual's name in full.

Bidder's Signature

Bidder's Title

Business Address

Date

****END OF SECTION****

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SECTION 00410

BID GUARANTY BOND

The attached form shall be turned in with the bid as the Bid Guaranty Bond with the form signed and notarized by the surety. Alternately, the bidder may submit the following forms of bidder's security:

- a. Cash
- b. A cashier's check made payable to the City.
- c. A certified check made payable to the City.

If a bid guaranty bond is submitted on a form other than that provided herein, then the alternate bid guaranty bond must meet all the requirements of the form provided herein. If the alternate bid guaranty bond is not acceptable to the City, then the bid may be subject to rejection. The City shall be the sole judge as to whether the alternate bid guaranty bond form is acceptable.

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WE, _____ AS PRINCIPAL, AND _____ AS SURETY, are held and firmly bound unto the City of Angels in the penal sum of 10 PERCENT OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of Angels for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made to the City of Angels to which said bid was submitted, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents, in no case shall the liability of the surety hereunder exceed the sum of \$_____.

THE CONDITION OF THIS OBLIGATION IS SUCH

THAT WHEREAS, the Principal has submitted the above-mentioned bid to the City of Angels, aforesaid, for certain construction specifically described as follows, for which bids are to be opened at _____.

FOR: Purdy Road Water and Sewer Improvements

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented for signature, the Principal enters into a written contract in the prescribed form, in accordance with the bid, and files two bonds with the City of Angels, one to guarantee faithful performance, and the other to guarantee payment for labor and materials as required by law, and provide certificate of insurance coverage required by the contract documents, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect, and the surety shall pay said penal sum to the City of Angels on demand.

IN WITNESS WHEREOF, we have hereunto set our hand on this ____ day of _____, 20____.

_____ Title of Signator (seal)	_____ Title of Signator (seal)
_____ Signature of Principal	_____ Signature of Surety
_____	Best Rating: _____
_____	_____
_____ Address	_____ Address

Note: Signatures of those executing for the surety must be properly acknowledged.

****END OF SECTION****

SECTION 00420

CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS

1.00 QUALIFICATIONS

By signing in the area indicated below, the Bidder acknowledges and certifies the following:

- A. The Bidder – at the time of bidding, award, and throughout the period of the contract – shall be licensed under the provisions of Chapter 9, Division 3, of the Business and Professions Code of the State of California, to do the type of work contemplated in the contract documents. In accordance with Public Contract Code Section 20103.5, any Bidder not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractor's State License Board.
- B. The Bidder is skilled and regularly engaged in the general class and type of work called for in the contract documents.
- C. The Bidder is competent, knowledgeable, and has special skills required for the nature, extent, and inherent conditions of the work to be performed.
- D. The Bidder acknowledges that there may be certain peculiar and inherent conditions existent in the construction of the particular facilities which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction work with respect to such hazards.

2.00 EXPERIENCE

To be considered for award, Bidder, as a company, shall have substantially completed within the last five (5) years, at least three (3) separate water or sewer projects for public agencies with a minimum construction value of \$500,000 per project. At least two of the projects shall include temporary bypass piping/pumping.

The Bidder shall submit a summary of project experience and qualifications with the bid documents including the following information for each project: Project Name, Owner, Length/Size of Water/Sewer Constructed, Bypass Pumping Required Construction Cost, Construction Change Orders (number/total dollars), Owner's Representative, Owner's Telephone Number, and Date of Substantial Completion.

Section 00420
CERTIFICATION OF BIDDER'S
EXPERIENCE AND QUALIFICATIONS

1. Project Name: _____
Owner: _____
Length/Size of Water/Sewer Constructed: _____
Bypass Pumping Requirements, Capacity/number of days: _____
Construction Cost: _____
Construction Change Orders, number/total dollars: _____
Owner's Representative: _____
Owner's Telephone No.: (____) _____
Date of Substantial Completion: _____

2. Project Name: _____
Owner: _____
Length/Size of Water/Sewer Constructed: _____
Bypass Pumping Requirements, Capacity/number of days: _____
Construction Cost: _____
Construction Change Orders, number/total dollars: _____
Owner's Representative: _____
Owner's Telephone No.: (____) _____
Date of Substantial Completion: _____

3. Project Name: _____
Owner: _____
Length/Size of Water/Sewer Constructed: _____
Bypass Pumping Requirements, Capacity/number of days: _____
Construction Cost: _____
Construction Change Orders, number/total dollars: _____
Owner's Representative: _____
Owner's Telephone No.: (____) _____
Date of Substantial Completion: _____

Section 00420
CERTIFICATION OF BIDDER'S
EXPERIENCE AND QUALIFICATIONS

Signed this _____ day of _____, 20____.

Name of Bidder

Contractor's License No.

Expiration Date

Signature of Bidder

Title of Signator

*** END OF SECTION ***

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SECTION 00430

PROPOSED SUBCONTRACTORS

Pursuant to California Public Contracting Code, Section 4100 et. seq., the following list gives the name, business address, and portion of work (description of work to be done) for each subcontractor that will be used in the work if the bidder is awarded the Contract. (Additional supporting data may be attached to this page. Each page shall be sequentially numbered and headed "Proposed Subcontractors" and shall be signed.)

[illegible]

Name of Bidder

¹ Status M = Minority Owned Business Enterprise.
W = Women Owned Business Enterprise.

*** END OF SECTION ***

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SECTION 00450

SITE VISIT AFFIDAVIT

NAME OF PROJECT: Purdy Road Water and Sewer Improvements

State of California

County of _____

_____, being first duly sworn, deposes
(Printed Name of Contractor's Authorized Representative)

he or she is

_____ of _____,
(Title of Representative) (Bidder's Name)

the party making the bid, has visited the Site of the Work as described in the Contract Documents and has examined and familiarized themselves with the existing conditions, as well as all other conditions relating to the construction which will be performed. The submitting of a bid shall be considered an acknowledgement on the part of the Bidder of familiarity with conditions at the site of Work. The Bidder further acknowledges that the site examination has provided adequate and sufficient information related to existing conditions which may affect cost, progress or performance of the Work.

Signed this _____ day of _____, 20_____.

Authorized Signature

*** END OF SECTION ***

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SECTION 00480

**NON-COLLUSION AFFIDAVIT TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID**

State of California)
) ss.
County of)

_____, being first duly sworn, deposes and say that he or she is of _____ the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, business entity, business combination, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signature

Name of Bidder

Title

Date

Subscribed and sworn to before me this
_____ day of _____, 20____.

Signature of Notary Public in and for
the County of _____,
State of California.

*** END OF SECTION ***

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SECTION 00490

**DEPARTMENT OF INDUSTRIAL RELATIONS AND
SB 854 COMPLIANCE AFFIDAVIT**

In accordance with California Labor Code as amended through Senate Bill (SB) 854, prior to commence of the Contract, all Contractors are required to register and maintain active registration throughout the duration of the contract with the California Department of Industrial Relations (DIR). This project is subject to compliance monitoring and enforcement by the DIR. For information regarding registration, please go to:

www.dir.ca.gov

I, the Bidder, certify that:

I am aware of the provisions of SB 854 and subsequent DIR regulations which require Contractors/Vendors to comply with all labor compliance requirements including, but not limited to, prevailing wage requirements, Labor Code Sections 1725.5, 1771.1(a), 1774-1776, 1777.5, 1813, 1815, Public Works Contractor Registration Program, Electronic Certified Payroll Records to Labor Commissioner, and other requirements described in the DIR website. I will comply with such provisions before commencing the performance of the work of this contract and maintain compliance throughout the completion of said contract.

Signature

Date

Print Name

Business Name

Title

CSLB License Number

DIR Registration Number

END OF SECTION

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SECTION 00500

**CONSTRUCTION SERVICES AGREEMENT
BY AND BETWEEN THE CITY OF ANGELS
AND [CONTRACTOR NAME]**

Project No. [CITY PROJECT CIP/NUMBER]

Mark Twain Water Distribution System Improvements Project

THIS CONSTRUCTION SERVICES AGREEMENT (the “Agreement”) is entered into by and between the CITY OF ANGELS, a California municipal corporation (“City”), and [CONTRACTOR NAME], a [TYPE OF COMPANY] (“Contractor”), on this ____ day of _____ 202__, (the “Effective Date”). City and Contractor may be collectively referred to herein as the “Parties” or individually as “Party.” There are no other parties to this Agreement.

RECITALS

A. City seeks a duly qualified and licensed construction firm experienced in the construction of water distribution improvement projects for the performance of the City’s [PROJECT NAME] (the “Project”).

B. The Project involves the expenditure of funds in excess of \$5,000 and constitutes a “public project” pursuant to Public Contract Code section 20161.

C. Contractor has made a proposal to City to provide construction services, a copy of which is attached and incorporated hereto as **Exhibit A** (the “Services”). Contractor’s bid or proposal encompasses all work and including labor, supervision, materials, equipment, and operations necessary and required to complete the Project in accordance with the Contract Documents and at the prices stated.

D. Contractor represents that it is a licensed contractor pursuant to section 7000 et seq. of the Business and Professions Code in the relevant classification(s) which it shall maintain for the duration of the Agreement, and that it is competent, knowledgeable, and has the specialized skills required to complete the Project.

E. Contractor further represents that it has examined and is familiar with all the Contract Documents and that it has satisfied itself as to the nature and location of all work to be performed, the general local conditions to be encountered in the performance of any work, including soil and hard rock material conditions, and all other matters which can in any way affect the performance of the Project or the cost thereof.

F. City has determined it is necessary and desirable to employ the services of Contractor to perform construction work on the Project in accordance with the Contract Documents and the terms of this Agreement.

G. City has taken appropriate proceedings to authorize construction of the Project and execution of this contract pursuant to Public Contract Code section 20160 et seq.; specifically, on [DATE], at a duly noticed meeting of the City Council of the City of Angels Camp, this contract for the construction of the improvements hereinafter described was awarded to Contractor as the lowest responsive and responsible bidder for said improvements.

H. The Parties desire to enter into this Agreement for the purpose of setting forth the terms and conditions upon which Contractor shall complete the Project.

NOW, , in consideration of the promises and covenants set forth below, the Parties agree as follows:

AGREEMENT

1. Contract Documents: This Agreement, together with the following documents, are collectively referred to herein as the “Contract Documents”:

- i. Notice to Bidders, Request for Proposal and Instructions to Bidders and addenda;
- ii. Contractor’s Bid or Proposal accepted by City and related documents and addenda;
- iii. General Conditions, Supplementary Conditions, and Technical Specifications of the City of Angels for the [PROJECT NAME] Project;
- iv. Plans and detailed drawings prepared for this Project and approved by City (“Project Plans”);
- v. All bonds and insurance required by the Contract Documents;
- vi. Any and all supplemental written agreements or “change orders” amending, decreasing, or extending the work contemplated or which may be required to complete the work in a substantial and acceptable manner; and
- vii. The current edition of the City of Angels Camp Standard Specifications and Drawings.

All of the Contract Documents are intended to incorporate the terms of the others so that any work called for in one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents. The documents comprising the complete contract will hereinafter be referred to as the “Contract.” In case of any dispute regarding the terms of the Contract, the decision of the City Engineer shall be final.

2. Term. The Contract shall be effective as of the Effective Date first stated above. Contractor shall not commence work on the Project until it has been given notice by City (“Notice to Proceed”). The Contract shall terminate one (1) year after City accepts Contractor’s performance of the Services by recording a Notice of Completion with the County of Calaveras Clerk Recorder (the “Term”), unless the Parties mutually agree in writing to terminate the Contract earlier or extend the Term in an agreed writing executed by both Parties.

3. Scope of Work.

(a) *Services.* Contractor shall perform the Services described in Exhibit A, subject to all terms and conditions in the Contract. Contractor shall not receive additional compensation for the performance of any Services not described therein.

(b) *Modification.* City, at any time, by written order, may make changes within the general scope of the work under this Agreement or issue additional instructions, require additional work or direct deletion of work. Contractor shall not proceed with any change involving an increase or decrease in the Contract Price, as defined in Section 4 of this Agreement, without prior written authorization from City. Contractor shall not be entitled to compensation for the performance of any such unauthorized work. Contractor further waives any and all right or remedy by way of restitution or quantum meruit for any and all extra or changed work performed without express and prior written authorization of City. Notwithstanding the foregoing, Contractor shall promptly commence and diligently complete any change to the work subject to City's written authorization issued pursuant to this Section; Contractor shall not be relieved or excused from its prompt commencement of diligent completion of any change subject to City's written authorization by virtue of the absence or inability of Contractor and City to agree upon the extent of any adjustment to the completion schedule or Contract Price on account of such change. The issuance of a change order pursuant to this Section 3 in connection with any change authorized by City shall not be deemed a condition precedent to Contractor's obligation to promptly commence and diligently complete any such change authorized by City hereunder. City's right to make changes shall not invalidate the Contract nor relieve Contractor of any liability or other obligations under the Contract. Any requirement of notice of changes in the scope of work to Contractor's surety shall be the responsibility of Contractor.

(c) *Specific Materials & Performance of Work.* Contractor shall furnish all tools, equipment, facilities, labor, and materials necessary to perform and complete, in good workmanlike manner, the work of general construction as called for, and in the manner designated in, and in strict conformity with, the plans and specifications for said work entitled, "[SPECS NAME]." The equipment, apparatus, facilities, labor, and materials shall be furnished, and said work performed and completed as required by the Contract under the direction and supervision, and subject to the approval, of the City Engineer or City Engineer's designated agent. Contractor is responsible for researching and complying with all local codes, agencies, and jurisdictions that regulate and govern the work. Contractor shall set up, identify, coordinate, provide safe access, and obtain all inspections for its work, as required by any authorized agency or applicable code, prior to covering up work. Contractor shall protect existing facilities and personal property.

(d) *Exhibits.* All "Exhibits" referred to below or attached hereto are, by this reference, incorporated into the Contract.

	<u>Exhibit Designation</u>	<u>Exhibit Title</u>
1.	Exhibit A	Contract Documents
2.	Exhibit B	Payment by Force Account
3.	Exhibit C	Workers' Compensation Insurance Certification
4.	Exhibit D	Performance Bond

5. Exhibit E Payment Bond

4. Contract Price. City shall pay, and Contractor shall accept in full payment for the work set forth above in Section 3, Scope of Work, an amount not to exceed [CONTRACT PRICE WRITTEN OUT] (\$[NUMERIC AMOUNT]) (the “Contract Price”). Said amount shall be paid pursuant to Section 8 of this Agreement. The Contract Price may only be changed by a contract change order. The value of any work covered by a contract change order for an adjustment in the Contract Price will be determined in the sole discretion of City as follows:

(a) If the work performed is on the basis of unit prices contained in the Contract Documents, the change order will be determined in accordance with the provisions in Section 4-1.05, “Changes and Extra Work”, of the Caltrans Standard Specifications, as applicable; or

(b) If the work performed is not included on the engineer’s estimate associated with a unit price, the change order will be by a mutually agreed lump sum; or

(c) If the change order is not determined as described above in either subdivision (a) or (b), the change order will be determined on the basis of force account in accordance with the provisions set forth in **Exhibit B**, “Payment by Force Account,” attached hereto and incorporated herein by reference.

5. Time for Performance. The time fixed for the commencement of work under the Contract is within ten (10) working days after the Notice to Proceed has been issued. The work on this project, including all punch list items, shall be completed on or before the expiration of [CONSTRUCTION PERIOD WRITTEN OUT] ([NUMERIC AMOUNT OF DAYS]) [CALENDAR OR WORKING] days (the “Completion Date”) beginning on the first day of work or no later than the tenth day after the Notice to Proceed has been issued.

(a) *Right of City to Increase Working Days:* If Contractor fails to complete the Services by the Completion Date, the City Engineer shall have the right to increase the number of working days in the amount the City Engineer may determine will best serve the interests of City, and if the City Engineer desires to increase said number of working days, the City Engineer shall have the further right to charge Contractor and deduct from the final payment for the work the actual cost of engineering, inspection, superintendence, and other overhead expenses which are directly chargeable to Contractor, and which accrue during the period of such extension, except that the cost of the final service and preparation of the final estimates shall not be included in such charges. No extension of time for completion of Services under the Contract shall be considered unless requested by Contractor at least twenty (20) calendar days prior to the Completion Date, in writing, to the City Engineer.

The Completion Date may only be changed by a contract change order. The value of any work covered by a contract change order for an adjustment in the Completion Date will be determined as follows:

- i. Additional working days will be awarded where the amount of time is mutually agreed upon by Contractor and the City Engineer; or

- ii. Additional working days will be awarded where Contractor is prevented from completing any part of the work identified on the critical path and:
 1. where the delay is caused by acts of public enemy, fire, floods, tsunamis, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes, shortage of materials and freight embargos, provided that Contractor shall notify Engineer in writing of the causes of delay within fifteen (15) days from the beginning of that delay; or
 2. where the delay is caused by actions beyond the control of Contractor; or
 3. where the delay is caused by actions or failure to act by the City Engineer.

Contractor shall not be entitled to an adjustment in the Completion Date for delays within the control of Contractor. Delays resulting from and within the control of a subcontractor or supplier of Contractor shall be deemed to be delays within the control of Contractor.

(b) *Excusable Delays.* Contractor shall not be in breach of the Contract in the event that performance of Services is temporarily interrupted or discontinued due to a “Force Majeure” event which is defined as: riots, wars, sabotage, civil disturbances, insurrections, pandemic, epidemic, or explosions; natural disasters, such as floods, earthquakes, landslides, and fires; strikes, lockouts, and other labor disturbances; or other catastrophic events, which are beyond the reasonable control of Contractor. Force Majeure does not include Contractor’s financial inability to perform, Contractor’s failure to obtain any necessary permits or licenses from other governmental agencies, or Contractor’s failure to obtain the right to use the facilities of any public utility where such failure is due solely to the acts or omissions of Contractor. If Contractor’s performance of the Services is delayed by an excusable delay, the Completion Date shall be extended for such reasonable time as determined by the City Engineer. Extensions in time must be requested by Contractor within fifteen (15) calendar days of the excusable delay in order to receive consideration.

(c) *Emergency - Additional Time for Performance - Procurement of Materials.* If, because of war or other declared national emergency, the federal or state government restricts, regulates, or controls the procurement and allocation of labor or materials, or both, and if solely because of said restrictions, regulations or controls, Contractor is, through no fault of Contractor, unable to perform the Services, or the work is thereby suspended or delayed, any of the following steps may be taken:

- i. City may, pursuant to resolution of the City Council, grant Contractor additional time for the performance of the Contract, sufficient to compensate in time, for delay or suspension.

To qualify for such extension in time, Contractor within ten (10) days of Contractor's discovering such inability to perform, shall notify the City Engineer in writing thereof, and give specific reasons therefore; the City Engineer shall thereupon have sixty (60) days within which to procure such needed materials or labor as is specified in this agreement, or permit substitution, or provide for changes in the work in accordance with subdivision (b) of this Section.

Substituted materials, or changes in the work, or both, shall be ordered in writing by the City Engineer, and the concurrence of the City Council shall not be necessary. All reasonable expenses of such procurement incurred by the City Engineer shall be defrayed by the Contractor; or

- ii. If such materials or labor cannot be procured through legitimate channels within sixty (60) days after the filing of the aforesaid notice, either Party may, upon thirty (30) days' written notice to the other, terminate this agreement. In such event, Contractor shall be compensated for all work executed upon a unit basis in proportion to the amount of the work completed, or upon a cost-plus-ten-percent (10%) basis, whichever is the lesser. Materials on the ground, in process of fabrication or in route upon the date of notice of termination specially ordered for the Project and which cannot be utilized by Contractor, shall be compensated for by City at cost, including freight, provided Contractor shall take all steps possible to minimize this obligation; or
- iii. The City Council, by resolution, may suspend the Contract until the cause of inability to perform is removed for a period of not to exceed sixty (60) days.

If the Contract is not canceled, and the inability of Contractor to perform continues without fault on Contractor's part, beyond the time during which the Contract may have been suspended, as herein above provided, the City Council may further suspend the Contract, or either Party hereto may, without incurring any liability, elect to declare the Contract terminated upon the ground of impossibility of performance. In the event City declares this agreement terminated, such declaration shall be authorized by the City Council by resolution, and Contractor shall be notified in writing thereof within five (5) days after the adoption of such resolution. Upon such termination, Contractor shall be entitled to proportionate compensation at the Contract Price for such portion of the Contract as may have been performed; or

- iv. City may terminate the Contract, in which case Contractor shall be entitled to proportionate compensation at the agreed rate for such portion of the Contract as may have been performed. Such termination shall be authorized by resolution of the City Council. Notice thereof shall be forthwith given in writing to Contractor, and the Contract shall be terminated upon receipt by Contractor of such notice.

In the event of the termination provided in this sub-paragraph (iv), none of the covenants, conditions or provisions hereof shall apply to the Services not performed, and City shall be liable to Contractor for the proportionate compensation last herein mentioned.

(d) *Delay Damages.* In the event Contractor, for any reason, fails to perform the Services to the satisfaction of the City Engineer by the Completion Date, City may, in accordance with Section 7203 of the Public Contract Code, in lieu of any other of its rights authorized by Section 6 of this agreement, deduct from payments or credits due Contractor after such breach a sum equal to

LIQUIDATED DAMAGES WRITTEN OUT AND NUMERIC for each calendar day beyond the Completion Date. This deduction shall not be considered a penalty but shall be considered as delay damages. The aforementioned rate of deduction is an amount agreed to by the Parties as reasonably representing additional construction engineering costs incurred by City if Contractor fails to complete the Services by the Completion Date. However, any deduction assessed as delay damages shall not relieve Contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed Contractor to complete the Services by the Completion Date. Due account shall be taken of any time extensions granted to Contractor by City. Permitting Contractor to continue work beyond the Completion Date shall not operate as a waiver on the part of City of any of its rights under the Contract nor shall it relieve Contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed Contractor to complete the Services by the Completion Date.

6. Termination.

(a) *Option of City to Terminate Contract for Failure to Complete Services.* If a Party should fail to perform any of its obligations hereunder within the time and in the manner herein provided, or otherwise violates any of the terms of the Contract (the “Defaulting Party”), the other Party shall give notice to the Defaulting Party and allow the Defaulting Party ten (10) days to correct such deficiency. If the Defaulting Party does not correct such deficiency, the other Party may immediately terminate the Contract by giving written notice of such termination, stating the reason for such termination. In such event, Contractor shall be entitled to receive payment for all Services satisfactorily rendered until such termination, provided, however, there shall be deducted from such amount the amount of damage, if any, sustained by virtue of any breach of the Contract by Contractor, including Delay Damages. If payment under the Contract is based upon a lump sum in total or by individual task, payment for Services satisfactorily rendered shall be an amount which bears the same ratio to the total fees specified in this Agreement as the Services satisfactorily rendered hereunder by Contractor to the total services otherwise required to be performed for such total fee, provided, however, that there shall be deducted from such amount the amount of damage, if any, sustained by City by virtue of any breach of the Contract by Contractor. Upon termination, Contractor shall deliver copies of all Work Product, as defined in Section 19 of this Agreement, to City. If City terminates the Contract before Contractor commences any Services hereunder, City shall not be obligated to make any payment to Contractor.

(b) *Termination for Convenience.* City may at any time for any reason, with or without cause, suspend or terminate the Contract, or any portion hereof, by serving Contractor at least thirty (30) days prior written notice. Upon receipt of such notice, Contractor shall immediately cease all work under the Contract, unless the notice provides otherwise. If the City suspends or terminates a portion of the Contract such suspension or termination shall not make void or invalidate the remainder of the Contract. In the event the Contract is terminated pursuant to this section, Contractor shall be entitled to receive payment for all Services satisfactorily rendered until such termination and of value to the City, provided, however, there shall be deducted from such amount the amount of damage, if any, sustained by virtue of any breach of the Contract by Contractor, including Delay Damages. If payment under the Contract is based upon a lump sum in total or by individual task, payment for Services satisfactorily rendered shall be an amount which bears the same ratio to the total fees specified in this Agreement as the Services satisfactorily rendered hereunder by

Contractor to the total services otherwise required to be performed for such total fee, provided, however, that there shall be deducted from such amount the amount of damage, if any, sustained by City by virtue of any breach of the Contract by Contractor. Upon termination, Contractor shall deliver copies of all Work Product, as defined in Section 19 of this Agreement, to City. If City terminates the Contract before Contractor commences any Services hereunder, City shall not be obligated to make any payment to Contractor.

(c) If Contractor should be adjudged bankrupt or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it or any of its subcontractors should violate any of the provisions of the Contract, City may serve written notice upon it and its surety of its intention to terminate the Contract. Such notice shall contain the reasons for City's intention to terminate the Contract, and unless such violations shall cease within five (5) calendar days after serving of such notice, the Contract shall cease and terminate upon the expiration of said five (5) calendar days. In the event of any such termination, City shall immediately serve written notice thereof upon the surety and Contractor, and the surety shall have the right to take over and perform the Contract; provided however, that, if the surety does not give City written notice of its intention to take over and perform the Contract or does not commence performance thereof within thirty (30) calendar days from the date of the service of such notice, City may take over the work and prosecute the same to completion by contract or any other method it may deem advisable, for the account and at the expense of Contractor, and Contractor and its surety shall be jointly liable to City for any excess cost occasioned City thereby, and in such event City may, without liability for so doing, take possession of and utilize in completing the work, such materials, appliances, and other property belonging to Contractor as may be on the Project site and necessary thereof.

7. Liability for Breach: Neither Party waives the right to recover direct damages against the other for breach of the Contract, including any amount necessary to compensate City for all detriment proximately caused by Contractor's failure to perform its obligations hereunder or which in the ordinary course of things would be likely to result therefrom. City reserves the right to offset such damages against any payments owed to Contractor. City shall not, in any manner, be liable for special or consequential damages, including but not limited to Contractor's actual or projected lost profits had Contractor completed the Services required by the Contract. In the event City terminates this Agreement for cause, and it is later determined that the termination was wrongful, such default termination shall automatically be converted to and treated as a termination for convenience and Contractor shall be entitled to receive only the amounts payable under Section 6 of this Agreement and Contractor specifically waives any claim for any other amounts or damages. In the event of termination by either Party, copies of all finished or unfinished Work Product, as defined in Section 19 of this Agreement, shall become the property of City. Notwithstanding the foregoing, in no event shall City be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of or in connection with the Contract or the Services performed in connection with the Contract.

8. Compensation: City shall make payments to Contractor in accordance with the provisions of Section 9 of the General Conditions in legally executed and regularly issued warrants of City, drawn on the appropriate fund or funds as required by law and order of the City Council thereof. Contractor shall be administered a progress payment approximately every thirty (30) calendar days

from the time work begins according to the payment schedule furnished by the City Engineer at the time work begins. Contractor shall provide access at all reasonable times to all reports, contract records, contract documents, contract files, and personnel necessary to audit and verify Contractor's charges to City under this Contract.

Monthly progress payments in the amount of 95 percent (95%) of the value of the work will be made to Contractor based on the Contractor's estimate and the schedule of prices contained in the accepted bid. The remaining 5 percent (5%) will be retained by City as partial security for the fulfillment of the Contract except that at any time after 50 percent (50%) of the work has been completed, if the City Engineer, in his sole discretion, finds that satisfactory progress is being made and the Project's critical path of work is on schedule, City may discontinue any further retention. Such discontinuance will only be made upon the written request of Contractor. If further retention is discontinued, City may, at any time thereafter reinstitute a retention of five percent (5%), as specified above, if the City Engineer determines that satisfactory progress is not being made. Payment will be made as soon as possible after the preparation of the Contractor's estimate. City shall pay the remaining 5 percent (5%) of the value of the Services completed under this Contract, if unencumbered by retentions for claims, not sooner than the expiration of thirty-five (35) calendar days from the date of recordation of the Notice of Completion, pursuant to Section 2 of this agreement, and not later than sixty (60) days from the "completion" of the Services as said term is defined in Public Contract Code section 7107(c).

No estimate or payment shall be made if, in the judgment of the City Engineer, the work is not proceeding in accordance with the provisions of the Contract, or when, in his judgment, the total value of the work done since the last estimate amounts to less than \$1,000. No progress payments will be made if the time allotted for the job is thirty (30) working days or less. Payment of any progress payment, or the acceptance thereof by Contractor, shall not constitute acceptance of the work performed under this Contractor, or any portion thereof, and shall in no way reduce the liability of Contractor to replace unsatisfactory work or materials, though the unsatisfactory character of such work or materials may not have been apparent or detected at the time such payment was made.

Additionally, as a precondition to City's progress payments hereunder, Contractor shall provide to City, prior to payment, unconditional waivers and releases of stop notices pursuant to Civil Code section 8128 et seq. from each subcontractor and materials supplier. The form of said waivers and releases shall be as set forth in Civil Code section 3262(d)(2).

Pursuant to Public Contract Code section 22300 et seq., Contractor may request the right to substitute securities for any moneys withheld by City to ensure the performance required of Contractor under the Contract, or that City make payment of retentions earned directly into an escrow account established at the expense of Contractor.

9. Disputes Pertaining to Payment for Work: Should any dispute arise respecting the true value of any work performed, of any work omitted, or of any extra work which Contractor may be required to do, or respecting the size of any payment to Contractor during the performance of the Contract, such dispute shall be decided by the City Engineer, and the decision of the latter shall be final and conclusive. The Parties agree to comply with the claims resolution procedures set forth in Public Contract Code section 9204 when applicable.

(a) *Claims Processing.* Any submission of a claim by Contractor must comply with the requirements of Public Contract Code section 9204. Upon receipt of a claim pursuant to this section, City shall conduct a reasonable review of the claim and, within a period not to exceed forty-five (45) days, shall provide Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the Parties may, by mutual agreement, extend the time period provided in this subdivision. Contractor shall furnish reasonable documentation to support the claim. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after City issues its written statement. If Contractor disputes City's written response, or if City fails to respond to a claim issued pursuant to this section within the time prescribed, Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute.

(b) *Meet-and-Confer Conference.* Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, City shall schedule a meet-and-confer conference within thirty (30) days for settlement of the dispute. Within ten (10) business days following the conclusion of the meet-and-confer conference, if the claim or any portion of the claim remains in dispute, City shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after the City issues its written statement.

(c) *Nonbinding Mediation.* Any disputed portion of the claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the Parties sharing the associated costs equally. The Parties shall mutually agree to a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the Parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each Party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject judicial review pursuant to Section 23 of this Agreement.

Notwithstanding any claim, dispute, or other disagreement between the Parties regarding performance under the Contract, the scope of work hereunder, or any other matter arising out of or related to, in any manner, the Contract, Contractor shall proceed diligently with performance of the Services in accordance with City's written direction, pending any final determination or decision regarding any such claim, dispute, or disagreement.

10. Permits and Care of Work: Contractor shall, at Contractor's expense, obtain all necessary permits and licenses for the construction of each improvement, give all necessary notices and pay all fees and taxes required by law, except those City fees set forth in Section 1 of the Special Provisions. Contractor has examined the Project site and is familiar with its topography and condition, location of property lines, easements, building lines, and other physical factors and limitations affecting the performance of the Contract, including soil and rock conditions. Contractor, at Contractor's expense, shall obtain any permission necessary for any operations conducted off the property owned or controlled by City. Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.

11. Public Works and Payment of Prevailing Wage:

(a) *Monitoring and Enforcement.* In accordance with the provisions of Sections 1725.5, 1771.1, 1771.3, and 1771.4 of the Labor Code, all work performed under the Contract is subject to compliance monitoring and enforcement by the Department of Industrial Relations (“DIR”). All work performed by Contractor or its subcontractors under the Contract is subject to the requirements of Labor Code section 1720 et seq. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 of the Labor Code at the time the contract is awarded. Contractor and its subcontractors shall furnish the records specified in Section 1776 of the Labor Code directly to the Labor Commissioner, at least monthly, in the format prescribed by the Labor Commissioner.

In accordance with the provisions of Section 1773.3 of the Labor Code, City shall provide notice to DIR of the award of this Contract within thirty (30) working days of the award. The notice shall be transmitted electronically in a format specified by DIR and shall include the name of Contractor, any subcontractor listed on the successful bid, the bid and contract award dates, the contract amount, the estimated start and completion dates, Project location, and any additional information DIR specifies that aids in the administration and enforcement of Section 1720 et seq. of the Labor Code.

Wages & Hours of Employment. In the performance of the Services under the Contract, eight (8) hours shall be the maximum hours of labor on any calendar day, and the minimum wages of compensation of persons performing labor in the execution of this agreement shall be the current prevailing scale of wages determined by DIR for the community pursuant to Labor Code Section 1770. Contractor shall forfeit as penalty Twenty-five and no/100ths Dollars (\$25.00) to be paid to City for each workman employed in the execution of the Contract by Contractor or its subcontractor(s), for each calendar day during which any workman is required or permitted to labor more than eight (8) hours, in violation of provisions of Labor Code section 1810 et seq. Contractor shall post prevailing wage rates at the Project no later than the first day Contractor commences performance of the Services under the Contract. Contractor shall forfeit as a penalty Two-Hundred Dollars (\$200.00) to be paid to the City for each calendar day for each workman paid less than the prevailing wage in violation of the Labor Code. In addition, Contractor shall pay to each workman the difference between the prevailing wage rate and the amount paid to each workman for each calendar day, or portion thereof, for which the workman was paid less than the prevailing wage.

12. Superintendence by Contractor: Contractor shall give personal superintendence to the work on the Project or have a competent foreman or superintendent satisfactory to the City Engineer on the Project at all times during construction and performance of work under the Contract, with authority to act for Contractor.

13. Inspection and Testing by City: Contractor shall at all times maintain proper facilities and provide safe access for inspection by City to all parts of the work performed on the Project and to the shops wherein the work is in preparation. Contractor shall notify City with sufficient time in advance of the manufacture of production materials to be supplied by Contractor under the Contract in order for City to arrange for mill or factory inspection and testing of same. Any

materials shipped by Contractor from factory prior to having satisfactorily passed such testing and inspection by City's representative or prior to the receipt of notice from such representative that such testing and inspection will not be required shall not be incorporated on the Project. Contractor shall also furnish to City, in triplicate, certified copies of all factory and mill test reports upon request.

14. Conformity with Law and Safety: Contractor shall observe and comply with all applicable laws, ordinances, codes, and regulations of governmental agencies, including federal, state, municipal, and local governing bodies having jurisdiction over any or all of the scope of Services, including all provisions of the Occupational Safety and Health Act of 1979 as amended, all California Occupational Safety and Health Regulations, the California Building Code, the American with Disabilities Act, any copyright, patent, or trademark law, and all other applicable federal, state, municipal, and local safety regulations, appropriate trade association safety standards, and appropriate equipment manufacturer instructions. All Services performed by Contractor or its subcontractors must be in accordance with these laws, ordinances, codes, and regulations. Contractor's failure to comply with any laws, ordinances, codes, or regulations applicable to the performance of the Services hereunder shall constitute a breach of contract. In cases where standards conflict, the standard providing the highest degree of protection shall prevail.

If a death, serious personal injury or substantial property damage occurs in connection with the performance of the Contract, Contractor shall immediately notify City's risk manager by telephone. If any accident occurs in connection with the Contract, Contractor shall promptly submit a written report to City, in such form as City may require. This report shall include the following information: (a) name and address of the injured or deceased person(s); (b) name and address of Contractor's subcontractor, if any; (c) name and address of Contractor's liability insurance carrier; and (d) a detailed description of the accident, including whether any of City's equipment, tools, or materials were involved.

If a release of a hazardous material, substance, or waste occurs in connection with the performance of the Contract, Contractor shall immediately notify City. Contractor shall not store hazardous materials or hazardous waste within City limits without a proper permit from City.

15. Other Contracts: City may award other contracts for additional work on the Project, and Contractor shall fully cooperate with such other contractors and carefully fit Contractor's own work to that provided under other contracts as may be directed by the City Engineer. Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor.

16. Bonds: Concurrently with the execution hereof, Contractor shall furnish, on the forms provided herein as **Exhibits D and E**, respectively, corporate surety bonds to the benefit of City, issued by a surety company acceptable to City and authorized and admitted to do business in the state of California, as follows:

(a) *Faithful Performance Bond.* In an amount equal to at least one hundred percent (100%) of the Contract Price as security for the faithful performance of the Contract. The bond shall contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code.

(b) *Payment Bond.* In an amount equal to at least one hundred percent (100%) of the Contract Price as security for the payment of all persons performing labor and furnishing materials in connection with the Contract. The bond shall be in accordance with the provisions of Sections 3225, 3226, and 3247 through 3252, inclusive, of the Civil Code and Section 13020 of the Unemployment Insurance Code of California. Said bond shall also contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code.

The surety companies shall familiarize themselves with all provisions and conditions of the Contract. It is understood and agreed that the surety or sureties waive the right of special notification of any modification or alterations, omissions or reductions, extra or additional work, extensions of time, or any other act or acts by City or its authorized agents under the terms of this Contract and failure to so notify the surety or sureties of such changes shall in no way relieve the surety or sureties of their obligations under the Contract.

17. Indemnification:

(a) *Indemnity for Professional Liability.* When the law establishes a professional standard of care for Contractor's Services, to the fullest extent permitted by law, Contractor shall indemnify, protect, defend, and hold harmless City and any and all of its elective and appointive boards, officers, officials, agents, employees or volunteers ("City's Agents") from and against any and all losses, liabilities, damages, costs, and expenses, including legal counsel's fees and costs but only to the extent Contractor or its subcontractors are responsible for such damages, liabilities and costs on a comparative basis of fault between Contractor or its subcontractors and City in the performance of professional services under the Contract. Contractor shall not be obligated to defend or indemnify City for City's own negligence or for the negligence of others.

(b) *Indemnity for other than Professional Liability.* Other than in the performance of professional services and to the full extent permitted by law, Contractor shall indemnify, defend, and hold harmless City and any and City's Agents from and against any liability, including liability for claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including legal counsel's fees and costs, court costs, interest, defense costs, and expert witness fees, where the same arise out of, are a consequence of, or are in any way attributable to, in whole or in part, the performance of the Contract by Contractor or by any individual or agency for which Contractor is legally liable, including, but not limited to, officers, agents, employees, or subcontractors of Contractor.

18. Contractor's Insurance: Concurrently with the execution hereof, Contractor shall furnish City with satisfactory proof of carriage of the insurance required under this section, and that Contractor shall give City at least thirty (30) days prior notice of the cancellation of any policy during the Term of this contract. Contractor shall not commence work under this Agreement until Contractor has obtained City's approval regarding all insurance requirements, forms, endorsements, amounts, and carrier ratings, nor shall Contractor allow any subcontractor to commence work on a subcontract until all similar insurance required of the subcontractor shall have been so obtained and approved. Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Services hereunder by Contractor, its agents, representatives, employees or

subcontractors. Failure to maintain or renew coverage or to provide evidence of renewal may constitute a material breach of the Contract. Any available insurance proceeds in excess of the specified minimum limits and coverage shall be available to City.

(a) *General Liability Insurance.* Contractor shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than Two Million Dollars (\$2,000,000) per occurrence, Four Million Dollars (\$4,000,000) general aggregate, for bodily injury, personal injury, and property damage, including, without limitation, blanket contractual liability and coverage for explosion, collapse, and underground property damage hazards. Contractor's general liability policies shall be primary and not seek contribution from City's coverages and be endorsed using Insurance Services Office form CG 20 10 to provide that City and its officers, officials, employees, and agents shall be additional insureds under such policies. For construction contracts, an endorsement providing completed operations to the additional insured, ISO form CG 20 37, is also required. The policy shall contain, or be endorsed to contain, the following provisions:

- (1) City, its elective and appointive boards, officers, agents, employees, and volunteers are to be covered as additional insureds with respect to liability arising out of work or operations performed by or on behalf of Contractor, including materials, parts or equipment furnished in connection with such work or operations, which coverage shall be maintained in effect for at least three (3) years following the completion of the work specified in the Contract. General liability coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as CG 20 10 for ongoing operations and CG 20 37 for products/completed operations), or as a separate Owners and Contractors Protective Liability policy providing both ongoing operations and completed operations coverage.
- (2) For any claims related to the Project, Contractor's insurance coverage shall be primary insurance as respects City and any insurance or self-insurance maintained by City shall be excess of Contractor's insurance and shall not contribute with it.
- (3) In the event of cancellation, non-renewal, or material change that reduces or restricts the insurance coverage afforded to City under the Contract, the insurer, broker/producer, or Contractor shall provide City with thirty (30) days' prior written notice of such cancellation, non-renewal, or material change.
- (4) Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

(b) *Workers' Compensation Insurance.* Contractor shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance with limits of at least One Million Dollars (\$1,000,000). Contractor shall submit to City, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of City, its officers, agents, employees, and volunteers.

(c) *Auto Insurance.* Contractor shall provide auto liability coverage for owned, non-owned, and hired autos using ISO Business Auto Coverage form CA 00 01, or the exact equivalent, with a limit of no less than Two Million Dollars (\$2,000,000) per accident. If Contractor owns no vehicles, this requirement may be met through a non-owned auto endorsement to the CGL policy.

(d) *Builder's Risk Insurance.* Upon commencement of construction and with approval of City, Contractor shall obtain and maintain Builder's Risk/Course of Construction insurance. The policy shall be provided for replacement value on an "all-risk" basis. City shall be named as Loss Payee on the policy and there shall be no coinsurance penalty provision in any such policy. The policy must include: (1) coverage for removal of debris and insuring the buildings, structures, machinery, equipment, materials, facilities, fixtures, and all other properties constituting a part of the project; (2) coverage with limits sufficient to insure the full replacement value of any property or equipment stored either on or off the project site, whether provided from within a Builder's Risk policy or through the addition of an Installation Floater. Such insurance shall be on a form acceptable to City to ensure adequacy of terms and limits. Contractor shall not be required to maintain property insurance for any portion of the Project following transfer of control thereof to City.

(e) *Contractors Pollution Insurance.* Pollution Coverage shall be provided on a Contractors Pollution Liability form, or other form acceptable to City, providing coverage for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy limit shall be no less than One Million Dollars (\$1,000,000) per claim. All activities contemplated in the Contract shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for the hauling of waste from the Project site to the final disposal location, including non-owned disposal sites.

(f) *Professional Liability Insurance.* When applicable, Contractor shall maintain professional liability insurance that insures against professional errors and omissions that may be made in performing the Services to be rendered in connection with the Contract, in the minimum amount of One Million Dollars (\$1,000,000) per claim and in the aggregate. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement, and Contractor agrees to maintain continuous coverage through a period no less than three (3) years after completion of the services required by the Contract.

(g) *Deductibles and Self-Insured Retentions.* Upon request of City, any deductibles or self-insured retentions must be declared to and approved by City. At the option of City, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects City and City's Agents; or (2) Contractor shall provide a financial guarantee satisfactory to City guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

(h) *Acceptability of Insurers.* Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-VII or with an insurer to which City has provided prior approval.

(i) *Verification of Coverage.* Contractor shall furnish City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this Section 18. All certificates and endorsements are to be received and approved by City before

work commences. However, failure to obtain the required documents prior to the work beginning shall not waive Contractor's obligation to provide them. City reserves the right, at any time, to require complete, certified copies of all required insurance policies and endorsements.

(j) *Waiver of Subrogation.* With the exception of professional liability, Contractor hereby agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. The commercial general liability policy and workers' compensation policy shall be endorsed to contain a waiver of subrogation in favor of City for all work performed by Contractor, its agents, employees, independent contractors and subcontractors. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation.

(k) *Subcontractors.* Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

19. Ownership of Work Product: Any and all work, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, designs, specifications, drawings, diagrams, surveys, source codes, professional or technical information or data, photographs, notes, letters, emails, or any original works of authorship created by contractor or its subcontractors or subcontractors in connection with Services performed under the Contract ("Work Product") shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of City. In the event that it is ever determined that any Work Product created by Contractor or its subcontractors or subcontractors under the Contract are not works for hire under U.S. law, Contractor hereby assigns all copyrights to such Work Product to City. With the prior written approval of the City Engineer, Contractor may retain and use copies of such Work Product for reference and as documentation of its experience and capabilities.

All Work Product shall become the property of City irrespective of where located or stored and Contractor agrees to deliver all such documents and information to City, without charge and in whatever form it exists, upon the Completion Date, as may be extended. Contractor shall have no ownership interest in such Work Product.

All Work Product of Contractor under the Contract, including written information which City will cause to be distributed for either internal or public circulation, including both preliminary and final drafts, shall be delivered to City in both printed and electronic form, or as may be specific in Exhibit A.

When the Contract is terminated, Contractor agrees to return to City all documents, drawings, photographs, and other written or graphic material, however produced, that it received from City or City's Agents, in connection with the performance of its Services under the Contract. All materials shall be returned in the same condition as received.

20. Taxes: Payment of any taxes, including California sales and use taxes, levied upon the Contract, the transaction, or the Services or goods delivered pursuant hereto, shall be the obligation of Contractor. Contractor shall cooperate with City to the full extent possible to maximize the local allocation of California sales and use tax to City. Such cooperation shall include, but not be limited to:

(a) *Use Tax Direct Payment Permits.* Contractor shall apply for, obtain, and utilize, to the maximum extent reasonable, a California Use Tax Direct Payment Permit.

(b) *Purchases of \$500,000 or More.* Contractor shall require vendors and suppliers located outside California from whom Contractor makes purchases of \$500,000 or more to allocate the use tax to City.

21. Independent Contractor: At all times during the Term of the Contract, Contractor shall be deemed to be an independent contractor and shall be wholly responsible for the manner in which Contractor performs the Services required under the Contract. Contractor shall be liable for its acts and omissions, and those of its employees, contractors, subcontractors, representatives, volunteers, and its agents. Nothing contained herein shall be construed as creating an employment, agency, or partnership relationship between City and Contractor. City shall have the right to control Contractor only insofar as the result of Contractor's Services rendered pursuant to the Contract; however, City shall not have the right to control the means by which Contractor accomplishes Services rendered pursuant to the Contract.

22. Contractor Not Agent: Except as City may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to the Contract to bind City to any obligation whatsoever.

23. Arbitration of Disputes: All claims, disputes, and other matters in question between City and Contractor arising out of, or relating to, this Contract or the breach thereof, including claims of Contractor for extra compensation of Services related to the project, shall be decided by arbitration before a single arbitrator in accordance with the provisions of Sections 1281 through 1284.2 of the Code of Civil Procedure (the "Arbitration Laws") unless the Parties mutually agree otherwise. The provisions of Section 1283.05 of the Arbitration Laws apply to any arbitration proceeding except as otherwise provided in the Contract. The arbitrator shall have authority to decide all issues between the Parties including, but not limited to, claims for extras, delay, and liquidated damages, if any, provided for the Contract, matters involving defects in the Services performed by Contractor or its subcontractors, rights to payment, and whether the necessary procedures for arbitration have been followed. The award rendered by the arbitrator shall be final and judgment may be entered upon it in accordance with applicable law in any court having competent jurisdiction thereof.

Notice of the demand for arbitration shall be filed in writing with the other Party. The demand for arbitration shall be made within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

The parties shall jointly appoint an arbitrator within fifteen (15) calendar days of the date of giving the notice of the demand for arbitration. If the Parties are unable to jointly agree upon the appointment of an arbitrator within said fifteen (15) calendar day period, and do not agree in writing to extend said period for a fixed period, then either Party may seek to have the arbitrator appointed by the Superior Court of Stanislaus County in accordance with the Arbitration Laws.

If any proceeding is brought to contest the right to arbitrate and it is determined that such right exists, the losing Party shall pay all costs and attorney's fees incurred by the prevailing Party.

In addition to the other rules of law which may be applicable to any arbitration hereunder, the following shall apply:

(a) Promptly upon the filing of the arbitration, each Party shall be required to set forth in writing and to serve upon each other Party a detailed statement of its contentions of fact and law.

(b) All Parties to the arbitration shall be entitled to the discovery procedures provided under Section 1283.05 of the California Code of Civil Procedure.

(c) The arbitration shall be commenced and conducted as expeditiously as possible consistent with affording reasonable discovery as provided herein.

(d) These additional rules shall be implemented and applied by the arbitrator.

The costs of arbitration shall be borne by the Parties as determined by the arbitrator, but each Party shall bear its own attorney's fees associated with the dispute with the other Party and to the arbitration.

All administrative remedies required under Section 9 of this Agreement or pursuant to Public Contract Code section 9204, or required by any other law, shall be exhausted prior to commencement of any arbitration under this Section 23.

24. Provisions Cumulative: The provisions of the Contract are cumulative, and in addition to and not in limitation of, any other rights or remedies available to City.

25. Notices: All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid. Any Party hereto may at any time, by giving ten (10) days' written notice to the other Party hereto, designate any other address in substitution of the address to which such notice or communication shall be given. Such notices or communications shall be given to the Parties at their addresses set forth below.

If to City:

**City of Angels
Attn: City Administrator
200 Monte Verde Street, Suite B
Angels Camp, CA 95222**

With courtesy copies to:

**White Brenner LLP
Attn: Douglas L. White City Attorney
1607 T Street
Sacramento, CA 95811**

If to Contractor:

[CONTRACTOR NAME]

Attn: [NOTICE NAME/TITLE]
[ADDRESS]
[CITY/STATE/ZIP]

If to Contractor's Sureties:

26. Interpretation: As used herein, any gender includes each other gender, the singular includes the plural and vice versa.

27. Antitrust Claims: Contractor or its subcontractors offer and agree to assign to City all rights, title, and interest to any causes of action under Section Four of the Clayton Act and the Cartwright Act concerning antitrust claims.

28. Use of City Project Number: Contractor or its subcontractors agree to use the aforementioned City project number ([PROJECT NUMBER]) on all maps, drawings, submittals, billing, and written correspondence that involve City staff or contracted consultants. Nothing in this section shall preclude Contractor or its subcontractors from using their own project numbers for their own internal use.

29. No Conflict of Interest: Contractor represents that no conflict of interest will be created under state or federal law by entering into or in carrying out the Contract.

30. Confidentiality: Contractor understands and agrees that, in the performance of Services under the Contract, or in the contemplation thereof, Contractor may have access to private or confidential information that may be owned or controlled by City and that such information may contain proprietary or confidential details, the disclosure of which to third parties may be damaging to City ("Confidential Information"). Contractor shall not, either during or after the Term, disclose to any third party any Confidential Information without the prior written consent of City. If City gives Contractor written authorization to make any such disclosure, Contractor shall do so only within the limits and to the extent of that authorization. Contractor may be directed or advised by the City Attorney on various matters relating to the performance of Services on the Project or on other matters pertaining to the Project, and in such event, Contractor agrees that it will treat all communications between itself, its employees, and its subcontracts as being communications which are within the attorney-client privilege.

31. Modification. No alteration, amendment, modification, or termination of the Contract shall be valid unless made in writing and executed by all Parties to the Contract.

32. Waiver: No covenant, term, or condition or the breach thereof shall be deemed waived, except by written consent of the Party against whom the waiver is claimed, and any waiver of the breach of any covenant, term, or condition shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other covenant, term, or condition.

33. Assignment: No Party to the Contract shall assign, transfer, or otherwise dispose of this Agreement in whole or in part to any individual, firm, or corporation without the prior written consent of the other Party. Subject to the foregoing provisions, the Contract shall be binding upon, and inure to the benefit of, the respective successors and assigns of the Parties hereto.

34. Authority: All Parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement and the names, titles, and capacities herein stated on behalf of any entities, persons, states, or firms represented or purported to be represented by such entities, person, states, or firms and that all former requirements necessary or required by state or federal law in order to enter into the Contract have been fully complied with. Further, by entering into this Agreement, neither Party hereto shall have breached the terms or conditions of any other contract or agreement to which such Party is obligated, which such breach would have a material effect hereon.

35. Governing Law: The Contract shall be governed and construed in accordance with the laws of the state of California.

36. Venue: Venue for all legal proceedings shall be in the Superior Court of California, in and for the County of Calaveras.

37. Severability: If the Contract in its entirety is determined by an arbitrator or a court of competent jurisdiction to be invalid or unenforceable, the Contract shall automatically terminate as of the date of final entry of judgment. If any provision of the Contract shall be determined to be invalid and unenforceable, or if any provision of the Contract is rendered invalid or unenforceable according the terms of any federal or state statute, which becomes effective after the Effective Date of this Agreement, the remaining provisions shall continue in full force and effect and shall be construed to give effect to the intent of this Agreement.

38. Counterparts: This Agreement may be executed simultaneously and in several counterparts, each of which shall be deemed an original but together shall constitute one and the same instrument.

39. Mandatory and Permissive: “Shall” and “will” and “agrees” are mandatory. “May” and “can” are permissive.

40. Headings: Headings used in this Agreement are for reference purposes only and shall not be considered in construing this Agreement.

41. Attorney’s Fees and Costs: Except as expressly provided for in Sections 9 and 23 of this Agreement, if any action at law or in equity, including action for declaratory relief, is brought to enforce or interpret the provisions of the Contract, the prevailing Party shall be entitled to reasonable attorney’s fees and costs, which may be set by the court in the same action or in a separate action brought for that purpose, in addition to any other relief to which such Party may be entitled.

42. Necessary Acts and Further Assurances: The Parties shall, at their own cost and expense, execute and deliver such further documents and instruments and shall take such other actions as may be reasonably required or appropriate to evidence or carry out the intent and purposes of the Contract.

IN WITNESS WHEREOF, two identical counterparts of this agreement, consisting of a total of NUMBER OF pages, each of which counterparts shall for all purposes be deemed an original of said agreement, have been duly executed by the parties hereinabove named, on the day and year first herein above written.

CONTRACTOR

CITY OF ANGELS, a municipal corporation

By: _____

By: _____

Pamela Caronongan, City Administrator

Print Name

Date: _____

Federal Tax ID or Social Security No:

APPROVED AS TO FORM:

By: _____

For City Attorney

DIR Registration Number:

Attach Contractor's Seal Here

EXHIBIT A
CONTRACTOR'S PROPOSAL FOR SERVICES

EXHIBIT B
PAYMENT BY FORCE ACCOUNT

For work paid by force account, the City Engineer compares City's records to Contractor's daily force account work report. When the City Engineer and Contractor agree on the contents of the daily force account work reports, the City Engineer accepts the report, and City pays for the work. If the records differ, City pays for the work based only on the information shown on City's records. If a subcontractor performs work at force account, work paid at force account will be accepted at an additional 2 percent (2%) markup to the total cost of that work, including markups, as reimbursement for additional administrative costs. The markups specified in labor, materials, and equipment include compensation for all delay costs, overhead costs, and profit. If an item's unit price is adjusted for work-character changes, City excludes Contractor's cost of determining the adjustment. Payment for owner-operated labor and equipment is made at the market-priced invoice submitted.

A. Labor. Labor payment is full compensation for the cost of labor used in the direct performance of the work plus a 35 percent (35%) markup, as set forth below, and consistent with California Labor Code section 1770 et seq. Force account labor payment consists of:

1. Employer payment to the worker for:
 - 1.1 Basic hourly wage
 - 1.2 Health and welfare
 - 1.3 Pension
 - 1.4 Vacation
 - 1.5 Training
 - 1.6 Other State and federal recognized fringe benefit payments
2. Labor surcharge percentage in *Labor Surcharge and Equipment Rental Rates* current during the work paid at force account for:
 - 2.1 Workers' compensation insurance
 - 2.2 Social security
 - 2.3 Medicare
 - 2.4 Federal unemployment insurance
 - 2.5 State unemployment insurance
 - 2.6 State training taxes
3. Subsistence and travel allowances paid to the workers
4. Employer payment to supervisors, if authorized

The 35 percent (35%) markup consists of payment for all overhead costs related to labor but not designated as costs of labor used in the direct performance of the work including:

- (a) Home office overhead
- (b) Field office overhead
- (c) Bond costs
- (d) Profit
- (e) Labor liability insurance
- (f) Other fixed or administrative costs that are not costs of labor used in the direct performance of the work

B. Materials. Material payment is full compensation for materials the Contractor furnishes and uses in the work. The City Engineer determines the cost based on the material purchase price, including delivery charges, except:

- 1. A 15 percent markup is added;
- 2. Supplier discounts are subtracted whether the Contractor takes them or not;
- 3. If the City Engineer believes the material purchase prices are excessive, City pays the lowest current wholesale price for a similar material quantity;
- 4. If Contractor procured the materials from a source Contractor wholly or partially own, the determined cost is based on the lower of the:
 - 4.1 Price paid by the purchaser for similar materials from that source on Contract items; and
 - 4.2 Current wholesale price for those materials;
- 5. If Contractor does not submit a material cost record within thirty (30) days of billing, the determined cost is based on the lowest wholesale price:
 - 5.1 During that period
 - 5.2 In the quantities used

C. Equipment Rental. Equipment rental payment is full compensation for:

- 1. Rental equipment costs, including moving rental equipment to and from the change order work site using its own power.
- 2. Transport equipment costs for rental equipment that cannot be transported economically using its own power. No payment is made during transport for the transported equipment.
- 3. 15 percent markup.

If Contractor wants to return the equipment to a location other than its original location, the payment to move the equipment must not exceed the cost of returning the equipment to its original

location. If Contractor uses the equipment for work other than work paid by force account, the transportation cost is included in the other work.

Before moving or loading the equipment, Contractor must obtain authorization for the equipment rental's original location.

The City Engineer determines rental costs:

1. Using rates in *Labor Surcharge and Equipment Rental Rates*:
 - 1.1. By classifying equipment using manufacturer's ratings and manufacturer-approved changes.
 - 1.2. Current during the work paid by force account.
 - 1.3. Regardless of equipment ownership but City uses the rental document rates or minimum rental cost terms if:
 - 1.3.1. Rented from equipment business Contractor does not own.
 - 1.3.2. The Labor Surcharge and Equipment Rental Rates hourly rate is \$10.00 per hour or less.
2. Using rates established by the City Engineer for equipment not listed in *Labor Surcharge and Equipment Rental Rates*. Contractor may submit cost information that helps the City Engineer establish the rental rate but City uses the rental document rates or minimum rental cost terms if:
 - 2.1. Rented from equipment business Contractor does not own.
 - 2.2. The City Engineer establishes a rate of \$10.00 per hour or less.
3. Using rates for transport equipment not exceeding the hourly rates charged by established haulers.

Equipment rental rates include the cost of:

1. Fuel	7. Repairs and maintenance
2. Oil	8. Depreciation
3. Lubrication	9. Storage
4. Supplies	10. Insurance
5. Small tools that are not consumed by use	11. Incidentals
6. Necessary attachments	

City pays for small tools consumed by use. The City Engineer determines payment for small tools consumed by use based on Contractor-submitted invoices.

The City Engineer may authorize rates in excess of those in the *Labor Surcharge and Equipment Rental Rates* if:

1. Contractor submits a request to use rented equipment

2. Equipment is not available from Contractor's normal sources or from one of Contractor's subcontractors
3. Rented equipment is from an independent rental company
4. Proposed equipment rental rate is reasonable
5. The City Engineer authorizes the equipment source and the rental rate before Contractor uses the equipment

D. Equipment on the Job Site. For equipment on the job site at the time required to perform work paid by force account, the time paid is the time:

1. To move the equipment to the location of work paid by force account plus an equal amount of time to move the equipment to another location on the job site when the work paid by force account is completed
2. To load and unload equipment
3. Equipment is operated to perform work paid by force account and:
 - 3.1. Hourly rates are paid in 1/2-hour increments
 - 3.2. Daily rates are paid in 1/2-day increments

E. Equipment Not on the Job Site Required for Original-Contract Work. For equipment not on the job site at the time required to perform work paid by force account and required for original-Contract work, the time paid is the time the equipment is operated to perform work paid by force account and the time to move the equipment to a location on the job site when the work paid by force account is completed.

The minimum total time paid is:

1. 1 day if daily rates are paid
2. 8 hours if hourly rates are paid

If daily rates are recorded, equipment:

1. Idled is paid as 1/2 day
2. Operated four (4) hours or less is paid as 1/2 day
3. Operated four (4) hours or more is paid as one (1) day

If the minimum total time exceeds eight (8) hours and if hourly rates are listed, City rounds up hours operated to the nearest 1/2-hour increment and pays based on the hours shown in the following table. The table does not apply when equipment is not operated due to breakdowns, in which case rental hours are the hours the equipment was operated.

Equipment Rental Hours

Hours operated	Hours paid
0.0	4.00
0.5	4.25
1.0	4.50
1.5	4.75
2.0	5.00
2.5	5.25
3.0	5.50
3.5	5.75
4.0	6.00
4.5	6.25
5.0	6.50
5.5	6.75
6.0	7.00
6.5	7.25
7.0	7.5
7.5	7.75
≥8.0	hours used

F. Equipment Not on the Job Site Not Required for Original-Contract Work. For equipment not on the job site at the time required to perform work paid by force account and not required for original-Contract work, the time paid is the time:

1. To move the equipment to the location of work paid by force account plus an equal amount of time to return the equipment to its source when the work paid by force account is completed
2. To load and unload equipment
3. Equipment is operated to perform work paid by force account

G. Non-Owner-Operated Dump Truck Rental. Contractor shall submit the rental rate for non-owner-operated dump truck rental to City. The City Engineer shall determine the payment rate. Payment for non-owner-operated dump truck rental is for the cost of renting a dump truck, including its driver. For the purpose of markup payment only, the non-owner-operated dump truck is rental equipment and the owner is a subcontractor.

The above markups shall constitute full compensation for all home office overhead, field office overhead, bond costs, profit, labor liability insurance, and other fixed or administrative costs that are not costs specifically designated as cost or equipment rental as stated above. The total payment made as provided above shall be deemed to be the actual cost of the work and shall constitute full compensation therefor.

When extra work to be paid for on a force account basis is performed by a subcontractor, an additional markup of 10 percent (10%) will be added to the total cost of that extra work including all markups specified in this Section. The additional 10 percent (10%) markup shall reimburse Contractor for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

INSERT REMAINING ITEMS

<u>Exhibit C</u>	<u>Workers' Compensation Insurance Certification</u>
<u>Exhibit D</u>	<u>Performance Bond</u>
<u>Exhibit E</u>	<u>Payment Bond</u>

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SECTION 00610

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the **City of Angels Camp**, State of California, has awarded to _____, hereinafter designated as the "Principal," a contract for **Project No. __-__, "_____»«Project_Name_2»;** and,

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful performance of said contract.

NOW, THEREFORE, we the Principal, and _____ as Surety, are held and firmly bound unto the City of Angels Camp in the penal sum of _____ (\$_____), lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, or Principal's heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said contract and any alteration thereof made as therein provided, on the Principal's part, to be kept and performed at the time and in the manner therein specified and in all respects according to their true intent and meaning; and shall defend, indemnify and save harmless the City of Angels Camp, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and virtue.

And the Surety, for value received hereby stipulates and agrees that, in accordance with the Plans, Standard Specifications, Special Provisions, and other contract documents, no change, extension of time, alteration, or addition to the terms of the contract, or to the work to be performed hereunder, or to the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration of additions to the terms of the Contract to the work, or to the specifications.

The City of Angels Camp reserves the right to refuse use of any Contractor assigned by any surety to complete the work.

[Signatures on Following Page]

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their seals this _____ day of _____, 20__, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal)

Principal _____

By _____

Title _____

(Attach Notarial Acknowledgment)

(Corporate Seal)

Surety _____

Address _____

Phone No.: () _____ Fax No.: () _____

By _____

Attorneys-in-Fact

Title _____

(Attach Notarial Acknowledgment)

NOTE TO SURETY COMPANY: There must be submitted a certified copy of unrevoked resolution of authority for the attorneys-in-fact.

(Seal)

Witness _____

Approved as to form:

Risk Manager

****END OF SECTION****

SECTION 00620

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the **City of Angels Camp**, a municipal corporation, has awarded to _____, hereinafter designated as the "Principal", a contract for **Project No.** ____-____**«Project_Number»**, "**_____»«Project_Name_2»**; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract, to secure payment of claims of laborers, mechanics, or materialmen employed on work under said contract, as provided by law.

NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the City of Angels Camp in the sum of _____ (\$_____), said sum being equal to the estimated amount payable by said City of Angels Camp under the terms of the contract, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if said Principal, or Principal's heirs, executors, administrators, successors, or assigns, or subcontractors shall fail to pay for any material, provisions, provender, or other supplies, implements, or machinery used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from these wages of employees of the Contractor and Contractor's subcontractors pursuant to the Revenue and Taxation Code, with respect to such work and labor, the Surety or Sureties hereon will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, said Surety will pay a reasonable attorney's fee to be fixed by the court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Section 3138 of the Civil Code of the State of California so as to give a right of action to them or their assigns in any suit brought upon this bond.

Said Surety, for value received, hereby stipulates and agrees that, in accordance with the Plans, Standard Specifications, Special Provisions, and other Contract Documents, no change, extension of time, alteration or addition to the terms of the contract, or to the work to be performed there under, or to the specifications accompanying the same, shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work, or to the specifications.

[Signatures on Following Page]

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their seals this _____ day of _____, 20__, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal)

Principal _____

By _____

Title _____

(Attach Notarial Acknowledgment)

(Corporate Seal)

Surety _____

Address _____

Phone No.: () _____ Fax No.: () _____

By _____

Attorneys-in-Fact

Title _____

(Attach Notarial Acknowledgment)

NOTE TO SURETY COMPANY: There must be submitted a certified copy of unrevoked resolution of authority for the attorneys-in-fact.

(Seal)

Witness _____

Approved as to form:

Risk Manager

*** END OF SECTION ***

SECTION 00650

WORKERS' COMPENSATION INSURANCE CERTIFICATION

Pursuant to Section 18(b) of the Agreement, Contractor certifies as follows:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Signed: _____

Date: _____

(Typed or Printed Name)

Business Address (Street Address, City, State & Zip Code):

Business Phone: () _____

****END OF SECTION****

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STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT

CITY OF ANGELS

These General Conditions are based in part on
EJCDC C-700 (2002 Copyrighted Edition)

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in these General Conditions or in other Contract Documents, the terms listed below have the meanings indicated which are applicable to both the singular and plural thereof. Said terms are generally capitalized or written in italics, but not always. When used in a context consistent with the definition of a listed-defined term, the term shall have a meaning as defined below whether capitalized or italicized or otherwise.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids, which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Construction Manager which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Request for Proposal, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Construction Manager which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Construction Manager's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the

Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Construction Manager who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Construction Manager, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work

(or a specified part thereof) can be safely and conveniently utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Construction Manager ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

53. *Construction Manager*--The individual or entity retained by the Owner to perform construction quality assurance and contract administration functions not involving reviews and interpretations with respect to design intent. The Construction Manager is a representative of the Owner, either an employee or consultant, employed to act

as advisor to the Owner in construction matters related to the Contract.

1.02 *Terminology*

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer or Construction Manager. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer or Construction Manager as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer or Construction Manager any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents, or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

c. has been damaged prior to --Construction Manager’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide, Supply*

1. The word "Furnish" or the word "Install" or the word "Perform" or the word "Provide" or the word "Supply," or any combination or similar directive or usage thereof, shall mean FURNISHING AND INCORPORATING IN THE WORK including all necessary labor, materials, equipment, and everything necessary to perform the Work indicated, unless specifically limited in the context used.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Construction Manager for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Construction Manager and Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Construction Manager, and others as appropriate will be held to review for acceptability to Construction Manager as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Construction Manager if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Construction Manager responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Construction Manager and Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Construction Manager as to form and substance if it

provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations with respect to the design intent of the Contract Documents shall be issued by Engineer through the Construction Manager, and clarifications and interpretations with respect to administrative matters shall be issued by the Construction Manager as provided in Article 9.

D. The Specifications may vary in form, format and style. Some specification sections are written in varying degrees of streamlined or declarative style and some sections may be relatively narrative by comparison. Omissions of such words and phrases as "the Contractor shall," "in conformity with," "as shown," or "as specified" are intentional in streamlined sections. Omitted words and phrases shall be supplied by inference. Similar types of provisions may appear in various parts of a section or articles within a part depending on the format of the section. The Contractor shall not take advantage of any variation of form, format or style in making claims for extra Work.

E. The cross referencing of specification sections under the subparagraph heading "Related Sections include but are not necessarily limited to:" and elsewhere within each specification section is provided as an aid and convenience to the Contractor. The Contractor shall not rely on the cross referencing provided and shall be responsible to coordinate the entire work under the Contract Documents and provide a complete Project whether or not the cross referencing is provided in each section or whether or not the cross referencing is complete.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or

association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, Engineer or Construction Manager, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer or Construction Manager, or any of their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Construction Manager any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer through Construction Manager before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Construction Manager in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner, Construction Manager or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract

Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification of matters of design intent issued through the Construction Manager, and Construction Managers written interpretation or clarification of administrative matters.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or
2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adoption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

1. Where easement lines are shown on the Contract Drawings they shall be considered as shown in their final location unless stipulated otherwise in the Supplementary Conditions.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and

legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Construction Manager in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Construction Manager's and Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Construction Manager will promptly review the pertinent condition with Engineer as appropriate, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor and Engineer) of Construction Manager's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

- b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

- a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

- b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by

the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner, Engineer and Construction Manager, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

3. Pursuant to Government Code Section 4216-4216.9, the Contractor shall notify the appropriate regional notification center of all excavations as required under Government Code sections 4216 to 4216.9. The Contractor shall contact Underground Service Alert at 1-800-642-2444 for the location of subsurface installations. Contractor shall furnish to the Construction Manager written documentation of its contact(s) with Underground Service Alert within two (2) days after such contact(s).

4. At least two (2) days before performing any excavation work, the Contractor shall request the utility owners to mark or otherwise indicate the location of their service. Contractor shall furnish to the Construction Manager written documentation of its contact(s) with utility owners requesting them to mark or otherwise indicate the location of their respective facilities within three (3) days after such contact(s).

5. It shall be the Contractor's responsibility to determine the exact location and depth of all utilities, including service connections, which have been marked by the respective owners and which Contractor believes may affect or be affected by Contractor's operations. If no pay item is provided in the Contract for this work, full compensation for such work shall be considered as included in the prices bid for other items of work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Construction Manager. Construction Manager will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Construction Manager concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05. In accordance with Government Code Section 4215 the Contractor shall not be assessed liquidated damages for delay in completion of the project, when such delay is caused by the failure of the Owner or utility company to provide for the removal or relocation of facilities for which they are the responsible party

3. When the General Requirements, Specifications, or Construction Drawings indicate that a utility is to be relocated, altered or constructed by others, the Owner will conduct all negotiations with the utility company and the work will be done at no cost to the Contractor.

4. Temporary or permanent service, relocation or alteration of utilities desired by the Contractor for its own convenience shall be the Contractor's responsibility and it shall make arrangements and bear all costs.

5. Except where the owner of a damaged utility has advised that it intends to repair the damage through its own forces or forces that it will retain or has retained, Contractor shall, within 24 hours of receipt from the Owner of notice to commence correction of damage, notify the Construction Manager in writing if Contractor intends to repair the damage. During nights and weekends when work is not in progress, Owner may give such notice by telephone or by facsimile transmission to the Contractor's facsimile number and such notice will be immediately effective. The Contractor's failure to provide timely written notification that it intends to repair the damage shall be deemed its agreement that the Owner may repair the damage at Contractor's expense without further notice and without prejudice to any other remedy available to Owner. In such event, the Contractor may observe the Work if this can be done without in any way delaying the progress thereof, but may not contest any element of the expense of repair or the lack of further notice. This provision is in addition to any other remedy, including the remedy provided in 13.09, Owner May Correct Defective Work

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Construction Manager's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Construction Manager whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by licensed land surveyor registered in the state of California.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Construction Manager (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Construction Manager concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by

Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, Engineer and Construction Manager, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer and Construction Manager, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insur-

ance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner, Engineer and Construction Manager, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Contract Documents or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

8. With respect to all insurance required by this paragraph 5.04., Contractor agrees to waive all rights of subrogation against Owner, Engineer and Construction Manager, and each additional insured identified in the Supplemental Conditions.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, Engineer and Construction Manager, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, explosion, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, Engineer and Construction Manager with 30 days written notice to each other additional insured.

B. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, Engineer and Construction Manager, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured and will

contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, Engineer and Construction Manager, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Engineer and Construction Manager, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, Engineer and Construction Manager, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, Engineer or Construction Manager, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the

objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

1. All insurance required by the Contract Documents, or by laws or regulations shall remain in full force and effect on all phases of the Work, whether or not the Work is occupied or utilized by Owner, until all Work included in the agreement has been completed and final payment has been made.

2. Nothing contained in the insurance requirements shall be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from Contractor's, subcontractors' or suppliers' operations under the Contract. Contractor agrees that Contractor alone shall be completely responsible for procuring and maintaining full insurance coverage as provided herein or as may be otherwise required by the Contract Documents. Any approval by Owner or Construction Manager shall not operate to the contrary.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract

Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. Means or methods of work suggested by the Owner, the Construction Manager, or the Engineer to the Contractor, but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor. The Owner, Construction Manager, or the Engineer assume no responsibility therefor, and in no way will be held liable for any defects in the Work which may result from or be caused by use of such plan or method of Work.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Construction Manager except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. In the absence of any Federal, state or local laws, regulations or covenants, the Contractor may conduct its performance of the Work at the Contractor's sole discretion, except that the cost of any overtime pay or other expense incurred by the Owner for Resident Project Representative, Owner's Representative and construction observation services, occasioned by the conduct of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day, shall be reimbursed to the Owner by the Contractor. Contractor shall provide to Construction Manager 72-hour written notice of intent to work outside of regular working hours .

C. Prevailing Wage

1. In accordance with Section 1770 of the Labor Code, the Owner has ascertained and does hereby specify that the prevailing wage rates shall be those provided in Article 00100-22.00, WAGE RATES. The said rates shall include all employer payments that are required by Section 1773.1 of the Labor Code. The Owner will furnish to the Contractor, upon request, a copy of such prevailing rates. It shall be the duty of the Contractor to post a copy of such prevailing wages at the job site.

2. For each worker paid less than the stipulated rate in the execution of the Contract by the Contractor, or any subcontractor under it, in violation of the provisions of the Labor Code, and in particular, Section 1770 to Section 1780, inclusive, the Contractor shall be subject to the provisions and penalties of Section 1775 of the Labor Code. In addition to said penalty, and pursuant to said Section 1775, the difference between such stipulated prevailing wage rates and the amounts paid to each worker for each calendar day, or portion thereof, for which each worker was paid less than the stipulated prevailing rate shall be paid to each worker by the Contractor.

3. The wage rates set forth are the minimum that may be paid by the Contractor. Nothing herein contained shall be construed as preventing the Contractor from paying more than the minimum set forth.

4. No extra compensation whatever shall be allowed by the Owner due to the inability of the Contractor to hire labor at the minimum rate nor for any necessity for payment by the Contractor for subsistence, travel time, overtime, or other added compensation, all of which possibilities are elements to be considered and ascertained to the Contractor's own satisfaction in preparing the bid.

5. If it becomes necessary to employ a craft other than those listed in the prevailing rates, the Contractor shall notify the Owner immediately and the Owner will obtain the additional prevailing rate from the Director of the Department of Industrial Relations and the rate thus determined shall be applicable as a minimum at the time of initial employment.

6. The Contractor shall pay travel and subsistence payments to workers needed to execute the work as such travel and subsistence payments are defined in the applicable collective bargaining agreement filed with the Department of Industrial Relations pursuant to Labor Code Section 1773.8.

7. Owner and Contractor stipulate that Labor Code Section 1775 will be complied with.

8. The Owner will consider the type of work performed by classification traditionally employed to perform said work in Stanislaus County when determining appropriate craft, classification or type of worker under Section 1733.2 of the California Labor Code.

9. Not Used.

10. Certified Payrolls - In accordance with Section 1776 of the Labor Code, each Contractor and subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time, and overtime hours worked each day and week, and

the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor or the subcontractor in connection with the project.

11. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:

12. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or its authorized representative on request.

13. A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of the Owner, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

14. A certified copy of all payroll records shall be made available upon request by the public in accordance with Section 1776 of the Labor Code.

15. The Contractor is responsible for its and its subcontractors' compliance with the provisions of Section 1776 of the Labor Code.

16. Overtime Requirements - The Contractor shall forfeit, as a penalty to the Owner, the penalty as provided in Section 1813 of the Labor Code for each worker employed in the execution of the Contract by the Contractor, or any subcontractor under the Contractor, for each day during which such worker is required or permitted to work more than eight (8) hours in any one day and forty (40) hours in any one week, in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815 thereof, inclusive, except that work performed by employees of Contractors in excess of eight (8) hours a day and forty (40) hours during one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day, at not less than one and a half (1.5) times the basic rate of pay as provided for in Section 1815 of the Labor Code.

17. Apprentice and Trainee - Attention is directed to the provisions in Section 1777.5 of the Labor Code and in accordance with the regulations of the California Apprenticeship Council concerning the employment of apprentices by the Contractor or any subcontractor under the Contractor.

18. Section 1777.5 requires the Contractor or subcontractors employing tradespersons in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the project that administers the apprenticeship program in that trade for a certificate of approval. The Contractor and subcontractors are required to submit contract award information to the applicable joint apprenticeship committee. As provided for in Section 1777.5 of the Labor Code, the Contractor is

required to make contributions to funds established for the administration of apprenticeship programs.

19. It shall be the responsibility of the Contractor to abide by the provisions of Section 1777.5 of the Labor Code and to require all subcontractors employed by or contracting with the Contractor to abide by said provisions. The Contractor shall furnish the Owner any and all evidence of compliance with this code section when requested by the Owner.

20. For failure to comply with Section 1777.5 of the Labor Code, the Contractor shall be subject to the penalties in Section 1777.7 of the Labor Code. The provisions of this paragraph apply only to the extent not preempted by Federal law.

21. Workers' Compensation Insurance - The Contractor is required to secure the payment of compensation to its employees in accordance with the provisions of Sections 1860 and 3700 of the Labor Code and Paragraph 00820-2.40, Workers' Compensation Insurance.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

1. Where the Work requires equipment be furnished, due to the lack of standardization of equipment as produced by the various manufacturers, it may become necessary to make minor modifications in the structures, buildings, piping, mechanical work, electrical work, accessories, controls, or other work, to accommodate the particular equipment offered. Contractor's bid price for any equipment offered shall include the cost of making any necessary changes subject to the approval of Construction Manager.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer or Construction Manager, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

1. Materials and equipment, if furnished by the Owner, will be made available as designated in the General Requirements. The cost of unloading, hauling and handling, and placing Owner-furnished materials and equipment shall be considered as included in the price bid for the Contract item involving such Owner-furnished material.

2. Contractor shall inspect and assure itself of the amount and soundness of such materials and equipment.

3. The Contractor will be held responsible for all materials and equipment furnished to it and received by it, and shall pay all demurrage and storage charges. Owner-furnished materials and equipment lost or damaged from any cause whatsoever shall be replaced by the Contractor. The Contractor will be liable to the Owner for the cost of replacing Owner-furnished material and equipment and such costs may be deducted from any moneys due or to become due the Contractor.

D. All items of standard equipment shall be the latest model at the time of bid, unless otherwise specified.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Construction Manager for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be

considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Construction Manager from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Construction Manager for review of a proposed substitute item of material or equipment that

Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

- a) perform adequately the functions and achieve the results called for by the general design,
- b) be similar in substance to that specified, and
- c) be suited to the same use as that specified;

2) will state:

- a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
- b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
- c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

- a) all variations of the proposed substitute item from that specified, and
- b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract

Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the differ-

ence in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner, Engineer, and Construction Manager for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner, Engineer or Construction Manager and any such Subcontractor, Supplier or other individual or entity, nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Construction Manager and Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner, Construction Manager and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Construction Manager and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils

or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Construction Manager and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner, Construction Manager nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages

(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Construction Manager and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Construction Manager for reference, and shall be current at the time of Contractor's submission of Application for Payment as a condition precedent for Construction Manager's recommendation of payment. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Construction Manager for Owner. Contractor shall include accurate locations for buried and imbedded items.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not

designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

1. At least two (2) days before performing any excavation work or other work that could damage existing improvements within, or adjacent to, the Work area, the Contractor shall notify the owners of properties adjacent to the Work area of intended commencement of such Work and request that such owners mark or otherwise indicate the location of underground improvements of which they are aware or other improvements not readily apparent from visual inspection of the adjacent property, such as survey points and utility service installations not owned by the appropriate utility. The Contractor shall also give two (2) days' notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers, and other improvements within the right-of-way that are designated for removal or would be destroyed because of the Work. Contractor shall furnish to the Construction Manager written documentation of its contact(s) with property owners (1) requesting them to mark or otherwise indicate the location of their respective facilities, and (2) notifying them to salvage or relocate landscaping or improvements within or adjacent to the Work area within two (2) days after such contact(s).

2. It shall be the Contractor's responsibility to determine the exact location (including depth for underground improvements) and to document the existing condition of all existing improvements which are not designated for removal (e.g., curbs, sidewalks, survey points, fences, walls, signs, utility installations, pavements, structures, etc.) which the Contractor believes may affect or be affected by Contractor's operations.

3. In the event that existing improvements are found that have not been identified in the Contract Documents or indicated by the respective property owner, or are found to exist in a substantially different location than so indicated, the Contractor shall (1) immediately notify the Construction Manager thereof in writing, and (2) take steps to avoid damaging such improvements, including ascertaining their exact location if not yet known.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable,

shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner, Construction Manager or Engineer, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

1. The Contractor shall immediately notify the Construction Manager and the property owner of any damage to any existing improvements that have not been designated to be removed. The Contractor shall be responsible for the cost of repairing or restoring all existing improvements which are not designated for removal (e.g., curbs, sidewalks, survey points, fences, walls, signs, utility installations, pavements, structures, etc.) and are damaged or removed as a result of its operations. Repairs and replacements shall be at least equal to existing improvements and shall match them in finish and dimension.

2. The Contractor shall protect from damage all landscaping (e.g., trees, lawns, shrubbery, etc.) adjacent to the Work area or within the Work area that have not been designated to be removed. The Contractor shall immediately notify the Construction Manager and the property owner of any damage to any such landscaping which is not designated for removal. The Contractor shall be responsible for the cost of restoring or replacing such landscaping in as nearly the original conditions and location as it is reasonably possible. Lawns shall be re-seeded and covered with suitable mulch.

3. Except where an owner of damaged improvements or landscaping has advised that he or she intends to repair the damage himself or through forces that he or she will retain or has retained, Contractor shall, within 24 hours of receipt from the Owner of notice to commence correction of damage, notify the Construction Manager in writing if Contractor intends to repair the damage. During nights and weekends when work is not in progress, Owner may give such notice by telephone or by facsimile transmission to the Contractor's facsimile number designated and such notice will be immediately effective. The Contractor's failure to provide timely written notification that it intends to repair the damage shall be deemed its agreement that the Owner may repair the damage at Contractor's expense without further notice and without prejudice to any other remedy available to Owner. In such event, the Contractor may observe the Work if this can be done without in any way delaying the progress thereof, but may not contest any element of the expense of repair or the lack of further notice. This provision is in addition to any other remedy, including the remedy provided in 13.09, Owner May Correct Defective Work

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Construction Manager has

issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

E. The Contractor shall establish, implement, and maintain a Written injury prevention program as required by Labor Code Section 6401.7. This written program shall be submitted to the Construction Manager within five (5) days of Notice to Proceed. The Contractor's injury prevention program will not be reviewed for approval. Before proceeding with any construction work, the Contractor shall take the necessary action to comply with all provisions for safety and accident prevention. The Contractor shall develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor shall appoint an employee as safety supervisor who is qualified and authorized to supervise and enforce compliance with the safety program. The Contractor, as a part of its safety program, shall maintain at its office or other well-known place at the Site, safety equipment applicable to the Work as prescribed by the aforementioned authorities, all items necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons who may be injured on the jobsite.

1. In accordance with the provisions of Section 6705 of the Labor Code, the Contractor shall submit, in advance of excavation 5 feet or more in depth, detailed plans showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from hazard of caving ground during such excavation. If such plans vary from the shoring system standards set forth in the Construction Safety Orders in Title 8, California Code of Regulations, the plans shall be prepared and signed by a registered civil or structural engineer. Shoring, bracing, sloping, or other protective system shall not be less effective than required by the California Construction Safety orders. The Contractor shall designate in writing to the Construction Manager the "competent person" with the authority and responsibilities designated in the Construction Safety Orders.

2. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Construction Manager and the Owner. In addition, the Contractor must promptly report in writing to the Construction Manager 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. The Contractor shall make all reports as are, or may be, required by any authority having jurisdiction, and permit all safety inspections of the work being performed under this Contract.

3. 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 to the Construction Manager, giving full details of the claim.

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Construction Manager prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

B. If Contractor fails to take appropriate action in an emergency, the Owner also reserves the right to perform any portion of the work that threatens the safety or health of the public or Owner, and the safety of the work or any property or equipment. In the event the Owner performs work in an emergency, an appropriate Change Order shall be issued unilaterally deducting from the payments then or thereafter due the Contractor the cost for performing such Work, including compensation for the Engineer's, the Construction Manager's, and Owner's additional services made necessary by such emergency

6.17 *Shop Drawings and Samples*

A. Contractor shall submit required Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions,

specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

c. Shop Drawings submitted as herein provided by Contractor and reviewed by Engineer for conformance with the design concept shall be executed in conformity with the Contract Documents unless otherwise required by Owner.

d. When Shop Drawings are submitted for the purpose of showing the installation in greater detail, their review shall not excuse Contractor from requirements shown on the drawings and Specifications.

e. For-Information-Only submittals upon which the Engineer is not expected to conduct review or take responsive action may be so identified in the Contract Documents.

2. *Samples*: Contractor shall also submit required Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation; otherwise Contractor will not be relieved of the responsibility of executing the Work in accordance with the Contract Documents, even though such Shop Drawings or Samples have been otherwise reviewed.

a. If a Shop Drawing or Sample, as submitted, indicates a variation from the Contract Requirements as set forth in the Contract Documents and Engineer finds same to be in the interest of Owner and to be so minor as not to involve a change in the Contract Price or time for performance, Engineer may approve the Shop Drawings or Samples; provided however, such departure is slight in nature and does not affect the design concept of the Work.

4. Contractor shall submit all Shop Drawings and Samples sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting and rechecking and to avoid any delay in progress of the Work.

5. Shop Drawings and Sample submittals not conforming to requirements of this paragraph 6.17D and Section 01340 will be returned to Contractor without action for resubmittal and the resulting delay shall be entirely the responsibility of Contractor.

D. Engineer's Review

1. Engineer will provide timely review of required Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in

the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

4. Engineer's check and review of Shop Drawings and Samples, Standard Specifications and descriptive literature submitted by Contractor will be only for general conformance with design concept, except as otherwise provided, and shall not be construed as:

- a. permitting any departure from the Contract Requirements;
- b. relieving Contractor of the responsibility for any error in details, dimensions or otherwise that may exist in such submittals;
- c. constituting a blanket approval of dimensions, quantities, or details of the material or equipment shown; or
- d. approving departures from additional details or instructions previously furnished by Engineer. Such check or review shall not relieve Contractor of the full responsibility of meeting all of the requirements of the Contract Documents.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Construction Manager and Engineer, and their Related Entities, shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Construction Manager and Engineer;

2. recommendation by Construction Manager or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Construction Manager or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Construction Manager and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all

claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Construction Manager and Engineer and their respective officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the permanent Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to permanent systems, materials or equipment incorporated into the Work are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly

licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of

others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Construction Manager and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Construction Manager in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Construction Manager.

8.02 *Replacement of Construction Manager or Engineer*

A. In case of termination of the employment of either Construction Manager or Engineer, Owner shall appoint a Construction Manager or engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Construction Manager or Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs

incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 – CONSTRUCTION MANAGER'S AND ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Construction Manager and Engineer will be Owner's representatives during the construction period. The duties and responsibilities and the limitations of authority of Construction Manager and Engineer as Owner's representatives during construction are set forth in the Contract Documents and will not be changed without written consent of Owner, Construction Manager and Engineer.

9.02 *Visits to Site*

A. Engineer may make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will endeavor to guard Owner against defective Work.

B. Construction Manager will make visits to the Site at intervals appropriate to the various stages of construction as Construction Manager deems necessary in order to observe the progress that has been made and the quality of the

various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Construction Manager, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Construction Manager will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Construction Manager's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Construction Manager will keep Owner informed of the progress of the Work, and will endeavor to guard Owner against defective Work.

C. Engineer's and Construction Manager's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Construction Manager's Project Representative*

A. If Owner and Construction Manager agree, Construction Manager will furnish a Resident Project Representative to assist Construction Manager in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Construction Manager's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

B. Construction Manager's Resident Project Representative shall not authorize any deviation from the Contract Documents or substitutions of materials or equipment.

9.04 *Authorized Variations in Work*

A. Construction Manager or Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or

both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Construction Manager will have authority to reject Work which Construction Manager or Engineer believes to be defective, or that Construction Manager or Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Construction Manager will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

B. The acceptance at any time of materials or equipment by or on behalf of Owner shall not be a bar to future rejection if they are subsequently found to be defective, inferior in quality, or not equal to the material or equipment specified, or are not as represented to Construction Manager, Engineer or Owner.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Construction Manager's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Construction Manager will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Construction Manager will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Construction Manager's written decision thereon will be final and binding (except as modified by Construction Manager to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents with respect to matters of design intent. Construction Manager will be the initial interpreter of the requirements of the Contract Documents with respect to administrative matters and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Construction Manager in writing within 30 days of the event giving rise to the question.

B. Construction Manager or Engineer through Construction Manager will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Construction Manager's or Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Construction Manager's or Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Construction Manager and Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Construction Manager's and Engineer's Authority and Responsibilities*

A. Neither Construction Manager's and Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Construction Manager or Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Construction Manager or Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Construction Manager or Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Construction Manager and Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Construction Manager and Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Construction Manager and Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Construction Manager's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

1. Change Proposal Request

a. When Owner requests Contractor to present a proposal to accomplish a change in the Work, the request will be made in the form of a Change Proposal Request (CPR) prepared by Construction Manager. The CPR will describe the change and request Contractor to propose a cost and Contract Price and/or Contract Time change. Contractor will propose cost and/or time changes, if any, sign the CPR and return it to Construction Manager. If requested by Owner or Construction Manager, Contractor shall provide an itemized breakdown of the cost of the change. Construction Manager will make recommendations to Owner concerning acceptance. If the CPR is approved by Owner, the CPR will be included in a Change Order. Contractor is not authorized to proceed with a change contained in a CPR until the Change Order is properly signed and issued.

b. When the Contractor desires to propose changes to the Work, it may initiate a CPR in the

same form as provided in Paragraph 10.01A.1.a. and submit the CPR to the Construction Manager for the Engineer's review and recommendation.

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Construction Manager covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Construction Manager or by Engineer through Construction Manager pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Construction Manager's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Construction Manager for decision. A decision by Construction Manager shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Construction Manager and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Construction Manager and the other party to the Contract within 60 days after the start of such event (unless Construction Manager allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Construction Manager and the claimant within 30 days after receipt of the claimant's last submittal (unless Construction Manager allows additional time).

C. *Construction Manager's Action:* Construction Manager will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or

3. notify the parties that the Construction Manager is unable to resolve the Claim if, in the Construction Manager's sole discretion, it would be inappropriate for the Construction Manager to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Construction Manager does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Construction Manager's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work, or the reasonable cost that would have been incurred in the case of deleted Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, training, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above. For Change Order pricing, the Labor Surcharge (social security contributions, unemployment excise, and payroll taxes) shall be 27 percent of the sum of the wages, vacation, and fringe benefits (workers' compensation, training, health and retirement benefits, sick leave, bonuses, and holiday pay).

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale

of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Construction Manager, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Construction Manager, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain. For Change Order pricing, bonds and insurance shall be 1 percent of the Change Order value for both additive and credit changes that are above the original Contract value and 0 percent of the Change Order value for both additive and credit changes that are below the original Contract value.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Construction Manager an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Construction Manager.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Construction Manager to

reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Construction Manager subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item. Work described in the Contract Documents, or reasonably inferred as required for a functionally complete installation, but not identified in the listing of unit price items shall be considered incidental to unit price work listed and the cost of incidental work included as a part of the unit price.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the total cost of a particular item of Unit Price Work amounts to 10 percent or more of the Contract Price at time of Notice of Award and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and if there is no corresponding adjustment with respect to any other item of Work; and if Contractor believes that Contractor has incurred additional expense as a result thereof; or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a claim for an adjustment in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Construction Manager and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum including overhead and profit not necessarily in accordance with Paragraph 12.01.C.2, and shall include the cost of any secondary impacts that are foreseeable at the time of pricing the cost of extra Work; or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (either by estimate before the work is performed or force account) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a

fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the reasonable cost that would have been incurred to perform the Work plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Construction Manager and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

C. No extension of the Contract Time will be allowed for additional Work or for claimed delay unless the additional Work contemplated or claimed delay is shown to be on the critical path of the Project's schedule of construction or Contractor can show by Critical Path Method analysis how the additional Work or claimed delay adversely affects the critical path.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Construction Manager, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be in accordance with Paragraph 12.02 C., and shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Construction Manager, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Construction Manager, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them

proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Construction Manager timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Construction Manager's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Construction Manager.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Construction Manager, it must, if requested by Construction Manager, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Construction Manager timely notice of Contractor's intention to cover the same and Construction Manager has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Construction Manager, it must, if requested by Construction Manager, be uncovered for Construction Manager's observation and replaced at Contractor's expense.

B. If Construction Manager considers it necessary or advisable that covered Work be observed by Construction Manager or inspected or tested by others, Contractor, at Construction Manager's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Construction Manager may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); or Owner shall be entitled to accept defective Work in accordance paragraph 13.08 in which case Contractor shall still be responsible for all costs associated with exposing, observing, and testing the defective Work. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Construction Manager, remove it from the Project and

replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and

replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If (prior to Construction Manager's recommendation of final payment), instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Construction Manager as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Construction Manager's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Construction Manager to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors,

Construction Manager and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Construction Manager. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Construction Manager for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or

other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. Retention - The Owner will deduct from each progress payment and retain as part security, ten (10) percent of the amount earned until the final payment.

4. Pursuant to Public Contract Code Section 22300, for moneys earned by the Contractor and withheld by the Owner to ensure the performance of the Contract, the Contractor, may, at their option, choose to substitute securities meeting the requirements of said Section 22300. In the event the Contractor wishes to choose this option, the Contractor shall enter into an escrow agreement with the Owner and the escrow agent, a qualified bank to be acceptable to the Owner, in the form of the agreement included in the project specifications. The costs of such escrow shall be paid by the Contractor. The securities to be deposited in said escrow account shall be equivalent, in fair market value, to the amount to be withheld as performance retention. The securities shall be held in accordance with the provisions of Public Contract Code Section 22300, and the implementing agreement.

5. Contractor shall have the obligation of ensuring that such securities deposited are sufficient so as to maintain, in total fair market value, an amount equal to the cash amount of the sums to be withheld under the Contract. If, upon written notice from the Owner, or from the appropriate escrow agent, indicating that the fair market value of the securities has dropped below the dollar amount of moneys to be withheld by the Owner to ensure performance, Contractor shall, within five days of the date of such notice, post additional securities as necessary to ensure that the total fair market value of all such securities held by the Owner, or in escrow, is equivalent to the amount of money to be withheld by the Owner under the Contract.

6. Any Contractor wishing to exercise this option shall give notice in writing to Owner, and shall thereafter execute an escrow agreement in the form of the form included with these Contract Documents

7. Materials, as used herein, shall be considered to be those items that are fabricated and manufactured goods and equipment. Only those materials for which the Contractor can transfer clear title to the Owner will be qualified for partial payment. The Contractor may request payment of seventy-five (75) percent of the actual net cost of these materials, not to exceed fifty (50) percent of the total adjusted line item extension as found in the bid schedule.

8. To receive partial payment for materials and equipment delivered to the Site, but not incorporated in the Work, it shall be necessary for the Contractor to submit to the Construction Manager a list of such materials, at least seven (7) days prior to submitting the monthly estimate of amount earned for work completed. At the Construction Manager's sole discretion, the Construction Manager will approve items for which partial payment is to be made subject to the following:

a. Only equipment or materials that have received favorable review of shop drawings will qualify.

b. Eligible equipment or materials must be delivered and properly stored, protected, and maintained in a manner favorably reviewed by the Construction Manager, at the job site or at a bonded warehouse.

c. The Contractor's actual net cost for the materials must be supported by invoices of suppliers, or other documentation requested by the Construction Manager.

d. Materials or equipment delivered to the Site less than thirty (30) days prior to their scheduled incorporation in the Work shall not qualify.

e. Final payment shall be made only for materials actually incorporated in the Work. Upon acceptance of the Work, all materials remaining for which advance payments had been made shall revert to the Contractor, unless otherwise agreed, and partial payments made for these items shall be deducted from the final payment for the Work.

f. Partial payments for materials and equipment on hand shall not be deemed to be final payment for the material nor relieve the Contractor of its obligations under the Contract.

g. Partial payments for materials and equipment on hand shall be subject to retention in accordance with the Contract Documents

9. After receipt of the last progress payment, but prior to acceptance of the Work by the Owner, the Contractor shall send a letter to the Construction Manager. The letter, pursuant to California Public Contract Code Section 7 100, shall state that acceptance of the final payment described below shall operate as and shall be, a release to the Owner, the Construction Manager, the Designer, and their duly authorized agents, from all claim of and/or liability to the Contract arising by virtue of the Contract related to those amounts. Disputed Contract claims in stated amounts previously filed as provided in Paragraph 00700-7.03b, Claims, may be specifically excluded by the Contractor from the operation of the release.

B. Review of Applications

1. Construction Manager will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Construction Manager's recommendation of any payment requested in an Application for Payment will constitute a representation by Construction Manager to Owner, based on Construction Manager's observations on the Site of the executed Work as an experienced and qualified design professional and on Construction Manager's review of the Application for Payment and the accompanying data and schedules, that to the best of Construction Manager's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Construction Manager's responsibility to observe the Work.

3. By recommending any such payment Construction Manager will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Construction Manager in the Contract Documents; or
- b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Construction Manager's review of Contractor's Work for the purposes of recommending payments nor Construction Manager's recommendation of any payment, including final payment, will impose responsibility on Construction Manager:

- a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Construction Manager may refuse to recommend the whole or any part of any payment if, in Construction Manager's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Construction Manager may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Construction Manager's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Construction Manager has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Construction Manager's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor. Payment will be made by the Owner to the Contractor in accordance with Owner's normal accounts payable procedure.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Construction Manager because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Construction Manager, Owner will give Contractor immediate written notice (with a copy to Construction Manager) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Construction Manager in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Construction Manager issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Construction Manager shall make an inspection of the Work to determine the status of completion. If Construction Manager does not consider the Work substantially complete, Construction Manager will notify Contractor in writing giving the reasons therefor.

C. If Construction Manager considers the Work substantially complete, Construction Manager will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There

shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Construction Manager as to any provisions of the certificate or attached list. If, after considering such objections, Construction Manager concludes that the Work is not substantially complete, Construction Manager will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Construction Manager considers the Work substantially complete, Construction Manager will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Construction Manager believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Construction Manager will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Construction Manager in writing prior to Construction Manager's issuing the definitive certificate of Substantial Completion, Construction Manager's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Construction Manager to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Construction Manager in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Construction Manager to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Construction Manager shall make an inspection of that part of the Work to determine its status of completion. If Construction Manager does not consider that part of the Work to be substantially complete, Construction Manager will notify Owner and Contractor in writing giving the reasons therefor. If Construction Manager considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Construction Manager will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Final Payment

1. After Contractor has, in the opinion of Construction Manager, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Construction Manager's Review of Application and Acceptance

1. If, on the basis of Construction Manager's observation of the Work during construction and final inspection, and Construction Manager's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Construction Manager is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Construction Manager will, within ten days after receipt of the final Application for Payment, indicate in writing Construction Manager's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Construction Manager will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Construction Manager will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Forty-five days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Construction Manager, less any sum Owner is entitled to set off against Construction Manager's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Construction Manager so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully

completed and accepted) and recommendation of Construction Manager, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Construction Manager with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure

to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Construction Manager or Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02A. occur, Owner will provide written notice to Contractor and Surety to arrange a conference with Contractor and Surety to address Contractor's failure to perform the Work. Conference shall be held not later than 15 days, after receipt of notice.

1. If the Owner, the Contractor, and the Surety do not agree to allow the Contractor to proceed to perform the Construction Contract, the Owner may, to the extent permitted by Laws and Regulations, declare a Contractor Default and formally terminate the Contractor's right to complete the Contract. Contractor Default shall not be declared earlier than 20 days after the Contractor and Surety have received notice of conference to address Contractor's failure to perform the Work.

2. If Contractor's services are terminated, Surety shall be obligated to take over and perform the Work. If Surety does not commence performance thereof within 15 consecutive calendar days after date of an additional written notice demanding Surety's performance of its obligations, then Owner, without process or action at law, may take over any portion of the Work and complete it as described below.

a. If Owner completes the Work, Owner may exclude Contractor and Surety from the site and take possession of the Work and of all tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by Contractor and Surety (without liability to Contractor and Surety for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor or Surety but which are stored elsewhere, and finish the Work as Owner may deem expedient.

3. Whether Owner or Surety completes the Work, Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by Owner arising out of or resulting from completing the Work, such excess will be paid to Contractor. If such claims, costs, losses and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses and damages incurred by

Owner will be reviewed by Engineer as to their reasonableness and when so approved by Engineer incorporated in a Change Order, provided that when exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

4. Neither Owner, Engineer, nor any of their respective consultants, agents, officers, directors or employees shall be in any way liable or accountable to Contractor or Surety for the method by which the completion of the said Work, or any portion thereof, may be accomplished or for the price paid therefor.

5. Owner, notwithstanding the method used in completing the Contract, shall not forfeit the right to recover damages from Contractor or Surety for Contractor's failure to timely complete the entire Contract. Contractor shall not be entitled to any claim for damages on account of the method used by Owner in completing the Contract.

6. Maintenance of the Work shall continue to be Contractor's and Surety's responsibilities as provided for in the bond requirements of the Contract Documents or any special guarantees provided for under the Contract Documents or any other obligations otherwise prescribed by law.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor, Construction Manager and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Construction Manager fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Construction Manager, and provided Owner or Construction Manager do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Construction Manager has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner

and Construction Manager, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Construction Manager for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
2. agrees with the other party to submit the Claim to another dispute resolution process, or
3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

B. No action or failure to act by the Owner, the Engineer, or the Construction Manager shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state of California.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

17.07 *Penalty for Collusion*

A. If, at any time, it is found that the person, firm, or corporation to whom the Contract has been awarded has, in presenting any bid or bids, colluded with any other party or parties, then the Contract shall be null and void, and the

Contractor and its sureties shall be liable for loss or damage which the Owner may suffer thereby, and the Owner may advertise for new bids for said Work.

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SECTION 00805

SUPPLEMENTARY CONDITIONS

1.01 SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend and supplement Section 00700, GENERAL CONDITIONS, and other provisions of the contract documents as indicated below. All provisions of the General Conditions that are amended or supplemented remain in full force and effect as so amended or supplemented. All provisions of the General Conditions which are not so amended or supplemented remain in full force and effect.

1.02 DEFINED TERMS

The terms used in these Supplementary Conditions which are defined in the General Conditions have the meaning assigned to them in the General Conditions.

1.03 AMENDMENTS AND SUPPLEMENTS

The following are instructions that amend or supplement specific paragraphs in the General Conditions and other contract documents:

A. Paragraph 00700-3.03.B.2:

Add the following paragraph:

Where conflicts exist among the Contract Documents and/or any reference specifications, such conflicts shall be clarified according to the following order, the first ranked taking precedence over the lower ranked:

1. Amendments, Change Orders or other modifications to the Contract Documents, as executed by the City in accordance with the requirements of the Contract Documents.
2. Agreement
3. Supplementary Conditions
4. General Conditions
5. Division 01 Documents
6. Plans and Technical Specifications
7. Notice Inviting Bids and Information to Bidders
8. Contract Payment Bond
9. Performance Bond
10. Any provisions required by law or valid regulations to be inserted in this contract, whether actually inserted or not
11. Appendices (photographs, data contained in reports, and other information).

Additional rules of interpretation:

1. Written numbers over figures, unless obviously incorrect.

2. Figured dimensions over scaled dimensions.
3. Large-scale drawings over small-scale drawings.
4. Any conflict between a bill or list of materials shown in the Contract Documents and the actual quantities required to complete the Work required by Contract Documents, will be resolved in favor of the actual quantities, date (i.e., the most recent document), and if the dates are the same or not determinable, then in favor of Specifications.

B. Paragraph 00700-4.05B:

Add the following paragraph:

Monument Preservation:

1. Contractor shall comply with the Professional Land Surveyors' Act – Business & Professions Code, Section 8771(b) regarding referencing, preserving, and reconstructing monuments, whether or not the monuments are shown on the plans.
2. Before beginning any construction on the Project, the following tasks must be accomplished by or under the direction of a licensed land surveyor licensed in the State of California:
 - a. Conduct records research to identify horizontal and vertical control monuments, prepare and submit a map to the City of the monuments within the Project site. The map will identify if a monument is in a well, covered, or obliterated.
 - b. Locate and reference monuments. A preconstruction corner record or record of survey of the references shall be filed with the County Surveyor. The City shall receive a copy of the submitted corner or record of survey documents.
3. Before the certificate of completion for the Project is issued by the City, the following tasks must be accomplished by or under the direction of a licensed land surveyor licensed in the State of California:
 - a. Monuments shall be reset in the surface of the new construction in a monument box by California Concrete Pipe, Frame No. A-578 and Cover No. A-580.
 - b. Monuments wells shall be raised to the new surface elevation.
 - c. For section corners, quarter section corners, or center quarter section corners located in unimproved areas, the monuments shall be reset by placing heavily galvanized iron pipe or galvanized iron stake not less than 2-inches in diameter, minimum 3 ft long and 1 ft below the surface.
 - d. File either a post-construction corner record or a record of survey with the County Surveyor for the reset monuments. The City shall receive a copy of the submitted corner record or record of survey documents.

D. Paragraph 00700-6.11.A.4:

Add the following paragraph:

All Contractor activities shall be coordinated with the City Public Works Staff. Contractor operations shall not interfere with Utica Water and Power Authority activities or City operation of the wastewater collection/conveyance system.

1.04 PARAGRAPH DELETIONS

The following paragraphs/articles in the General Conditions are deleted:

A. Paragraph 00700-3.04 *Amending and Supplementing Contract Documents*

B. Paragraph 00700-3.05 *Reuse of Documents*

C. Paragraph 00700-5.01 *Performance, Payment, and Other Bonds*

D. Paragraph 00700-5.02 *Licensed Sureties and Insurers*

E. Paragraph 00700-5.03 *Certificates of Insurance*

F. Paragraph 00700-5.04 *Contractor's Liability Insurance*

G. Paragraph 00700-5.05 *Owner's Liability Insurance*

H. Paragraph 00700-5.06 *Property Insurance*

I. Paragraph 00700-6.01 *Supervision and Superintendence*

J. Paragraph 00700-6.02 *Labor: Working Hours*

K. Paragraph 00700-6.08 *Permits*

L. Paragraph 00700-6.09 *Laws and Regulations*

M. Paragraph 00700-6.10 *Taxes*

N. Paragraph 00700-6.12 *Record Documents*

O. Paragraph 00700-6.20 *Indemnification*

P. Paragraph 00700-8.08 *Inspections, Tests, and Approvals*

Q. 00700-ARTICLE 12 CHANGE OF CONTRACT PRICE; CHANGE OF
CONTRACT TIMES

- R. Paragraph 00700-14.02 *Progress Payments*
- S. Paragraph 00700-15.01 *Owners May Suspend Work*
- T. Paragraph 00700-15.02 *Owner May Terminate for Cause*
- U. Paragraph 00700-15.03 *Owner May Terminate for Convenience*
- V. 00700-ARTICLE 16 DISPUTE RESOLUTION
- W. Paragraph 00700-17.01 *Giving Notice*
- X. Paragraph 00700-17.05 *Controlling Law*

****END OF SECTION****

CITY OF ANGELS
PURDY ROAD WATER AND SEWER IMPROVEMENTS

Division 1 – General Requirements

Section 01010	Location and Summary of Work
Section 01015	Contract Time
Section 01020	Work Sequence
Section 01045	Modifications to Existing Structures and Piping
Section 01050	Field Engineering
Section 01060	Safety and Health
Section 01065	Water Pollution Control
Section 01070	Environmental Stewardship
Section 01200	Project Meetings
Section 01300	Submittals
Section 01310	Construction Schedule and Reports
Section 01700	Contract Closeout

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SECTION 01010

LOCATION AND SUMMARY OF WORK

PART 1 - GENERAL

1.01 GENERAL

This section consists of a description of the items of work included in the base bid and the location of the work.

The Contractor is advised that excavation through rock materials may be required for installation of water mainlines. Contractor shall be prepared to use special rock trenching equipment such as large excavators (Komatsu PC400, CAT 345, or larger) equipped with pneumatic hammer and/ or rock pick attachments. Cost for use of special rock trenching equipment shall be included in the respective pipeline construction bid items.

Hard rock materials shall be defined as material that may require systematic drilling or blasting and cannot be removed with normal effort by an excavator (Caterpillar Model 345B or equivalent powered equipment) and cannot be ripped to a depth of 200 mm with normal efforts. Should special rock trenching equipment encounter refusal as demonstrated to the City, subsequent rock removal efforts to the required depth shall be subject to additional compensation in accordance with Section 00700, General Conditions of the Construction Contract.

1.02 PROJECT LOCATION

Work associated with this project shall take place generally in the City of Angels along Purdy Road.

Work zones and staging areas shall be enclosed with temporary security fencing as directed by the City.

Waterline construction is generally within the City right-of-way. Construction of appurtenances will require entry into private property. Sewer rehabilitation work will also require entry to private property. The City will arrange for right-of-entry to private property by the Contractor. The City will require one week's notice from the Contractor requesting entry to private property.

1.03 COOPERATION

The Contractor shall conduct work in a manner that will not impair the essential function of conveying wastewater through the Purdy Road gravity sewer to the Booster Way Sewer. The Contractor shall be prepared to cooperate fully with the City, arranging for and installing bypass pumping equipment, electrical equipment, testing and acceptance procedures, and traffic control measures, to avoid disruptions. Contractor staging within the Project shall be

limited to the areas shown on the Plans and shall not disrupt circulation of pedestrians, bicycles, and vehicles. Contractor ingress/egress to the sites shall be coordinated and scheduled with City Public Works Department staff.

Contractor shall provide access to private residences, City Fire Department, and parking areas as directed by the City. The City will restrict parking on Purdy Road during waterline construction during normal construction hours. All traffic lanes shall be restored at the end of each day by the Contractor.

1.04 **WORK INCLUDED AS BASE BID ITEMS**

The work under the base bid items of this contract consists of the following project elements:

1. Mobilization and Demobilization

Mobilization shall consist of the preparatory work and operations, including but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of the Contractor's offices, buildings, security fencing, and other facilities necessary for work on the project; water pollution control; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

Demobilization shall include, upon substantial completion of the contracted work, the removal of all signs, construction trailers, storage trailers and bins, temporary fencing, garbage, construction debris, equipment, utility services not scheduled to remain, portable toilet facilities, and all excess construction material not included and paid for within other bid items. Work shall also include the repair, restoration and/or replacement of facilities damaged by the Contractor and/or subcontractors and suppliers, including driveways, parking areas, streets, pipelines, and landscaping, and the submittal of Record Drawings. Work area shall be policed clean and restored to original condition or better as further shown on the plans.

Payment for Mobilization/Demobilization shall not exceed 75% of the bid amount upon completion of the mobilization process with the remainder to be paid at completion of demobilization for the Project.

2. SWPPP Implementation

Work under this item includes preparing, permitting, and implementing the Storm Water Pollution Prevention Program (SWPPP). Work includes all tools, equipment, materials, and labor necessary to implement, maintain, and repair the SWPPP and BMPs. This includes, but is not limited to, testing and/or reporting that may be necessary to maintain compliance. The Contractor is required to have a registered QSP on staff or contracted who shall be named in the SWPPP and certifications provided prior to the start of construction.

The Contractor shall install BMPs, maintain BMPs, perform inspections, remove BMPs, and prepare documentation applicable to the work. At a minimum, inspections shall be done weekly and 24 hours prior to, during, and after each rain event, and every 24 hours during extended rain events. The Contractor is solely responsible for preparing and maintaining inspection and monitoring records. Copies shall be made available to the City upon request.

The Contractor shall immediately correct or replace a BMP deemed ineffective by the Contractor or City at no additional cost to the City. If measures taken by the Contractor are inadequate to effectively control water pollution, the City can direct the Contractor to revise operations and/or SWPPP efforts.

The contract price for SWPPP Implementation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work as specified herein.

3. Traffic Control – Purdy Road

Work under this item includes preparation of a traffic control/detour plan and all labor, materials, and equipment required to implement traffic control in accordance with the approved traffic control/detour plan and Caltrans *Manual of Traffic Control* along Purdy Road.

The contract price for Traffic Control – Purdy Road shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work as specified herein.

4. Construct 8-inch Waterline – Purdy Road

Work under this item shall include all labor, materials, tools, and equipment required to install the 8-inch waterline in Purdy Road as shown on the plans. Work shall also include pavement removal, trench excavation, installation of trench bedding/backfill to the specified compaction, flushing, testing, disinfection, and preparation or restoration of the pavement to the finish grade as shown on the plans. Material that is removed and not incorporated in the work shall be disposed of off-site at the Contractor's expense.

The contract price for Construct 8-inch Waterline in Purdy Road shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

5. Install Fire Hydrant Assembly

Work under this item shall include all labor, materials, tools, and equipment required to install fire hydrants as shown on the plans

The contract price for Install Fire Hydrant shall include full compensation for all labor, materials, tools, equipment, connections, excavation, backfill, thrust blocks, surface restoration, incidentals, and for accomplishing all the work involved in the fire hydrant

assembly including tee and valve, 6-inch lateral waterline, and fire hydrant and appurtenances as specified herein.

6. Install Air Release Valve

Work under this item shall include all labor, materials, tools, and equipment required to furnish and install air release valves as shown on the plans. Work shall also include flushing testing, and disinfection as specified.

The contract price for Install Air Release Valve shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

7. Install Dead-end Blow-off

Work under this item shall include all labor, materials, tools, and equipment required to furnish and install dead-end blow-offs as shown on the plans. Work shall also include flushing testing, and disinfection as specified.

The contract price for Install Dead-end Blow-off shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

8. Construct Connection to Existing Waterline – Purdy Road

Work under this item shall include all labor, materials, tools, and equipment required to connect to existing water pipelines in Purdy Road as shown on the plans. Work shall also include USA notification and coordination; potholing; verification of horizontal and vertical tie-in locations; sawcutting; excavation; coordination with City staff for shutdowns; removal of existing pipe as necessary to make the proposed connections; flushing, testing, and disinfection; bedding and backfill; all valves and fittings depicted in connection details; thrust blocks; compaction; and pavement restoration.

The contract price for Construct Connection to Existing Pipeline – Purdy Road shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

9. Install Residential Water Services

Work under this item shall include all labor, materials, tools, and equipment required to install residential laterals as shown on the plans. Work shall also include USA notification and coordination; potholing; verification of horizontal and vertical tie-in locations; sawcutting; excavation; piping; meter box, all valves and fittings as depicted in water service details to make connections; flushing, testing, and disinfection; bedding and backfill; compaction; and final asphalt restoration as shown on the Plans.

The contract price for Install Residential Water Services shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

10. Bypass Pumping MH 55-7 to MH 55-5

Work under this item includes the supply, installation, operation, onsite monitoring, and removal of a bypass piping and pumping system as shown on the plans, including installation, maintenance, and removal of a secondary containment system and operation of all temporary power facilities required for the bypass system. Work shall also include protection of bypass piping, preparation of manholes to accept bypass piping, and installation/removal of temporary plugs.

The contract price for Bypass Pumping MH 55-7 to MH 55-5 shall include full compensation for finishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work as specified herein.

11. Bypass Pumping MH 55-5 to MH 55-2

Work under this item includes the supply, installation, operation, onsite monitoring, and removal of a bypass piping and pumping system as shown on the plans, including installation, maintenance, and removal of a secondary containment system and operation of all temporary power facilities required for the bypass system. Work shall also include protection of bypass piping, preparation of manholes to accept bypass piping, and installation/removal of temporary plugs.

The contract price for Bypass Pumping MH 55-5 to MH 55-2 shall include full compensation for finishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work as specified herein.

12. Rehabilitation of 8-inch Sanitary Sewer

Work under this item involves all labor, materials, tools, and equipment, and incidentals needed to remove and replace existing 8-inch sanitary sewer pipe where shown including excavation; removal of sewer pipe; disposed of sewer pipe offsite; installation of replacement sewer pipe; installation of trench bedding/ backfill to the specified compaction; connections to existing sewer pipelines, testing, and restoration of finish ground.

The contract price for Rehabilitation of 8-inch Sanitary Sewer shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work including successful testing as specified herein.

13. Sheeting, Shoring, and Bracing

Work under this item shall include the design, fabrication, installation, maintenance, and removal of all necessary sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation.

The contract price for Sheeting, Shoring, and Bracing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for accomplishing all the work as specified herein.

****END OF SECTION****

SECTION 01015

CONTRACT TIME

PART 1 - GENERAL

1.01 COMPLETION DATE SCHEDULE

Time for final completion: 120 calendar days.

1.02 SCHEDULE

The following schedule contains specific dates which shall be adhered to and are the last acceptable date unless modified in writing between the City and the Contractor. Specific dates, as used herein, shall mean Working days after the date of the notice to proceed. For the period of time that any portion of the project remains unfinished after the time fixed for completion by these specific dates, with the exception of final completion, the Contractor shall pay to the City the amount of liquidated damages set forth in Section 00500, AGREEMENT. As required by Section 01310, CONSTRUCTION SCHEDULES AND REPORTS, the Contractor shall furnish to the City an acceptable construction schedule to complete the various portions of the project within the time allowed by the specific dates. The Contractor's construction schedule shall reflect the entire contract time defined in this section. Substantial completion as delineated below is defined in Section 00700, GENERAL CONDITIONS.

Specific Activity	Calendar Days from Receipt of Notice to Proceed
Complete Water Line Improvement	90
Complete Sewer Rehabilitation	100
Substantial Completion	110
Final Completion	120

****END OF SECTION****

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SECTION 01020

WORK SEQUENCE

PART 1 - GENERAL

1.01 BACKGROUND

- A. The Purdy Road sewer is an integral element of the City backbone wastewater conveyance system. The Purdy Road sewer discharges to the Booster Way Sewer and eventually the City wastewater treatment plant. The Purdy Road sewer shall remain in continuous service throughout construction except during scheduled shutdowns for pipeline connections including connections for bypass pumping and piping systems.

Contractor work associated with shutdowns may have to occur during off-peak hours, such as late nights and weekends and not during or within forty-eight (48) hours following significant rain events. Contractor shall take into account the need to work during said off-peak hours within its bid proposal and no additional costs to the City will be warranted. Proposed shutdowns and submittal of requests shall be included on the Project schedule specified in Section 01310, CONSTRUCTION SCHEDULE AND REPORTS.

- B. Connection of temporary and permanent sewer piping to the existing network at manholes will require a shutdown of the sewer. Shutdown requests for piping connection shall be coordinated with the City prior to submission of the shutdown notification request to the City. Shutdown of sewer systems will only be scheduled for weekday hours of 11:00 pm – 5:00 am. Contractor shall take into account the need to work during said hours within its bid proposal and no additional costs to the City will be warranted. A minimum fourteen-day notification is required for shutdown requests.
- C. The work may be subdivided into one or more work items. A work item shall be completed as a unit or subproject in accordance with the Contract. The required completion of a work item by a certain deadline may be necessary due to other construction constraints as described in Section 01015, CONTRACT TIME.
- D. The details of each work item are in the specifications and on the plans. The completion of a work item shall provide an operating system or facility that is substantially complete and available for utilization. All work shown on the plans and in the specifications is required, whether or not it is specifically addressed in the table of work items in this section.
- E. The work items listed below describe phases of work and their respective requirements. Substantial completion of a work item includes successful completion of performance testing and the commissioning period. The Work Items and the Contractor Requirements are listed in Table 1. Table 1 does not include all work to be performed by Contractor. Construction activities are illustrated in Drawing C0.11.

- F. Contractor shall take all necessary measures to avoid water quality impacts to an un-named creek from erosion or discharges created by construction activities.
- G. Purdy Road shall be reopened by the Contractor for vehicular traffic at the end of construction each day.

1.02 GENERAL REQUIREMENTS

The Contractor shall observe the following general requirements:

- A. Only where specifically indicated, City forces will be responsible for removing facilities from service, including draining and subsequent cleaning. In all other instances, the Contractor shall be responsible for draining and cleaning existing piping or manholes.
- B. The Contractor shall provide all necessary temporary pumps, piping, electrical wiring, controls and labor during and subsequent to all shutdown activities as required. Pumps and upstream water levels shall be continuously monitored by the Contractor during all temporary pumping operations to insure against flooding and un-planned bypassing. Where required, the Contractor shall operate long-term bypass piping and pumping facilities to facilitate construction and to maintain continuous operation of sewers.
- C. The Contractor shall maintain adequate access to temporary piping systems, utilities, and equipment during construction to allow continued operation and maintenance by City personnel and other City contractors to take place. In addition, the Contractor's attention is directed to Paragraph 01010-1.03, Cooperation.

1.03 STAGING OF CONSTRUCTION

The Contractor shall comply with the following:

- A. Mainline (water) should be constructed, flushed, successfully pressure tested, and disinfected by the Contractor. City forces will sample and bacteriological test prior to Contractor scheduling connection to existing mainline. Bacteriological testing by City forces will have a minimum downtime of two days. Following connection to existing mainline, Contractor shall disinfect as directed by City.
- B. Sewer construction activities shall be staged due to the need to maintain operation of the Purdy Road sewer, except when an approved shutdown has been arranged. The maximum shutdown period will be six hours unless otherwise approved. All shutdowns must be coordinated with and approved by the City as described previously. Shutdowns shall be scheduled from 11:00 p.m. to 5:00 a.m. unless otherwise approved. To maintain conveyance of wastewater through the Purdy Road sewer during scheduled sewer replacement, a bypass pumping system shall be installed and operated when required. Transitioning to/from the bypass pumping shall be as seamless as possible to minimize the downtime for wastewater conveyance.

- C. Temporary bypass pumping and piping systems shall be in place and operational prior to sewer pipeline/manhole demolition or sewer construction activities to commence.
- D. As part of the installation of temporary bypass pumping systems, the Contractor shall install plugs at the manholes where indicated during an approved shutdown. The Contractor shall assume that cleaning of the manhole is required to facilitate the installation of sewer plugs.

1.04 SUMMARY OF WORK SEQUENCE REQUIREMENTS

Staging of construction activities is summarized in Table 1 below.

TABLE 1
WORK SEQUENCE

<u>Description</u>	<u>Requirements</u>
Mobilization and Start-up	
	1) Prepare shop drawing submittals including traffic control plan for City review. 2) Prepare/submit water pollution control plan. 3) Place required BMPs prior to construction. 4) Submit documentation/permit applications for dewatering discharge location. 5) Construct staging area and move onsite. 6) Construct dewatering system (if required). 7) Submit temporary bypass pumping/piping plan for approval. 8) Place construction area signs, changeable messaging signs, and “No Parking” signs for the stage of work underway.
Stage 1	
	1) Construct 11-FT wide gravel access road from Purdy Road to private driveway to 714 Purdy Road. 2) Construct (P) 8-inch water main up to connection to (E) 10-inch water main in three stages. 3) Flush, test and disinfect new water main. 4) City to undertake bacteriological testing of new water main. 5) Following successful testing, Contractor to connect (P) 8-inch water main to (E) 10-inch water main and disinfect as directed by City. 6) Contractor to reconstruct Purdy Road.

<u>Description</u>	<u>Requirements</u>
Stage 2	
	1) Plug MH. 55-7 at outlet and construct bypass pump/piping system to MH 55-6. Plug inlet to MH 55-6 and begin bypass pumping. 2) Rehabilitate section of (E) 8-inch sanitary sewer between MH 55-6 and MH 55-7 3) Test new sanitary sewer. 4) Upon completion of testing, remove plugs at MH 55-6 and MH 55-7 and discontinue bypass pumping.
Stage 3	
	1) Plug MH 55-5 outlet and construct bypass pump/piping system to MH 55-2. Plug inlet to MH 55-2 and begin bypass pumping. 2) Rehabilitate sections of (E) 8-inch sanitary sewer between MH 55-2 and MH 55-5. 3) Test new sanitary sewer. 4) Upon completion of testing, remove plugs at MH 55-2 and MH 55-5 and discontinue bypass pumping.

****END OF SECTION****

SECTION 01045

MODIFICATIONS TO EXISTING STRUCTURES AND PIPING

PART 1 - GENERAL

1.01 SCOPE OF WORK

The Contractor shall furnish all labor, material, equipment and incidentals required to modify, alter and/or rehabilitate existing manholes as shown or specified and as required for the installation of new piping and appurtenances. Existing piping shall be removed and dismantled as necessary for the performance of structural and piping alterations in accordance with the requirements herein specified.

1.02 GENERAL

The Contractor shall cut, repair, reuse, excavate, demolish or otherwise remove parts of the existing manholes, piping, or appurtenances as indicated on the plans, herein specified, or as necessary to permit completion of the work under this contract. The Contractor shall dispose of surplus materials resulting from the above work as specified in Section 02100, SITE PREPARATION.

The Contractor shall dismantle and remove all piping and other appurtenances required for the completion of the work. Where called for or required, the Contractor shall cut existing conduits for the purpose of making connections thereto.

When removing materials, the Contractor shall take all precautions and use all necessary barriers and other protective devices so as not to damage the manholes beyond the limits necessary for the new work, nor to damage the structures or contents by falling or flying debris.

All work of altering existing manholes shall be done at such time and in such manner as will comply with the accepted time schedule or work sequence as specified in Section 01020, WORK SEQUENCE. Insofar as possible before any part of the work is started, all tools, equipment, and materials shall be assembled and made ready so that the work can be completed without delay.

****END OF SECTION****

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SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.01 CONSTRUCTION STAKING

A. General

The Contractor shall protect in place all City or County benchmarks or monuments. Any damaged or destroyed benchmarks or monuments shall be replaced by a California licensed surveyor at the Contractor's expense.

Reference benchmarks and base lines on the plans. From the information provided, the Contractor shall develop and make such additional surveys as are needed for construction, such as control lines, slope stakes, batter boards, stakes for pipe locations and other working points, lines, and elevations. Survey work shall be performed under the supervision of a licensed land surveyor or registered civil engineer in the State of California. Prior to starting construction, the Contractor shall submit to the City in accordance with Section 01300, SUBMITTALS, the frequency, information, and format of survey stakes and other construction control to be used for the Project.

B. Datum

The plane of reference for elevations used in the plans and specifications shall be mean sea level (MSL). Elevations below the plane of reference are designated as "minus" (-) elevations.

C. Horizontal and Vertical Control

From the base line and temporary benchmark described herein and the existing structures, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for execution of the work to the location and limit marks prescribed in the specifications or on the plans, subject to such modifications as the City may require to meet changed conditions or as a result of necessary modifications to the contract work.

D. Contractor's Layout

The Contractor shall furnish at his own expense, such stakes, equipment, tools, materials, and all labor as required in laying out any parts of the work from the base line and benchmarks shown on the plans. It shall be the responsibility of the Contractor to maintain and preserve all base line stakes and other marks until authorized to remove them; and, if such stakes or other marks are destroyed by the Contractor, or through his negligence, prior to their authorized removal, they may be replaced at the direction of the City and the

expense of replacement shall be borne by the Contractor and will be deducted from any amounts due or to become due to the Contractor.

The City may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit convenient checking of the work.

****END OF SECTION****

SECTION 01060

SAFETY AND HEALTH

1.01 GENERAL

The Contractor certifies that he is experienced and qualified to anticipate and meet the safety and health requirements of this project. Workmen involved in construction may be exposed to disease-producing organisms in wastewater and chemicals. The Contractor shall require his personnel to observe proper hygienic and safety precautions.

Solvents, gasoline, and other hazardous materials may enter the sewer and, therefore, certain areas are hazardous to open flame, sparks, or unventilated occupancy. The Contractor shall take measures to assure his personnel observe proper safety precautions when working in these areas.

The Contractor shall take all necessary precautions to avoid brush fires triggered by sparks from welding operations. The Contractor shall submit a fire prevention plan for City approval including the stationing of fire fighting personnel and equipment during welding operations.

2.01 SAFETY AND HEALTH REGULATIONS

The Contractor shall comply with Safety and Health Regulations for Construction, promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Acts, as set forth in Title 29, Code of Federal Regulations (CFR). Copies of these regulations may be obtained from Labor Building, 14th and Constitution Avenue NW, Washington, DC 20013.

The Contractor shall also comply with the provisions of the Federal and State of California Occupational Safety and Health Act (OSHA), as amended.

****END OF SECTION****

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SECTION 01065

WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 REQUIREMENTS

The Contractor shall be responsible for all costs associated with Water Pollution Control (WPC), and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for equipment, labor, permit fees or any other costs associated with WPC beyond those included in the associated bid item. The City may correct the deficiency and deduct the cost of correcting the deficiency from payment if the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation.

1.02 SCOPE

This section includes general specifications for preventing, controlling, and abating water pollution in streams, waterways, creeks, and other bodies of water.

1.03 GENERAL

The Contractor shall comply with the State Water Resources Control Board (SWRCB) Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004 (MS4 General Permit), and Order No. 2009-0009- DWQ NPDES General Permit No. CAS0000024 (Construction General Permit), as amended by NPDES permit 2012-0006-DWQ, for projects in excess of 1 acre in disturbance area.

A Water Pollution Control Plan (WCPC) can be either a SWPPP or an erosion and sediment control plan (ESCP). In general projects that are larger than 5 acres or projects between 1 acre and 5 acres that are not exempt, the Contractor must apply for a NOI under the Construction General Permit (CGP) and a SWPPP is required. Projects that are between 1 and 5 acres that are exempt or projects that are less than one acre, the Contractor shall prepare an ESCP.

Projects that disturb one acre or more of soil or disturb less than one acre but are part of a larger common plan or development or sale are subject to the CGP in addition to the construction site storm water runoff control ordinance.

The Contractor shall prepare and submit a WCPC for the City's review and written approval. WCPC will not be approved unless it contains appropriate site-specific construction site BMPs that meet the minimum requirements of the City. Any revisions to the erosion and sediment control plan shall be reviewed and approved by the City prior to implementation by the Contractor.

If the Project requires a SWPPP, the Contractor shall apply for a permit under the CGP. The City will file a NOI for the Project. The Contractor shall submit all necessary documents and complete the required form on the State Water Resources Control Board, Storm Water Multiple Application and Report Tracking System (SMARTS):

<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

After completing the application on SMARTS, the Contractor shall notify the City to certify the application. Note, the application requires the QSD to enter their name and QSD number. The City shall not responsible for delays resulting from incomplete application process.

The erosion and sediment control plan shall include the rationale used for selecting BMPs including supporting soil loss calculations, if necessary.

The SWPPP developed pursuant to the CGP may substitute for the ESCP for projects where a SWPPP is developed. SWPPP or ESCP shall be prepared by a California certified QSD. Implementation shall occur under the supervision of a California-certified QSP. Any modification of the SWPPP or ESCP prior to or during construction shall be reviewed and approved by the QSD in responsible charge. The WPC manager must be a California certified Qualified SWPPP Practitioner (QSP) certified through the California SWRCB. The Contractor shall assign one WPC manager to implement the WPCP for the project.

A. Summary

Information on forms, reports, and other documents can be found in the following manuals:

1. CalTrans Storm Water Handbooks available at:
<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>
2. California Stormwater Quality Association (CASQA) Stormwater Best Management Practice (BMP) Handbooks available at: <http://www.cabmphandbooks.com/>

Do not start job site activities until:

1. The WPCP is approved.
2. WPCP review requirements have been fulfilled. If the RWQCB requires time for review, allow 21 business days for the review.

If the Contractor operates a Contractor-support facility, protect stormwater systems or receiving waters from the discharge of potential pollutants by using water pollution control practices.

Contractor-support facilities include:

1. Staging areas
2. Storage yards for equipment and materials
3. Mobile operations
4. Batch plants for PCC and HMA
5. Crushing plants for rock and aggregate
6. Other facilities installed for the Contractor's convenience, such as haul roads

Discharges from manufacturing facilities, such as batch plants and crushing plants, must comply with the general waste discharge requirements for Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, issued by the SWRCB for "Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities" and referred to herein as "General Industrial Permit."

If the Contractor operates a crushing plant to produce rock or aggregate, obtain coverage under the General Industrial Permit. The Contractor must be covered under the General Industrial Permit for crushing plants located:

1. Outside of the job site
2. Within the job site that serve one or more contracts

If the Contractor obtains or disposes of material at a non-commercially operated borrow or disposal site, prevent water pollution due to erosion at the site during and after completion of the Contractor's activities. Upon completion of the Contractor's work, leave the site in a condition such that water will not collect or stand therein.

The City does not pay for water pollution control practices at Contractor-support facilities and non-commercially operated borrow or disposal sites.

B. Submittals

The WPC submittals shall conform to the requirements set forth in Section 13-1.01C, SUBMITTALS, of the Caltrans Standard Specifications. The Contractor shall be responsible for all costs associated with the preparation and delivery of WPC submittals to comply with these specifications, the Standard Specifications, and with all applicable storm water requirements of the City, Calaveras County, the State of California, and United States.

C. Quality Control and Assurance

The WPC quality control and assurance (QA/QC) shall conform to the requirements set forth in Section 13-1.01D, QUALITY CONTROL AND ASSURANCE, of the Caltrans Standard Specifications, the CASQA Handbook, except as modified herein, and the SWRCB

Order No. 2013-0001-DWQ and Order No. 2009-0009- DWQ, as applicable. The Contractor shall be responsible for all costs associated with the implementation of the QA/QC of WPC submittals to comply with these Provisions, the Standard Specifications, and with all applicable storm water requirements of the City, Calaveras County, the State of California, and United States.

PART 2 - PRODUCTS

2.01 MATERIALS

The WPC materials shall conform to the requirements set forth in Section 13-1.02, MATERIALS, of the Caltrans Standard Specifications, except as modified herein, and the SWRCB NPDES Permit 2013-0001-DWQ and Order No. 2009-0009- DWQ, as applicable.

PART 3 - EXECUTION

3.01 CONSTRUCTION

The WPC construction shall conform to the requirements set forth in Section 13-1.03, CONSTRUCTION, of the Caltrans Standard Specifications. The Contractor shall:

1. Install facilities and devices used for water pollution control practices before performing work activities.
2. Install soil stabilization materials for water pollution control practices in all work areas that are inactive or before storm events.
3. Repair or replace water pollution control practices within 24 hours of discovering any damage, unless a longer period is approved.

The City will not pay for the cleanup, repair, removal, disposal, or replacements of water pollution control practices due to improper installation or the Contractor's negligence.

The Contractor may request changes to the water pollution control work or the City may order changes to water pollution control work. Changes may include additional or new water pollution control practices. Additional water pollution control work may be paid for as extra work in accordance with Section 00700, GENERAL CONDITIONS.

The Contractor shall retain a printed copy of the approved WPCP at the job site and make available during site visits at the request of the City, County or State.

The Contractor shall monitor the National Weather Service's forecast on a daily basis. Monitoring and inspection shall be conducted in conformance with Section 13-1.03B and

13-1.03C of the Caltrans Standard Specifications, except as modified herein, and the SWRCB NPDES Permit 2013-0001-DWQ and Order No. 2009-0009- DWQ, as applicable. All inspection documentation shall be maintained at the site and made available by the Contractor at the request of the City, County or State.

Whenever the Contractor or the City identifies a deficiency in the implementation of the approved WPCP, correct the deficiency:

1. Immediately, unless a later date is approved
2. Before precipitation occurs

The City may correct the deficiency and deduct the cost of correcting the deficiency from payment if the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation.

3.02 **JOB SITE MANAGEMENT**

The Contractor shall perform appropriate job site management, including spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities. The Contractor shall implement effective handling, storage, usage, and disposal practices to control material pollution and manage waste and non-stormwater at the job site before they come in contact with storm drain systems and receiving waters.

Job site management shall conform to the requirements set forth in Section 13-4, JOB SITE MANAGEMENT, of the Caltrans Standard Specifications and the CASQA Handbook. Linear sediment barriers must comply with Section 13-10, TEMPORARY LINEAR SEDIMENT BARRIERS of the Caltrans Standard Specifications.

The Contractor shall be maintain and provide all submittals in accordance with Section 13-4.01B Submittals of the Caltrans Standard Specifications. The Contractor shall maintain all records on site, and provide a copy at the request of the City, County or State.

Stockpiling materials; storing pile-driving equipment and liquid waste containers; washing vehicles and equipment in outside areas; and fueling and maintaining vehicles and equipment activities must be performed at safe distance, such that no illicit discharge may occur, from concentrated flows of stormwater, drainage courses, and inlets, unless otherwise authorized by the City.

The Contractor shall be responsible for all costs associated with the performing job site management, and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for job site management.

3.03 **TEMPORARY SOIL STABILIZATION**

The use, submittals, materials and construction of temporary soil stabilization shall conform to the requirements set forth in Section 13-5, TEMPORARY SOIL STABILIZATION, of the Caltrans Standard Specifications and the CASQA Handbook. The Contractor shall be responsible for all costs associated with performing job site management to comply these Provisions, the Standard Specifications, and with all applicable storm water requirements of the City, Calaveras County, the State of California, and United States.

The City will designate the areas to receive soil stabilization materials by directing the placement of stakes or other suitable markers in increments of 1 acre or less.

The Contractor shall be responsible for all costs associated with the installation, maintenance, relocation, or removal of temporary stabilization measures, and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for installing, relocating, maintaining, or removing temporary soil stabilization.

3.04 **TEMPORARY SEDIMENT CONTROL**

The use, submittals, materials and construction of temporary sediment controls, excluding temporary linear sediment barriers, shall conform to the requirements set forth in Section 13-6, TEMPORARY SEDIMENT CONTROL, of the Caltrans Standard Specifications. Install, relocate, and remove control measures as needed to comply with all applicable regulations.

The Contractor shall be responsible for all costs associated with the installation, maintenance, relocation, or removal of temporary sediment control measures, and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for installing, relocating, maintaining, or removing temporary sediment controls.

3.05 **TEMPORARY TRACKING CONTROL**

The use, submittals, materials and construction of temporary linear sediment barriers shall conform to the requirements set forth in Section 13-7, TEMPORARY TRACKING CONTROL, of the Caltrans Standard Specifications and the CASQA Handbook. Install, relocate and remove facilities as needed to comply with all applicable regulations.

The Contractor shall retain and submit records of street sweeping activities, including sweeping times, sweeping locations, and the quantity of disposed sweeping waste. Records shall be maintained on-site and made available to the City, County or State upon request.

The Contractor shall be responsible for all costs associated with the installation, maintenance, relocation, or removal of temporary tracking control measures, and the proper

use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for installing, relocating, maintaining, or removing temporary tracking controls.

3.06 **TEMPORARY CONCRETE WASHOUTS**

The use, submittals, materials and construction of temporary linear sediment barriers shall conform to the requirements set forth in Section 13-9, TEMPORARY CONCRETE WASHOUTS, of the Caltrans Standard Specifications and the CASQA Handbook.

Install, relocate or remove portable temporary concrete washout or bins as needed for concrete work. Remove and dispose of concrete waste within 2 business days after a concrete washout becomes filled. Dispose of concrete waste material from a concrete washout at a plant licensed to receive solid concrete waste, liquid concrete waste, or both. Secure portable temporary concrete washout or bin to prevent spilling of concrete waste material whenever it is being relocated or transported within the job site. Whenever any spilled material is observed, clean up the spilled material and place it back into the concrete washout unit. The City does not pay for installing, relocating or removing a portable temporary concrete washout or bin.

The Contractor shall be responsible for all costs associated with the installation, maintenance, relocation, or removal of temporary concrete washouts, and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for installing, relocating, maintaining, or removing temporary concrete washouts.

3.07 **TEMPORARY LINEAR SEDIMENT BARRIERS**

The use, submittals, materials and construction of temporary linear sediment barriers shall conform to the requirements set forth in Section 13-10, TEMPORARY LINEAR SEDIMENT BARRIERS, of the Caltrans Standard Specifications and the CASQA Handbook. Install, relocate and remove facilities as needed to comply with all applicable regulations.

The Contractor shall be responsible for all costs associated with the installation, maintenance, relocation, or removal of temporary linear sediment barriers, and the proper use and applications of the facilities to comply with the applicable storm water requirements of the City, Calaveras County, the State of California, and the United States. This item shall be included in the bid under SWPPP Implementation. The City does not pay for installing, relocating, maintaining, or removing temporary linear sediment barriers.

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SECTION 01070

ENVIRONMENTAL STEWARDSHIP

PART 1 - GENERAL

1.01 SCOPE

This section includes general specifications for environmental compliance and environmental resource management. The Contractor shall be responsible to comply with the environmental mitigation and avoidance measures required for the project as described in the Categorical Exemption dated May 20, 2025.

1.02 REGULATOR REQUIREMENTS

A. Air Quality

Section 14-9, AIR QUALITY, of the Caltrans Standard Specifications includes specifications relating to air quality.

B. Air Pollution Control

Comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231). Do not burn material to be disposed.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 NOISE AND VIBRATION

Do not operate construction equipment or run the equipment engines from sunset to 7:00 a.m., Monday through Friday, or from sunset. to 8:00 a.m. on Saturdays, except where authorized by the City to operate equipment within the project limits during these hours to:

- a. Service traffic control facilities
- b. Service construction equipment

If authorized to work during these times, do not exceed 86 dBA LMax at 50 feet from the job site activities.

Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

3.02 CONSTRUCTION RELATED EXHAUST EMISSIONS

To reduce impacts for construction-related exhaust emissions, the Contractor shall utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than Tier II emission standards, as set forth in Section 2423 of the California Code of Regulations and Part 89 of Title 40 Code of Federal Regulations. Achievement can be accomplished through any combination of uncontrolled engines and engines complying with Tier II and above engine standards.

3.03 CULTURAL RESOURCES

If any cultural resources, including prehistoric or historic artifact, or other indications of archaeological resources are found during grading and construction activities for any individual phase, or portion of an individual phase of the project, all work shall be halted immediately within a 200 ft radius of the discovery until an archaeologist retained by the City and meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s). Construction activities beyond the 200 ft radius can proceed unless it is determined by the City and the archaeologist that additional areas require evaluation.

Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is: 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the National Register of Historic Places or California Register of Historical Resources; or 3) not a significant Public Trust Resource.

If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, will be retained by the City.

Delays in construction due to the presence of cultural resources will be considered in accordance with Section 00700, GENERAL CONDITIONS.

3.04 PALEONTOLOGICAL RESOURCES

If paleontological resources are discovered during the course of construction for any individual phase, or portion of an individual phase of the Project, work shall be halted immediately within 165 ft of the discovery, the City shall be notified, and a qualified paleontologist retained by the City will be retained to determine the significance of the discovery. If the paleontological resource is considered significant, it will be excavated by a

qualified paleontologist and given to a local agency, state university, or other applicable institution, where the resource can be curated and displayed for public education purposes.

Delays in construction due to the presence of paleontological resources shall be considered in accordance with Section 00700, GENERAL CONDITIONS.

3.05 HUMAN REMAINS

If human remains are discovered during the course of construction for any individual phase, or a portion of an individual phase of the Project, work shall be halted at the site and any nearby area reasonably suspected to overlie adjacent human remains until the Calaveras County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:

- a. The coroner will contact the Native American Heritage Commission to ascertain the proper descendants from the deceased individual. The coroner will make a recommendation to the City for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.
- b. The City will retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:
 1. The Native American Heritage Commission is unable to identify a descendent.
 2. The descendant identified fails to make a recommendation.
 3. The City or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Delays in construction due to the presence of human remains will be considered in accordance with Section 00700, GENERAL CONDITIONS.

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SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 PRECONSTRUCTION MEETING

A preconstruction meeting will be held within ten working days of Award of the Contract. The purpose of the meeting will be to discuss the various requirements of the specifications and the Contractor's responsibilities with regard to maintaining plant operations, process control, schedule, submittals, and safety. The Contractor shall not commence construction work until after the preconstruction meeting and issuance of a Notice to Proceed.

1.02 MONTHLY STATUS MEETINGS

Regular monthly construction progress meetings shall be held throughout the construction period from the time the Contractor begins work until the acceptance of the work by the City. The City, Superintendent, and representatives of the City will attend the meeting. The Contractor shall be represented by his designated construction manager and superintendent, and representative of any major subcontractor whose work will be discussed at the meeting.

The purpose of the meeting shall be as follows:

- A. Review of progress of the work during the preceding month and the job to date for compliance with the approved construction schedule as described in Section 01310, CONSTRUCTION SCHEDULE AND REPORTS.
- B. Discuss work and coordination of activities that will be required for the completion of all work scheduled for the following month.
- C. Discuss additional measures required to bring the progress of the work into compliance with the approved schedule if required to satisfy the provisions of the contract.
- D. Review status of submittals, change orders, directives, and equipment delivery dates.
- E. Any additional items of concern to the City.

1.03 WEEKLY MEETINGS

The Contractor's superintendent shall meet with the City at the beginning of each week to discuss the activities scheduled for the following week and the compliance of the work with the schedule established at the previous monthly status meeting.

1.04 ADDITIONAL MEETINGS

Additional meetings with the City, Engineer, and the Contractor will be called by the City to resolve disputes on various items of work on the project, including, but not limited to, progress payments, design omissions or conflicts, and changes in work and/or schedule.

****END OF SECTION****

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL

Where required by the specifications, the Contractor shall submit descriptive information that will enable determination of whether the Contractor's proposed materials, equipment, or methods of work are in general conformance to the design concept and in compliance with the plans and specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the specifications. In some instances, specified submittal information describes some, but not all, features of the material equipment, or method of work. Features not requiring submittals shall be as specified.

As described in Section 00700, GENERAL CONDITIONS, submittal review shall be only for general conformance with the design concept and general compliance with the information given in the contract documents. It shall not include review of quantities, dimensions, weights or gages, fabrication processes, construction safety precautions, all of which are the sole responsibility of the Contractor. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The City shall not be required to review and shall not be responsible for any deviations from the contract documents not clearly noted by the Contractor, nor shall the City be required to review partial submissions or those for which submissions for correlated items have not been received.

1.02 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment, or method of work shall be described in the submittal. The Contractor shall verify that all features of all products conform to the requirements of the specifications and plans. The Contractor shall insure that there is no conflict with other submittals and shall notify the City in each case where his submittal may affect the work of the City or others. The Contractor shall insure coordination of submittals among the related crafts and subcontractors.

Immediately following Award of the Contract, the Contractor shall review the plans and specifications and shall prepare a list of all submittals anticipated on the project and shall submit this list to the City. Items not on the list but requiring review shall be added to the list as requested by the City at any time during the construction.

1.03 TRANSMITTAL PROCEDURE

A. General

Submittals regarding material and equipment shall be accompanied by a transmittal form. A separate form shall be used for each specific item, class of material, equipment, and for items specified in separate, discrete sections. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.

A unique number, sequentially assigned, shall be noted on the transmittal form accompanying each item submitted. Submittal numbers shall have the following format: "XXX-YYYYY-ZZ"; where "XXX" is the sequential number assigned by the Contractor, "YYYYY" is the specification section number covered by the submittal, and "ZZ" is the sequential number of the submittal ("01" for the first submittal, "02" for the second submittal, etc.). Resubmittals shall have the same submittal number format; where "XXX" is the originally assigned submittal number.

Submittal 25-11350-02, for example, would be the second submittal (first re-submittal) of submittal 25 covering Section 11350.

B. Deviation from Contract

If the Contractor proposes to provide material, equipment, or method of work that deviates from the contract documents, he/she shall indicate so on the transmittal form accompanying the submittal copies. Deviations from the contract documents may result in a "credit" to the City.

C. Submittal Completeness

Submittals that do not contain all the information required to be submitted, including deviations, are not acceptable and will be returned without review.

D. Requests for Substitution

The Contractor may offer material or equipment of equal or better quality and performance in substitution for those specified. The City will consider offers for substitution only from the Contractor and will not acknowledge or consider such offers from suppliers, distributors, manufacturers, or subcontractors. The Contractor's offers of substitution shall be made in writing to the City and shall include sufficient data to enable the Engineer to assess the acceptability of the material or equipment for the particular application and requirements.

If the offered substitution necessitates changes to or coordination with other portions of the work, the data submitted shall include drawings and details showing such changes. Contractor agrees to perform these changes as part of the substitution of material or equipment at no additional cost to the City. Within 30 calendar days after receipt of the offer

of substitution, the Engineer will review the material submitted by the Contractor and advise the City and Contractor of objections, if any, to the proposed substitution or if further information is required. Upon notification by the City, the Contractor shall either provide material or equipment that complies with project specifications or furnish requested additional information. While the City might not take any objections to the proposed substitution, such action shall not relieve the Contractor from responsibility for the efficiency, sufficiency, quality and performance of the substitute material or equipment, in the same manner and degree as the material and equipment specified by name. Any cost differential associated with a substitution shall be reflected in the offer and the contract documents shall be modified by a change order.

1.04 **REVIEW PROCEDURE**

When the contract documents require a submittal, the Contractor shall submit copies of the specified information as follows unless otherwise specified:

- A. One reproducible original of all the submitted information. When individual sheets in the submittal exceed 8 1/2" x 11", a sepia shall be submitted.
- B. Six copies of all the submitted information.
- C. Submittals shall be delivered or mailed to:

Dave Richard, PE
On-Call City Engineer, Water/Wastewater
Dewberry | Drake Haglan
11060 White Rock Road, Suite 200
Rancho Cordova, CA 95670
drichard@dewberry.com

Unless otherwise specified, within 10 calendar days after receipt of the submittal, the submittal shall be reviewed and three copies of the marked-up reproducible original shall be returned to the Contractor. The reproducible original shall be retained by the City. The returned submittal shall indicate one of the following actions:

- 1. If the review indicates that the material, equipment, or work method is in general conformance with the design concept and complies with the drawings and specifications, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
- 2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in operation and maintenance information, a corrected copy shall be provided.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "REVISE AND RESUBMIT." Except at his own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."
4. If the review indicates that the material, equipment, or work method is not in general conformance with the design concept or in compliance with the drawings and specifications, copies of the submittal will be marked "REJECTED". Submittals with deviations that have not been identified clearly may be rejected. Except at his own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED".

Following the initial review, two "resubmittals" will be allowed by the City prior to a "back charge" for engineering review and administration costs being incurred by the Contractor. The "back charge" will be deducted from any amounts due the Contractor.

1.05 **EFFECT OF REVIEW OF CONTRACTOR'S SUBMITTALS**

Review of drawings, methods of work, or information regarding materials or equipment the Contractor proposes to provide shall not relieve the Contractor of his responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the City, or by any officer or employee thereof, or by any engineering firm conducting such review on behalf of the City, and the Contractor shall have no claim under the contract on account of the failure, or partial failure, of the method of work, material, or equipment so reviewed. A mark of "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED" shall mean that the City has no objection to the Contractor, upon his own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

****END OF SECTION****

SECTION 01310

CONSTRUCTION SCHEDULES AND REPORTS

PART 1 – GENERAL

1.01 SCOPE

This section specifies the procedures for preparing the construction schedule used for planning and managing construction activities. The schedule provides a basis for determining the progress status of the project relative to the completion time and specific dates.

1.02 DESCRIPTION

The Contractor shall prepare a time scale network schedule using a critical path method. A general guide for preparing such a schedule is contained in *The Use of CPM in Construction, a Manual for Contractors*, published by the Associated General Contractors of America.

The schedule shall depict all significant construction activities and all items of work listed in the breakdown of contract prices submitted by the Contractor in accordance with the BID SCHEDULE section of these specifications. The dependencies between activities shall be indicated so that it may be established what effect the progress of any one activity has on the schedule.

Detailed network activities shall include, in addition to construction activities, the submittal and approval of samples of material and shop drawings, the procurement of critical materials and equipment, and their installation and testing. All submittals of equipment and materials in Division 2 shall be shown on the schedule together with appropriate allowances for review and delivery times, installation, testing, and training as appropriate. All activities of the City that affect the progress of the work shall be shown. Any omission of work from the schedule required for contract compliance shall not excuse the Contractor from completing such work within any applicable completion date.

Completion time and all specific contract dates given in Section 01015, CONTRACT TIME, shall be shown on the schedule. Activities making up the critical path shall be identified.

No activity on the schedule shall have a duration longer than 21 calendar days except activities comprising only fabrication and delivery, which may extend for more than 21 calendar days. Activities which exceed these limits shall be divided into more detailed components. The scheduled duration of each activity shall be based on the work being performed during the normal 40-hour work week with allowances made for legal holidays and normal weather conditions.

The Contractor shall not work on legal holidays except by permission of the City. Legal holidays are defined as the holidays observed by the City. The Contractor shall notify the

City by Friday of their intent to work on any immediately following Saturday or Sunday. Delays to project completion experienced during holidays or weekends without proper permission or notice will not be considered to be the responsibility of the City.

Schedules shall be realistic. Contractors shall be required to show use of all calendar days allowed for completion in their schedule or accept a no cost change order reducing the number of days allowed for the completion of the work to the amount shown on the proposed and approved schedule

1.03 SUBMITTAL PROCEDURES

Within 10 calendar days after the date of the Notice of Proceed, the Contractor shall complete a construction schedule conforming to Paragraph 01310-1.02, Description, and representing in detail all planned procurement and onsite construction activities. The schedule shall be prepared on reproducible paper and may be in draft form with legible freehand lines and lettering. The Contractor shall submit the original and six copies to the City in accordance with Section 01300, SUBMITTALS.

No progress payments shall be made prior to the acceptance of the CPM schedule. Failure to resubmit updated schedules as required herein shall result in an increase in the retentions of the amounts due the Contractor.

Within 10 calendar days after receipt of the submittal, City shall review the submitted schedule and return two copies of the marked up original to the Contractor. If the City finds that the submitted schedule does not comply with specified requirements, the corrective revisions will be noted on the submittal copy returned to the Contractor for corrections and resubmittal as specified in Section 01300, SUBMITTALS.

1.04 SCHEDULE REVISIONS

Revisions to the accepted construction schedule may be made only with written approval of the Contractor and the City. Changes in timing for activities which are not on the critical path may be modified with written agreement of the Contractor and the City.

1.05 PROJECT STATUS UPDATE

A jobsite meeting will be held each month at a time mutually agreed upon by the Contractor and the City to review the construction progress for compliance with the approved schedule. Weekly meetings will also be held between the Contractor and City to review the progress of the work of the previous week and to coordinate the work of the subsequent week. The schedule shall be revised whenever: the schedule does not represent the progress of the work; equipment submittals, approvals, or deliveries make rescheduling of activities necessary; any change to the sequence of activities occurs or any change occurs to activities on the critical path; or when a contract modification necessitates a revision to the schedule. Updates to the schedule shall, at a minimum, be required on a monthly basis.

****END SECTION****

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 CLEANING OF SITE

The Contractor shall not allow the site of the work to become littered with trash and waste material but shall maintain the site in its normal neat and orderly condition throughout the construction period.

On or before the completion of the work including punch list acceptance by the City, the Contractor shall remove rubbish of all kinds from the jobsite and any of the grounds which he has occupied and leave them in first-class condition to the satisfaction of the City. Pavement shall be swept and/or flushed to remove any spilled soil or aggregate base material after placement. Pipes, drainage inlets, and streets used by the Contractor or contaminated by his operations shall be cleaned thoroughly to the satisfaction of the City.

PART 2 - RECORD DRAWINGS

2.01 GENERAL

The Contractor shall maintain one set of record drawings at the site at all times as a true, complete and accurate record of the work. The drawings shall consist of one set of full-size prints of the contract drawings marked up to reflect all changes that have been made during the course of the work and other supplementary information. The record drawings shall be updated weekly and be available for inspection by the City at all times. Progress payments may be withheld if the drawings are not kept current as provided for in the Section 00700, GENERAL CONDITIONS.

Record drawings shall be stored during the contract period in the Contractor's field office apart from the documents used for construction in suitable files or racks. The record drawings shall be maintained in a clean, dry legible condition and in good order until delivered to the City at the completion of the work. Record drawings shall not be used for construction purposes.

The contract record drawings and supplementary information shall record all deviations in construction, especially pipe and conduit locations and deviations caused by change orders, field clarifications, requests for clarification and addenda. Revisions shall be indicated in a neat and legible manner. Each document shall be clearly labeled "RECORD DOCUMENT."

2.02 INFORMATION TO BE RETAINED ON THE RECORD DRAWINGS

As a minimum, the following kinds of information shall be entered on the record drawings:

- A. Locations of work buried under or outside each building, such as plumbing, piping, and electrical lines and conduits.
- B. Locations of all items, not necessarily concealed, which vary from the plans.
- C. Deviations from the sizes, locations and other features of installations shown in the plans.
- D. Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.

2.03 ADDITIONAL CONTRACT RECORD INFORMATION

In addition to the marked-up set of plans, the Contractor shall also maintain a contract record file of additional drawings and information necessary for clarification. These include, but are not limited to:

- A. Field instructions (directives and field orders) issued by the City.
- B. Contract change orders.

****END OF SECTION****

CITY OF ANGELS
PURDY ROAD WATER AND SEWER IMPROVEMENTS

Division 2 – Site Work

Section 02100	Site Preparation
Section 02140	Dewatering
Section 02141	Temporary Bypass Piping and Pumping System
Section 02700	Sanitary Sewer System
Section 02800	Water Distribution System

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SECTION 02100

SITE PREPARATION

PART 1 - GENERAL

1.01 SCOPE

This section specifies site preparation which consists of clearing, grubbing, demolition, and disposal of materials.

1.02 REFERENCES

The publications referred to hereinafter form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of referenced publications in effect at the time of the bid shall govern. In case of conflict between the requirements of this section and the listed standards, the requirements of this section shall prevail.

State of California, Department of Transportation (CALTRANS) Publications

CALTRANS *Standard Specifications, State of California Business and Transportation Agency, Department of Transportation, 2018*

1. Caltrans Standard Specifications: Whenever this specification is referenced, the following is understood.
 - a. All references to statistical testing are deleted.
 - b. Whenever a discrepancy occurs between the Standard Specifications and this specification, it is understood that this specification governs.
 - c. All references to measurement and payment are deleted.

1.03 JOB CONDITIONS

A. Existing Conditions

The Project site is located along Purdy Road. Land uses along the pipeline alignment include single-family residences. The Contractor shall determine the actual condition of the site as it affects this portion of work.

B. Photographs

Prior to disturbing any area of the project site, the Contractor shall take sufficient photographs and video footage of each area that will be disturbed during construction,

documenting pre-construction conditions. The same views shall be re-photographed upon completion of construction activities on any section of the project, and submitted with Contractor's application for payment for work on the section. Pre-construction photography shall document the pre-construction condition of existing landscaped areas, trees and plants, fences, streets, sidewalks, drives, and in general, any area that will be disturbed before commencing work. A copy of each videotape shall be provided to the City, along with a log describing the address, date, and viewing orientation of each tape segment. Acceptable photographs and videotapes shall be submitted prior to disturbing any area of the project.

C. Protection

Site preparation shall not damage structures, bridge abutments, or landscaping adjacent to the site. The Contractor shall repair or replace any damaged property. To the maximum extent practicable, dust generated during construction activities shall be minimized. Submit a dust control plan to the City for approval in accordance with Section 01300, SUBMITTALS. The dust control plan shall meet the requirements of APCD Rules 8011-8081 to limit visible dust emissions to 20% opacity or less.

During the performance of the Work required by these Specifications or any operations appurtenant thereto, whether on right-of-way provided by the City or elsewhere, furnish all labor, equipment, materials, and means required, and carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance, and to prevent dust or dirt which has originated from construction operations from damaging landscaping, existing streets, cultivated fields, and dwellings, or causing a nuisance to persons. Water sprinkling shall not be used for dust control when it creates mud or flooding on public streets or right of way. The street area adjacent to open cut excavation work shall be cleaned at the end of each work shift and as necessary throughout the work day to control dust. The Contractor will be held liable for any damage resulting from dust originating from his operations under these specifications on City right-of-way or elsewhere.

The cost of sprinkling, street cleaning, or of other methods of controlling dust shall be included in the prices bid in the schedule for the other items of work.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 GENERAL

The Contractor shall notify the City when site preparation is complete. Further work shall not be started until the conditions defined herein are satisfied.

3.02 **PERFORMANCE**

A. **Demolition and Removal**

1. Pavement: When portions of asphalt pavements and concrete pads are to be removed and later construction is to be connected, edges shall be sawcut, on a neat line at right angles to the curb face.

B. **Utility Interference**

Where existing utilities interfere with the prosecution of the work, the Contractor shall relocate them in accordance with Section 00700, GENERAL CONDITIONS.

C. **Protection**

The Contractor shall provide protection devices, including barricades, fencing, warning signs, lights and other items necessary to ensure the security of, and safety within, the project site during this phase of the work.

D. **Cleanup**

Remove and transport debris, rubbish, and excess material from the site in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent areas. Comply with Federal, State, and local hauling disposal regulations. Cleanup shall be an ongoing activity throughout the contract period.

****END OF SECTION****

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SECTION 02140

DEWATERING

PART 1 - GENERAL

1.01 SCOPE

The section provides specifications for dewatering systems and appurtenances to be used during construction. Groundwater is expected to be encountered in some areas of the Project site adjacent to an un-named creek.

This specification covers the use of site sump pumping, well pointing, vertical sand drains, and deep well drainage systems.

1.02 QUALITY ASSURANCE

Before dewatering is commenced, the Contractor shall obtain the acceptance of the City for the method, installation and details of the dewatering system he proposes to use. To that end, the Contractor shall submit to the City plans setting forth the details of his proposed dewatering systems. The dewatering system plans shall be in sufficient detail to indicate sizes of pumps, piping, appurtenances, the ultimate disposal point for water and to permit the City to judge the overall completeness and effectiveness of the proposed system. The Contractor shall include in dewatering system plans any field adjustments that may be required during construction based on field conditions. Resident and property owner accessibility to all properties shall be maintained throughout the entire Project area, which may necessitate dewatering project alignment in stages to conform with construction sequencing project constraints. Any staging of dewatering shall also be indicated on the dewatering system plans submitted to the City. Contractor shall maintain resident and property owner access across dewatering headers.

The control of groundwater shall be such that softening of the bottom of excavations, or formation of "quick" conditions or "boils," does not occur. Dewatering systems shall be designed and operated so as to prevent removal of the natural soils.

The Contractor shall select the particular method of dewatering to be employed.

1.03 DISPOSAL OF GROUNDWATER

The Contractor is responsible for disposal of groundwater generated from dewatering activities. Two potential discharge methods include: 1) discharge to land or 2) discharge to surface water. Contactor shall choose disposal method and obtain permit for disposal. Conditions for disposal include compliance with the following WDR permits:

- A. State Water Resources Control Board Water Quality Order No. 2003-0003-DWQ Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality (see Appendix B).
- B. California Regional Water Quality Control Board Center Valley Region, Order R5-2016-0076-01, NPDES No. CAG995002 Waste Discharge Requirements Limited Threat Discharges to Surface Water (see Appendix B).

Contractor shall comply strictly with requirements for groundwater disposal including periodic sampling, analysis of groundwater quality, and reporting to the City.

PART 2 - METHODS

2.01 GENERAL

The Contractor shall furnish, install, operate and maintain all machinery, appliances, and equipment to maintain all excavations free from water during construction, and shall dewater and dispose of the water so as not to cause injury to public or private property, or to cause a nuisance or menace to the public.

The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent which would cause damage or endanger adjacent structures.

The static water level shall be drawn down a minimum of 2 ft below the bottom of the excavation to maintain the undisturbed state of the foundation soils and to facilitate the placement of fill or backfill compacted to the required density.

2.02 SUMP PUMPING

Sumps shall be at the low point of excavation. Excavation shall be graded to drain to the sumps.

2.03 WELL POINTS

The annular space between the pipe and the borehole of the well point shall be sealed near the top of the well point to prevent vacuum leaks. Installation shall be carried out in such a way so as not to excessively disturb in situ material.

2.04 DEEP WELLS

Deep wells shall be cased with PVC, steel, or other suitable casing material. The casing shall have a perforated section at the water producing zone. The annular zone between the casing and the bore hole may be gravel packed. Installation shall be carried out by any acceptable method. Demolition of deep wells shall be in accordance with County requirements.

2.05 VERTICAL SAND DRAINS

Vertical sand drains shall be installed with minimum disturbance to in situ material.

PART 3 - EXECUTION

3.01 GENERAL

One hundred percent standby pumping capacity shall be available on site at all times and shall be connected to the dewatering system piping to permit immediate use. In addition, standby ancillary equipment and appurtenances for all ordinary emergencies, and competent workmen for operation and maintenance of all dewatering equipment shall be on site at all times. Standby equipment shall include emergency power generation and automatic switchover to the emergency generator when normal power fails.

Dewatering systems shall not be shut down between shifts, on holidays, on weekends, or during work stoppages. The Contractor shall control surface water to prevent entry into excavations.

At each excavation a sufficient number of temporary observation wells to continuously check the groundwater level shall be provided.

3.02 RELEASE OF GROUNDWATER

The release of groundwater at its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill, and prevent flotation or movement of structures, pipelines and sewers.

There shall be no discharge of groundwater to the City Wastewater Treatment Plant.

****END OF SECTION****

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SECTION 02141

TEMPORARY BYPASS PIPING AND PUMPING SYSTEM

PART 1 – GENERAL

1.01 SCOPE

This section specifies the work necessary to furnish, place, operate, and remove temporary bypass piping and pumping systems that will convey wastewater during the Project as identified on the plans. Power for the bypass pumping system shall be furnished by the Contractor.

1.02 SUBMITTALS

The Contractor shall submit information in accordance with Section 01300, SUBMITTALS, to substantiate compliance with this specification. In addition, the following specific information shall be submitted.

- A. Bypass Pumping/Piping Plan with Emergency Response Plan. Description of discharge activities detailing the locations, quantity of water, equipment, and discharge points to convey and maintain existing wastewater flows during construction. Estimated schedule for discharge start and end dates of intermittent and continuous activities. The Emergency Response Plan shall include a contingency plan in the event of power failure or pump failure. Contractor shall respond to power failure or pump failure of the bypass pumping system within the hour following the failure.
- B. Engineering calculations and pump data verifying the adequacy of the bypass pumping system.
- C. Secondary containment system details and materials. Secondary containment is required in the event of pump failure and a subsequent overflow from the diversion manhole. Secondary containment for spill protection is specified in Paragraph 2.01. Secondary containment is also required for the temporary pipeline from the diversion manhole to the discharge manhole. Welded HDPE pipe as a casing pipe for the temporary pipeline for secondary containment is acceptable.
- D. Detail drawings and written descriptions of bypass pumping methods. Level of detail shall be sufficient to assure that work can be accomplished without overflows.
- E. Bypass Piping Plan including method for protecting exposed piping across an un-named creek. Piping Plan shall include descriptions of piping materials including carrier and casing pipe, valves, plugs, and appurtenances, pipeline routing, and provisions to protect piping from damage.

- F. Method of noise control for pumps, motors, and generators.
- G. Emergency plan for adverse weather and flooding for various stages of work.
- H. Continuous (24-hr) monitoring of the temporary bypass operation including auto-dialer system for loss of primary pump or high level at suction location.
- I. Pump refueling plan
- J. Spill Containment Plan.
- K. Summary of qualifying experience.

1.03 **BYPASS PUMPING SYSTEM REQUIREMENTS**

- A. Contractor shall supply bypass pumping systems including pumps and generators, instrumentation, and controls. Each system shall be set up to operate. Bypass pumping operations shall conform to the local noise requirements.
- B. Each bypass pumping system shall have the following capacity: 100 gpm
- C. Bypass pumping system shall be furnished with sufficient instrumentation and controls to allow for continuous (24 hr/day, 7 day/wk) automatic operation through the specified range of flows. Contractor shall maintain responsibility for operation of bypass pumping.
- D. Contractor shall have backup systems for each system and backup components for all components.
- E. Contractor shall have an operator experienced with pumping systems available at all times (24 hr/day, 7 day/wk) while bypass pumping is in operation.
- F. Permitting of generators shall be the responsibility of the Contractor.

1.04 **DISCHARGE**

Contractor shall discharge raw wastewater to the sewer manhole locations identified on the plans. Discharge piping shall extend into the manhole and shall minimize splashing.

1.05 **ENVIRONMENTAL REGULATIONS AND VIOLATIONS**

- A. Contractor is responsible for compliance with all federal, state, and local laws, regulations, and codes. Contractor is responsible to pay all fines, fees, penalties, and assessments levied against the City caused by the Contractor's operations and/or violations. Contractor shall be liable for all cleanup and damages in the event of a spill.

- B. Contractor shall take all necessary precautions, including constant monitoring of bypass pumping to ensure that no residences or properties are subjected to a backup or spill.

1.06 **BYPASS PUMPING EXPERIENCE**

In addition to the requirements specified in Section 00420, CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS, Contractor or subcontractor shall have a minimum of five similar bypass projects in the past five years including bypass pumping a minimum of 100 gpm. Documentation shall be submitted in accordance with Section 01300, SUBMITTALS.

PART 2 – MATERIALS

2.01 **SECONDARY CONTAINMENT SYSTEM**

Secondary containment system shall be Rain-for-Rent Spillguard or approved equal, with material suitable for containment of raw wastewater.

PART 3 – EXECUTION

3.01 **GENERAL**

- A. Bypass Pumping Plan and Emergency Response Plan shall be submitted to the City at least ten working days prior to commencing work.
- B. Contractor shall notify the City 24 hours prior to commencing bypass pumping operations.

3.02 **SYSTEM TESTING**

- A. Perform leakage and pressure tests of the temporary bypass pumping discharge piping using clean water prior to operation. Pressure and leakage tests shall be conducted at 1.5 times the maximum working pressure, based on the approved Temporary Bypass Pumping Plan, for a period of two hours. No leakage is permitted during this test. Provide a leakage and pressure test report that documents start time and pressure, pressure at 15-minute intervals, stop time, end of test pressure, and amount of leakage.

3.03 **INSTALLATION**

- A. Prevent damage to existing structures. Discharge piping to gravity sewer systems shall be designed in such a manner as to prevent discharge from contacting manhole walls or benching. Full discharge shall go into the downstream pipe in a manner to minimize turbulence. It may be necessary to remove manhole cones to provide sufficient space for

the bypass piping. Contractor is responsible for any damage to manholes. Repair damaged manholes to preconstruction condition. Make connections to the existing sewer and construct temporary bypass pumping structures only at the access locations indicated on the Plans. The new sewer may be used by the Contractor to convey the sanitary flows after the new sewer has passed inspection and testing. City shall approve any temporary connections to the new sewer. Plugging or blocking of sewage flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance of work, it is to be removed in a manner that permits the sewage flow to slowly return to normal without surge and that prevents surcharging or causing other major disturbances downstream. When working inside a manhole or force main in the presence of sewer gases, combustible or oxygen-deficient atmospheres, and confined spaces, the Contractor shall exercise caution and comply with OSHA requirements.

- B. HDPE pipe shall be installed in accordance with AWWA M55 "PE Pipe - Design and Installation" and the "Handbook of Polyethylene Pipe" by the Plastics Pipe Institute. The pipe shall be joined by the butt fusion procedure outlined in ASTM F 2620 or PPI TR-33. Fusion joints shall be made in compliance with the pipe or fitting manufacturer's recommendations. Fusion joints shall be made by qualified fusion technicians per PPI TN-42.

3.04 OPERATION

- A. Maintain flows in the existing upstream pumps stations, sewer interceptors, and tributary collector and lateral lines at all times and under all weather conditions except for brief periods when mains and services are disconnected and reconnected. Take actions and precautions necessary to prevent discharge of wastewater during disconnection and reconnection of mains including performing those tasks during off peak hours or providing additional temporary bypass measures. Interruption of flows that result in the discharge of wastewater will not be permitted.
- B. Maintain sewer flow at the work area in a manner that will not cause surcharging of sewers or damage to sewers, and that will protect public and private property from damage and flooding.
- C. Anticipate severe weather conditions and increases in peak flows during rain events and design and plan for these accordingly.
- D. Immediately notify City should a sanitary sewer overflow (SSO) occur. Take necessary action to clean up and disinfect the spillage to the satisfaction of City and other governmental agencies with jurisdiction. If sewage is spilled onto public or private property, wash down, clean up, and disinfect the spillage to the satisfaction of the property owner, utility owner, and governmental regulatory agencies.
- E. Overflows from temporary bypass operations shall not be permitted to enter streams or bodies of water. The Contractor shall be solely responsible for paying fines imposed and legal actions taken by state and federal regulatory agencies if overflows occur as a result

of the temporary bypass pumping operations. Reimburse City for any damages, operational costs, fines, and other effects. Immediately remove and dispose of wastewater and waste material spilled during the temporary bypass pumping at his own expense.

3.05 DISASSEMBLY AND REMOVAL

- A. When bypass operations are complete, bypass piping shall be flushed with fresh water and drained into the wastewater system prior to disassembly. Piping shall be disassembled in a manner to prevent an SSO.
- B. Upon completion of the bypass pumping operations, and after the receipt of written permission from City the Contractor shall disassemble and remove piping and restore property to pre-construction condition.

END SECTION

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SECTION 02700

SANITARY SEWER SYSTEMS

PART 1 – GENERAL

1.01 SCOPE

This section includes requirements for sanitary sewer systems including materials for sewer pipe and accessories, excavating, preparation of pipe-laying surface, pipe bedding, backfilling and compaction, pipeline testing, and pavement restoration. Sanitary sewer systems shall comply with City of Angels 2010 Improvement Standards (City Standards) except where noted otherwise.

1.02 QUALITY ASSURANCE

A. References

The publications referred to hereinafter form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of referenced publications in effect at the time of the bid shall govern. In case of conflict between the requirements of this section and the listed standards, the requirements of this section shall prevail.

American Society for Testing and Materials (ASTM) Publications

ASTM A53	<i>Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless</i>

ASTM D1556	<i>Density of Soil in Place by the Sand-Cone Method</i>

ASTM D1557	<i>Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb. (4.54-kg) Rammer and 18 Inch (457-mm) Drop</i>

ASTM D2922	<i>Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)</i>

ASTM D3017	<i>Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)</i>

State of California, Department of Transportation (CALTRANS) Publications

CALTRANS	<i>Manual of Traffic Control</i>

CALTRANS

*Standard Specifications, State of California Business and
Transportation Agency, Department of Transportation, 2018.*

1. Caltrans Standard Specifications: Whenever this specification is referenced, the following is understood.
 - a. All references to statistical testing are deleted.
 - b. Whenever a discrepancy occurs between the Standard Specifications and this specification, it is understood that this specification governs.
 - c. All references to measurement and payment are deleted.

B. Tests

The City will take samples and perform moisture content, compaction, and density tests during placement of backfill materials to check compliance with these specifications. The Contractor shall remove surface material at locations designated by the City and provide such assistance as necessary for sampling and testing. The City may direct the Contractor to construct inspection trenches in compacted or consolidated backfill to determine that the Contractor has complied with these specifications.

Tests will be made by the City in accordance with the following:

Moisture content	ASTM D3017
Density in-place	ASTM D1556 or ASTM D2922
Moisture-density relationships	ASTM D1557

1.03 SUBMITTALS

The Contractor shall submit information in accordance with Section 01300, SUBMITTALS, to substantiate compliance with this specification for materials.

If tests conducted by the Contractor or the City indicate that the material does not meet specification requirements, material placement will be terminated until corrective measures are taken. Material which does not conform to the specification requirements and is placed in the work shall be removed and replaced at the Contractor's sole expense. Sampling and testing performed by the Contractor shall be done at the Contractor's sole expense.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Sanitary Sewer Pipe

Sanitary sewer pipe shall be PVC pipe in compliance with Section 15 of the City Standards unless otherwise noted.

B. Trench Bedding

Bedding material shall be a select granular material free from organic matter and of such size and gradation that the specified compaction can be readily attained. As a minimum, materials shall have a sand equivalent value of not less than 20 and shall conform to the following gradation:

U.S. standard sieve size	Percent by weight passing
3/4 inch	100
No. 4	35-100
No. 30	20-100
No. 40	20-100

The coefficient of uniformity shall be 3 or greater. The material may be clean natural sand or gravel, select trench excavation, or a mixture thereof. Material shall not pass a No. 200 sieve.

C. Trench Backfill

Trench backfill materials shall be Class 1 Backfill in compliance with Section 15 of the City Standards.

D. Buried Warning and Identification Tape

Polyethylene plastic and metallic core or metallic-faced, acid-and alkali-resistant, polyethylene plastic warning tape shall be manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 in. minimum width, color coded for the intended utility with a warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing are to be permanent, unaffected by moisture or soil.

1. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements indicated above. Minimum

thickness of the tape shall be 0.003 in. Tape shall have a minimum strength of 1,500 psi lengthwise and 1,250 psi crosswise with a maximum 350% elongation.

2. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements indicated above. Minimum thickness of the tape shall be 0.004 in. Tape shall have a minimum strength of 1,500 psi lengthwise and 1,250 psi crosswise. The tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when the tape is buried up to 3 ft deep. Encase the metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

PART 3 – EXECUTION

3.01 GENERAL

A. Control of Water

The Contractor shall keep excavations free from water during construction. The static water level shall be drawn down a minimum of 2 ft below the bottom of excavations to maintain the undisturbed state of natural soils and allow the placement of any stable fill to the specified density. Disposal of water shall not damage property or create a public nuisance. The Contractor shall have on hand pumping equipment and machinery in good working condition for emergencies and shall have workers available for its operation. Dewatering systems shall operate continuously until backfill has been completed to 1 ft above the normal static groundwater level. The location of the Contractor's dewatering discharge shall be approved by the City as specified in Section 02140, DEWATERING.

Groundwater shall be controlled to prevent softening of the bottom of excavations, or formation of "quick" conditions. Dewatering systems shall not remove natural soils.

Release of groundwater to its static level shall be controlled to prevent disturbance of the natural foundation soils or compacted fill and to prevent flotation or movement of structures of pipelines.

Additional dewatering requirements are specified in Section 02140, DEWATERING.

B. Traffic Control

Traffic control shall be in accordance with Section 11 of the City Standards, the Caltrans Manual of Traffic Control, and traffic control plans included with the construction documents.

3.02 SEWER INSTALLATION

Trenching excavation, exposure of existing sewer, removed of sewer, bedding installation, pipeline laying, backfilling, compactions, and pipeline testing shall be in compliance with Section 15 of the City Standards. Pavement restoration shall match the existing pavement section or greater. Contractor shall dispose of removal sewer pipe, offsite at a permitted location.

3.03 BURIED WARNING AND IDENTIFICATION TAPE

Install tape above all buried pipes and conduits in accordance with manufacturer's recommendations except as modified herein. Bury tape 12 in. below finished grade; under pavements and slabs, bury tape 6 in. below top of subgrade.

****END SECTION****

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SECTION 02800

WATER DISTRIBUTION SYSTEMS

PART 1 – GENERAL

1.01 SCOPE

This section includes requirements for water distribution systems including materials for water distribution pipe, valves, and accessories; excavating; preparation of pipe-laying surface; pipe bedding; backfilling and compaction; pipeline flushing, testing and disinfection; and pavement restoration. Water distribution systems shall comply with City of Angels 2010 Improvement Standards (City Standards) except where noted otherwise.

1.02 QUALITY ASSURANCE

A. References

The publications referred to hereinafter form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of referenced publications in effect at the time of the bid shall govern. In case of conflict between the requirements of this section and the listed standards, the requirements of this section shall prevail.

American Society for Testing and Materials (ASTM) Publications

ASTM A53	<i>Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless</i>

ASTM D1556	<i>Density of Soil in Place by the Sand-Cone Method</i>

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CALTRANS

*Standard Specifications, State of California Business and
Transportation Agency, Department of Transportation, 2018.*

1. Caltrans Standard Specifications: Whenever this specification is referenced, the following is understood.
 - a. All references to statistical testing are deleted.
 - b. Whenever a discrepancy occurs between the Standard Specifications and this specification, it is understood that this specification governs.
 - c. All references to measurement and payment are deleted.

B. Tests

The City will take samples and perform moisture content, compaction, and density tests during placement of backfill materials to check compliance with these specifications. The Contractor shall remove surface material at locations designated by the City and provide such assistance as necessary for sampling and testing. The City may direct the Contractor to construct inspection trenches in compacted or consolidated backfill to determine that the Contractor has complied with these specifications.

Tests will be made by the City in accordance with the following:

Moisture content	ASTM D3017
Density in-place	ASTM D1556 or ASTM D2922
Moisture-density relationships	ASTM D1557

1.03 SUBMITTALS

The Contractor shall submit information in accordance with Section 01300, SUBMITTALS, to substantiate compliance with this specification for materials.

If tests conducted by the Contractor or the City indicate that the material does not meet specification requirements, material placement will be terminated until corrective measures are taken. Material which does not conform to the specification requirements and is placed in the work shall be removed and replaced at the Contractor's sole expense. Sampling and testing performed by the Contractor shall be done at the Contractor's sole expense.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Water Distribution Pipe

Water distribution pipe shall be ductile iron pipe in compliance with Section 18 of the City Standards unless otherwise noted.

B. Service Lines

Service lines shall be 1-inch polyethylene CTS in compliance with Section 16 of the City Standards unless otherwise noted.

C. Gate Valves

Gate valves shall be provided where shown with flanged connections in accordance with Section 18 of the City Standards unless otherwise noted.

D. Blowoffs

Blowoffs shall be provided where shown and shall be in accordance with Section 16 of the City Standards unless otherwise noted.

E. Air Release Valves

Air release valves shall be provided where shown and shall be in accordance with Section 18 of the City Standards unless otherwise noted.

F. Trench Bedding

Bedding material shall be a select granular material free from organic matter and of such size and gradation that the specified compaction can be readily attained. As a minimum, materials shall have a sand equivalent value of not less than 20 and shall conform to the following gradation:

U.S. standard sieve size	Percent by weight passing
3/4 inch	100
No. 4	35-100
No. 30	20-100
No. 40	20-100

The coefficient of uniformity shall be 3 or greater. The material may be clean natural sand or gravel, select trench excavation, or a mixture thereof. Material shall not pass a No. 200 sieve.

G. Trench Backfill

Trench backfill materials shall be Class I Backfill in compliance with Section 15 of the City Standards.

H. Buried Warning and Identification Tape

Polyethylene plastic and metallic core or metallic-faced, acid-and alkali-resistant, polyethylene plastic warning tape shall be manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 in. minimum width, color coded for the intended utility with a warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing are to be permanent, unaffected by moisture or soil.

1. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements indicated above. Minimum thickness of the tape shall be 0.003 in. Tape shall have a minimum strength of 1,500 psi lengthwise and 1,250 psi crosswise with a maximum 350% elongation.
2. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements indicated above. Minimum thickness of the tape shall be 0.004 in. Tape shall have a minimum strength of 1,500 psi lengthwise and 1,250 psi crosswise. The tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when the tape is buried up to 3 ft deep. Encase the metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

PART 3 – EXECUTION

3.01 WATERLINE INSTALLATION

Trenching excavation, bedding installation, pipeline laying, backfilling, compaction, pipeline testing, pipeline flushing, and pipeline disinfection shall be in compliance with Section 18 of the City Standards. Pavement restoration shall match the existing pavement section or greater.

3.02 CONNECTIONS TO EXISTING LINES

Connections to existing pipelines shall be accomplished by the Contractor as shown. Connections will require a limited, pre-approved shutdown of existing pipelines. Shutdowns shall be limited to a maximum duration of five hours from 12:00 a.m. to 5:00 a.m. Only one shutdown will be permitted at a time. Requests for shutdown shall be submitted 14 days in advance to the City for approval. Only City personnel will open/close valves to effect a line shutdown

3.03 Traffic Control

Traffic control shall be in accordance with Section 11 of the City Standards and the *Caltrans Manual of Traffic Control*, and approved traffic control plans. Traffic control plans shall be submitted to the City for approval prior to initiating construction.

3.04 BURIED WARNING AND IDENTIFICATION TAPE

Install tape above all buried pipes and conduits in accordance with manufacturer's recommendations except as modified herein. Bury tape 12 in. below finished grade; under pavements and slabs, bury tape 6 in. below top of subgrade.

****END SECTION****

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APPENDIX A

**State Water Resources Control Board Water Quality
Order No. 2003-0003-DWQ Statewide General Waste
Discharge Requirements (WDRs) for Discharges to
Land with a Low Threat to Water Quality**

**California Regional Water Quality Control Board
Center Valley Region, Order R5-2016-0076-01, NPDES
No. CAG995002 Waste Discharge Requirements
Limited Threat Discharges to Surface Water**

**STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 2003 – 0003 - DWQ**

**STATEWIDE GENERAL WASTE DISCHARGE
REQUIREMENTS (WDRs) FOR DISCHARGES TO LAND WITH
A LOW THREAT TO WATER QUALITY (GENERAL WDRs)**

The State Water Resources Control Board (SWRCB) finds that:

1. Section 13260(a) of the California Water Code (CWC) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the waters of the State¹, file a report of waste discharge (ROWD).
2. The discharges to land with a low threat to water quality listed in Table 1 are low volume discharges with minimal pollutant concentrations and are disposed of by similar means. These discharges are appropriately regulated under General WDRs.

Table 1. Categories of Low Threat Discharges

CATEGORY
Wells/Boring Waste
Well Development Discharge
Monitoring Well Purge Water Discharge
Boring Waste Discharge
Clear Water Discharges
Water Main/ Water Storage Tank/ Water Hydrant Flushing
Pipelines/Tank Hydrostatic Testing Discharge
Commercial and Public Swimming Pools
Small Dewatering Projects
Small /Temporary Dewatering Projects (such as excavations during construction)
Miscellaneous
Small Inert Solid Waste Disposal Operations
Cooling Discharge

See Attachment 1 to these General WDRs for discharge category definitions.

3. All WDRs must implement the Regional Water Quality Control Board (Regional Board) Water Quality Control Plan (Basin Plan) for the Region affected by the discharge. These General WDRs require Dischargers to comply with all applicable Basin Plan provisions, including any prohibitions and water quality objectives governing the discharge.

¹ “Waters of the State” as defined in CWC Section 13050(e)

4. These General WDRs establish minimum standards for the discharges listed in Table 1. The Discharger must comply with any more stringent standards in the applicable Basin Plan. In the event of a conflict between the provisions of these General WDRs and the applicable Basin Plan, the more stringent provision prevails.
5. The beneficial uses for the groundwaters of the State include, but are not limited to: municipal supply (MUN), industrial service supply (IND), industrial process supply (PROC), fresh water replenishment (FRESH), groundwater recharge (GWR), and agricultural supply (AGR).
6. The discharges listed in Table 1 have the lowest Threat to Water Quality (TTWQ) and Complexity, as defined in Section 2200, Title 23 of the California Code of Regulations (CCR). Discharges with the lowest TTWQ are those discharges of waste that could degrade water quality without violating water quality objectives or cause a minor impairment of designated beneficial uses. Low threat discharges that do not require any chemical, biological, or physical treatment have the lowest Complexity rating.
7. Dischargers seeking coverage under these General WDRs must file with the appropriate Regional Board: (a) a Notice of Intent (NOI) to comply with the terms and conditions of these General WDRs or a ROWD², (b) the applicable first annual fee as required by Title 23, CCR, Section 2200, (c) a project map, (d) evidence of California Environmental Quality Act (CEQA) compliance, and (e) a discharger monitoring plan. Upon review by Regional Board staff, a determination will be made as to whether or not coverage under these General WDRs is appropriate. The Discharger will be notified by a letter from the Regional Board Executive Officer³ when coverage under these General WDRs has begun.
8. Dischargers with low threat discharges listed in Table 1 currently covered by waivers or individual WDRs need not apply for coverage under these General WDRs unless requested to do so by the Regional Board.
9. Although a discharge may be eligible for coverage under these General WDRs, the Regional Board may elect to regulate the discharge under other WDRs or a conditional waiver. If the Regional Board has established WDRs or a conditional waiver, these General WDRs are not applicable.
10. The following discharge categories from Table 1 are exempt from SWRCB promulgated Title 27 requirements: Wells/Boring Waste Discharges, Clear Water Discharges, Small Dewatering Projects, and Cooling Discharges (Section 20090).

² If a ROWD is submitted instead of an NOI, the discharger must complete Sections VII-XV and XVII of the NOI (Attachment 3) and submit them to the Regional Board.

³ Regional Board Executive Officer or designee.

11. Title 27, Section 20230 of CCR exempts dischargers of inert solid wastes from the requirement to discharge at classified solid waste sites. Section 20230 also gives Regional Boards the option to assign individual or general WDRs for inert solid waste discharges.
12. Discharges to lands that have been listed as hazardous materials sites, pursuant to Government Code Section 65962.5, are not eligible for coverage under these General WDRs. Discharges that will significantly physically divide an established community, significantly conflict with any applicable land use plan/policy/regulation of an agency with jurisdiction over the project, or significantly conflict with any applicable habitat/community conservation plan are not eligible for coverage under these General WDRs.
13. Discharges that could have a significant impact on Biological Resources⁴, Cultural Resources⁵, Aesthetics⁶, Air Quality⁷ or that could significantly alter the existing drainage pattern of the discharge site or surrounding area are not eligible for coverage under these General WDRs.
14. Small inert waste disposal operations and small temporary dewatering operations located on unstable geologic units/soils or expansive soils are not eligible for coverage under these General WDRs. Small inert waste disposal operations and small temporary dewatering operations that could significantly conflict with existing zoning for agriculture use or a Williamson Act contract are not eligible for coverage under these General WDRs.
15. Small inert waste disposal operations that are within the boundaries of a comprehensive airport land use plan or, if a comprehensive airport land use plan has not been adopted, within two nautical miles of a public airport or public use airport are not eligible for coverage under these General WDRs.
16. A Negative Declaration in compliance with CEQA has been adopted for these General WDRs. The environmental impacts from new discharges authorized by these General WDRs have been found to be less than significant.
17. Potential Dischargers and all other known interested parties have been notified of the intent to prescribe WDRs as described in these General WDRs.
18. All comments pertaining to the proposed discharges have been heard and considered in a public meeting.

IT IS HEREBY ORDERED, that the Discharger, in order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, shall comply with the following:

⁴ As defined by the CEQA, Environmental Checklist Form, Title 14, California Code of Regulation, Appendix G, Section IV.

⁵ As defined by the CEQA, Environmental Checklist Form, Title 14, California Code of Regulation, Appendix G, Section V.

⁶ As defined by the CEQA, Environmental Checklist Form, Title 14, California Code of Regulation, Appendix G, Section I.

⁷ As defined by the CEQA, Environmental Checklist Form, Title 14, California Code of Regulation, Appendix G, Section III

A. PROHIBITIONS:

1. The discharge of any waste to surface waters is prohibited.
2. The disposal of wastes shall not cause pollution, contamination, or nuisance as defined in CWC Section 13050.
3. Discharge of wastes to lands not owned or controlled by the discharger is prohibited, unless the discharger has a written lease or an agreement with the owner.
4. The discharge of waste classified as “hazardous” or “designated” as defined in Title 22 CCR, Section 66261 and CWC Section 13173, is prohibited.
5. The discharge of waste shall not cause, wholly or in combination with any other discharge(s), the applicable Regional Board’s Basin Plan objectives for ground or surface waters to be exceeded.
6. The discharge of waste causing the spread of groundwater contamination is prohibited.
7. The discharge of water main, water storage tank, water hydrant pipeline flushing, or hydrostatic testing water from tanks or pipelines that have been used to store or convey any medium other than potable water is prohibited, unless the Discharger has demonstrated to the Regional Board that all residual pollutant concentrations have been reduced to levels below Regional Board Basin Plan groundwater quality objectives.
8. The discharge of wastes at Small Inert Solid Waste Disposal Operations that are not listed in Attachment 2 to these General WDRs or approved by the Regional Board is prohibited.

B. DISCHARGE SPECIFICATIONS:

Table 1 discharges, except monitoring well purge water and boring waste dischargers, shall not contain concentrations of pollutants in excess of the Basin Plan ground water quality objectives. Dischargers of boring waste shall not threaten an exceedance of applicable Basin Plan ground water quality objectives.

C. PROVISIONS:

1. The following provisions apply to Small Inert Solid Waste Operations:
 - a. Inert solid waste facilities shall only accept inert solid wastes that are listed in Attachment 2 to these General WDRs or that are approved by the Regional Board.

- b. Access to the facility shall be limited to ensure that all types of inert solid wastes accepted at the site are in compliance with these General WDRs.
 - c. Inert solid waste facilities shall develop and implement a load checking program to ensure that all the types of waste accepted at the site are in compliance with these General WDRs.
- 2. Discharges of boring waste, drilling mud, and cuttings from well-drilling operations shall be discharged to on-site sumps and shall not contain halogenated solvents. At the end of drilling operations, the Discharger shall either:
 - a. Remove all wastes from the sump; or
 - b. Remove all free liquid from the sump and cover residual solid and semi-solid wastes, provided that representative sampling of the sump contents after liquid removal shows residual solid wastes to be nonhazardous. Residual wastes shall be disposed at the proper Title 27, CCR classified waste disposal facility or onsite. Residual wastes discharged onsite shall meet the following requirements: (1) the discharge must be located greater than 5 feet above local groundwater level, (2) the discharge must be covered by a minimum of 1 foot of clean soil, and (3) the discharge must be located at least 100 feet from the nearest surface water. If the sump has appropriate containment features, it may be reused.
- 3. Monitoring well purge water shall be discharged at the monitoring well facility⁸ and shall not degrade underlying groundwater. Monitoring well purge water shall not be discharged in a manner causing ponding or threatening a discharge to surface waters.
- 4. A minimum freeboard of two feet shall be maintained at all wastewater disposal ponds and wastewater storage ponds.
- 5. All storage and disposal facilities shall be protected against erosion, overland runoff, and other impacts resulting from storm events.
- 6. Dischargers applying for coverage under these General WDRs shall submit with their NOI a discharge monitoring plan (DMP). The DMP shall include the following information:
 - a. All pollutants believed to be present in the discharge
 - b. Approximate concentration of pollutants in the discharge
 - c. Monitoring locations
 - d. Monitoring frequencies

⁸ A facility where monitoring well(s) have been installed to monitor the migration or levels of a pollutant or the effects and/or migration of a particular discharge.

- e. Report schedule (dates that reports will be submitted to the Regional Board).

Material Safety Data Sheets (MSDS) and additional laboratory analysis may be required by the Regional Board to evaluate the discharge and approve the DMP.

The DMP will be subject to Regional Board Executive Officer⁹ approval. The discharge may not be initiated until the Regional Board Executive Officer approves the DMP and sends notification of this approval by letter.

- 7. Dischargers of well development water, boring waste, and clear water discharges shall provide written notice to the Regional Board before initiating any discharge to a new site. Dischargers shall certify that the new discharge site is in compliance with these General WDRs and the requirements established by Sections VII-XVI of Attachment 3 (NOI). All other dischargers covered under these General WDRs are prohibited from discharging to sites not described in their NOI or ROWD.
- 8. Discharges of liquids derived from the purging, development, or sampling of groundwater from monitoring wells shall not contain nonaqueous phase liquids (i.e., concentrations of pollutants above the solubility limits).

D. APPLICATION:

- 1. Discharges described in the Findings are eligible for coverage under these General WDRs provided that the discharger submits to the appropriate Regional Board¹⁰ the following:
 - a. An NOI to comply with these General WDRs (Attachment 3 to these General WDRs) or an ROWD¹¹.
 - b. A project map.
 - c. Evidence of compliance with CEQA, if any other public agency has required the project to comply with CEQA.
 - d. A first annual fee as described in Finding No. 6.
 - e. A DMP, as described in Provision C.6.
 - f. Any other additional information requested by the Regional Board to evaluate the discharge.

⁹ Regional Board Executive Officer or designee.

¹⁰ Appropriate Regional Board is the Regional Board that regulates discharges of pollutants to waters of the State for the area that the proposed discharge will occur.

¹¹ If an ROWD is submitted instead of an NOI, the discharger must complete Sections VII-XV and XVII of the NOI (Attachment 3) and submit them to the Regional Board.

E. STANDARD PROVISIONS:

1. A copy of these General WDRs shall be kept at the discharge facility for reference by operating personnel. Key operating and site management personnel shall be familiar with its contents.
2. The Discharger shall develop a discharge management plan incorporating contingency measures, should sampling results show violation of water quality standards. In no case shall the discharge continue to impair beneficial uses or violate water quality standards or cause a possible nuisance condition.
3. The Discharger shall take all reasonable steps to prevent any discharge in violation of these General WDRs.
4. The Discharger shall properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) at all times to assure compliance with these General WDRs. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to assure compliance with the conditions of these General WDRs.
5. Prior to any modifications in the Discharger's facility, that would result in a material change in the quality or quantity of waste discharged or any material change in the location of the discharge, the Discharger shall report in writing to the appropriate Regional Board all pertinent information and obtain confirmation from the Regional Board that such modifications do not disqualify the Discharger from coverage under these General WDRs. Confirmation or new WDRs shall be obtained before any modifications are implemented.
6. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of these General WDRs by letter, a copy of which shall be immediately forwarded to the appropriate Regional Board office. The discharger shall also submit a Notice of Termination (Attachment No. 4 to these General WDRs) to the appropriate Regional Board.
7. These General WDRs do not convey any property rights or exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Discharger from liability under federal, State, or local laws, and do not create a vested right to continue to discharge wastes.
8. These General WDRs do not relieve the Discharger from the responsibility to obtain other necessary local, State, and federal permits to construct facilities necessary for compliance with these General WDRs, nor do these General WDRs prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.

9. The Discharger shall allow the Regional Board or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to do the following:
 - a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of these General WDRs,
 - b. Access and copy, at reasonable times, any records that must be kept under the conditions of these General WDRs;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under these General WDRs; and
 - d. Sample or monitor, at reasonable times, for the purposes of assuring compliance with these General WDRs or as otherwise authorized by the CWC any substances or parameters at any location.
10. After notice and opportunity for a hearing, coverage of an individual discharge under these General WDRs may be terminated or modified for cause, including but not limited to, the following:
 - a. Violation of any term or condition of these General WDRs;
 - b. In obtaining these General WDRs, misrepresentation or failure to disclose all relevant facts; and
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
11. The filing of a request by the Discharger for an Order to modify, revoke and reissue, or terminate the filing of or a notice of planned changes or anticipated noncompliance does not stay any condition of these General WDRs.
12. The Discharger shall comply with Monitoring and Reporting Program for Water Quality Order No. 2003-0003-DWQ, the approved DMP, and any revisions as prescribed thereto by the Regional Board Executive Officer.
13. Where the Discharger becomes aware that it failed to submit any relevant facts in a ROWD/NOI or submitted incorrect information in an ROWD/NOI or in any report to the Regional Board, it shall promptly submit the required facts or information.
14. The Discharger shall furnish, within a reasonable time, any information the Regional Board or SWRCB may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the Discharger's coverage under these General WDRs. The Discharger shall also furnish to the Regional Board or SWRCB, upon request, copies of records required to be kept by these General WDRs.

15. The CWC provides that any person failing or refusing to furnish technical or monitoring program reports, as required under these General WDRs, or falsifying any information provided in the monitoring reports is subject to civil liability for each day of violation.
16. The Discharger shall take all necessary steps to minimize or correct any adverse impact on the environment resulting from noncompliance with these General WDRs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
17. All reports, NOI, other documents required by these General WDRs, and other information requested by the Regional Board shall be signed by a person described below or by a duly authorized representative of that person.
 - a. For a corporation: by a responsible corporate officer such as (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function; (2) any other person who performs similar policy or decision-making functions for the corporation; or (3) the manager of one or more manufacturing, production, or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official.
18. Any person signing a document under Provision E.17 makes the following certification, whether written or implied:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
19. The Discharger shall immediately report any noncompliance potentially endangering public health or the environment. Any information shall be provided orally to the Regional Board within 24 hours of the time the Discharger becomes aware of the occurrence. A written report shall also be submitted to the Regional Board Executive Officer within five (5) calendar days of the time the Discharger becomes aware of the occurrence. The written report shall contain (a) a description of the noncompliance and its cause; (b) the period of the noncompliance event, including dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (c) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

20. The Discharger shall report all instances of noncompliance not reported under Provision No. E.19 at the time monitoring reports are submitted. The reports shall contain any applicable information listed in Provision No. E.19.
21. The Discharger shall give notice to the Regional Board as soon as possible of any planned alterations to the permitted facility that may change the nature or concentration of pollutants in the discharge.
22. The Discharger shall comply with all of the conditions of these General WDRs. Any noncompliance with these General WDRs constitutes a violation of the CWC and is grounds for an enforcement action.

CERTIFICATION

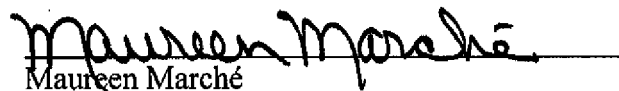
The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 30, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton

NO: None

ABSENT: None

ABSTAIN: None


Maureen Marché
Clerk to the Board

DISCHARGE CATEGORY DEFINITIONS

1. Well Development Discharge is any discharge of water to land during the development of a water well.
2. Monitoring Well Purge Water Discharge is any discharge of well water to land in the immediate vicinity of the monitoring well site during monitoring well sampling.
3. Boring Waste Discharge is any discharge of drilling mud and cuttings from well-drilling operations or any other borings in uncontaminated soils.
4. Water main, storage tank, and hydrant flushing discharges are discharges of potable or untreated clear water to land from water line and tank flushing operations.
5. Pipeline and Tank Hydrostatic Testing Discharges are discharges of potable or untreated clear water to land from hydrostatic testing of pipelines and tanks.
6. Commercial and Public Swimming Pool Discharges are discharges of swimming pool water to land.
7. Small Temporary Dewatering Projects are projects that discharge groundwater to land from small construction projects, excavation projects, or dewatering of underground utility vaults.
8. Small Inert Solid Waste Disposal Operations are operations or facilities, covering two acres of land or less, that accept wastes, which do not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and do not contain significant quantities of decomposable waste.
9. Cooling Discharge is non-contact cooling water discharge, air conditioner condensate discharge, discharge from evaporators, and discharge from heat exchangers.

INERT SOLID WASTES LIST

1. Inert mining wastes, including native geological materials generated during aggregate mining activities at or in the vicinity of the site
2. Uncontaminated soil, inert rock, and gravel
3. Broken concrete
4. Bricks
5. Glass and ceramics not containing lead
6. Inert plastics
7. Broken asphalt paving fragments (asphalt shall not be discharged to standing water nor shall it be placed below the highest anticipated groundwater elevation)

**ATTACHMENT 3
TO WQ ORDER
NO. 2003-0003-DWQ**

**State of California
State Water Resources Control Board**

**NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF WATER QUALITY ORDER NO. 2003-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS (WDRs)
FOR DISCHARGES TO LAND WITH A LOW THREAT TO WATER QUALITY**

Mark Only One Item	1. ☐ New Discharge 2. ☐ Change of Information-WDID # _____

I. Property Owner

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

II. Facility Owner

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

III. Billing Address

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

STATE USE ONLY

WDID:	Regional Board Office:	Date NOI Received:	
			Check #: _____

IV. Site Operator

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

V. Site Location

Street (including address, if any)	
Nearest Cross Street(s)	
County:	Total Size of Site (acres):
Township/Range/Section B&M T _____, R _____, Section _____,	
Latitude/Longitude (From Center): _____ Deg. _____ Min. _____ Sec N. _____ Deg. _____ Min. _____ Sec. W	
Attach a map of at least 1:24000 (1" = 2000") showing the proposed application site (e.g., USGS 7.5" topographic map).	

VI. Discharge Information

Subject	Notes
Low Threat Discharge Category:	See Table 1 of General Order 2003-0003-DWQ
Description of Operations:	
Approximate Volume of Discharge (for liquid discharges), or Flowrate: ☐ Intermittent Discharge ☐ Continuous Discharge	Gal/day, gal
Pollutants/Constituents Present in the Discharge and their Approximate Concentration*:	Mg/L
Land Use Zone:	
Adjacent Land Use Zones:	

Attach additional pages to characterize the discharge if necessary.

- VII. Does the proposed discharge have the potential to adversely impact a scenic vista, substantially damage scenic resources within a state scenic highway, or substantially degrade the existing visual character/quality of the discharge site/surroundings?
☐ YES ☐ NO
- VIII. Would the proposed discharge conflict with existing zoning for agricultural use or a Williamson Act contract?
☐ YES ☐ NO
- IX. Does the proposed discharge have the potential to significantly impact an applicable air quality plan, significantly violate any air quality standard or contribute to an existing violation, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, or significantly expose sensitive receptors to substantial pollutant concentrations?
☐ YES ☐ NO
- X. Do any locations within the proposed discharge site contain biologically unique or sensitive natural communities?
☐ YES ☐ NO
- XI. Does the discharge have the potential to cause a substantial adverse change in the significance of a historical or archeological resource (CCR Section 15064.5), directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains?
☐ YES ☐ NO
- XII. Is the proposed discharge site located on unstable geologic units/soils or expansive soils?
☐ YES ☐ NO
- XIII. Is the proposed discharge site located on a hazardous materials site, as defined by Government Code Section 65962.5?
☐ YES ☐ NO
- XIV. Does the proposed discharge have the potential to substantially alter the existing drainage pattern of the discharge site?
☐ YES ☐ NO
- XV. Does the proposed discharge have the potential to significantly physically divide an established community, significantly conflict with any applicable land use plan/policy/regulation of an agency with jurisdiction over the project, or conflict with any applicable habitat/community conservation plan?
☐ YES ☐ NO
- XVI. California Environmental Quality Act (CEQA) (If any other public agency has required the project to comply with CEQA, dischargers must submit evidence of CEQA compliance to be eligible for coverage under these General WDRs).
- a. Name of Lead Agency: _____
- b. Has a public agency determined that the proposed project is exempt from CEQA?
☐ YES ☐ NO
- Basis for Exemption/Agency: _____
- c. Has a "Notice of Determination" been filed under CEQA?
☐ YES ☐ NO

If yes, enclose a copy of the CEQA document, Environmental Impact Report (EIR), or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

d. EIR Negative Declaration expected CEQA completion date: _____

e. Expected CEQA documents: _____

Please submit the following with the Notice of Intent to the appropriate Regional Water Quality Control Board:

- a. Project map
- b. Evidence of compliance with the CEQA, if any other public agency has required the project to comply with CEQA
- c. First annual fee as described in Finding No. 6
- d. A DMP, as described in Provision C.6

XVII. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the General WDRs, including the criteria for eligibility, will be complied with."	
Signature of Owner/Operator	Title
Printed or Typed Name	Date
Signature of Property Owner	Title
Printed or Typed Name	Date
Signature of Site Operator/Manager	Title
Printed or Typed Name	Date

State Water Resources Control Board

**NOTICE OF TERMINATION
TO COMPLY WITH THE TERMS OF WATER QUALITY ORDER NO. 2003-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES TO LAND WITH A LOW THREAT TO WATER QUALITY**

WDID # _____

I. Property Owner

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

II. Facility Owner

Name				
Mailing Address				
City	County	State	Zip	Phone
Contact Person				

III. Site Location

Street (including address, if any)
Nearest Cross Street(s)
County:

IV. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."	
Signature of Facility Owner	Title
Printed or Typed Name	Date
Signature of Property Owner	Title
Printed or Typed Name	Date

STATE USE ONLY

WDID:	Regional Board Office:	Date NOT Received:	Date NOT Processed:
		_____	_____

STATE WATER RESOURCES CONTROL BOARD
MONITORING AND REPORTING PROGRAM FOR
WATER QUALITY ORDER NO. 2003-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES TO LAND WITH A LOW THREAT TO WATER QUALITY

A. MONITORING PROVISIONS:

1. Unless otherwise approved by the appropriate Regional Water Quality Control Board (Regional Board) Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants," promulgated by the U.S. Environmental Protection Agency (USEPA).
2. If the Discharger monitors any constituent more frequently than required by the General WDRs, the monitoring results shall be submitted.
3. The Discharger shall retain records of all monitoring information including all calibration and maintenance records, copies of all reports required by these General WDRs, and records of all data used to complete the application for these General WDRs. Records shall be maintained for a minimum of three years from the date of the sample, measurement, or report. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the appropriate Regional Board Executive Officer.
4. Records of monitoring information shall include the following:
 - a. The date, exact place, and time of sampling or measurements,
 - b. The individual(s) who performed the sampling or measurements,
 - c. The date(s) analyses were performed,
 - d. The individual(s) who performed the analyses,
 - e. The analytical techniques or method used, and
 - f. The results of such analyses.
5. All monitoring instruments and devices that are used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

B. DISCHARGE MONITORING:

1. Wells/boring waste and clear water dischargers shall submit the following information before initiation of discharge at a new site: (a) discharge site address and (b) discharge site latitude and longitude (if known).
2. Monitoring requirements for each discharge category are listed in Table 2. This monitoring program may be modified by the Regional Board Executive Officer.

Table 2. Monitoring Requirements Specific for each Discharge Category

CATEGORY	CONSTITUENTS	FREQUENCY
Wells/Boring Waste		
Water Well Development Discharge		
Monitoring Well Purge Water Discharge	Constituents that the monitoring well is used to monitor	Consistent with the frequency of groundwater monitoring
Boring Waste Discharge		
Clear Water Discharges		
Water Main/Water Storage Tank/Water Hydrant Flushing	Approximate volume (gal) at each discharge location and date of each discharge	Semiannually
Pipelines/Tank Hydrostatic Testing Discharge	Approximate volume (gal) at each discharge location and date of each discharge	Semiannually
Commercial and Public Swimming Pools		
Small Dewatering Projects		
Small /Temporary Dewatering Projects (such as excavations during construction)		
Miscellaneous		
Small Inert Solid Waste Disposal Operations	Approximate yd. ³ /day accepted by the site	Semiannually
Evaporative Cooling Water		

C. REPORT SCHEDULE:

Monitoring reports shall be submitted to the Regional Board Executive Officer in accordance with the following schedule:

<u>Reporting Frequency</u>	<u>Report Period</u>	<u>Report Due</u>
Quarterly	January-March April-June July-September October-December	May 15 August 15 November 15 February 15
Semiannually	January-June July-December	August 15 February 15

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

11020 Sun Center Drive, #200 Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • Fax (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

**ORDER R5-2016-0076-01
NPDES NO. CAG995002**

**WASTE DISCHARGE REQUIREMENTS
LIMITED THREAT DISCHARGES TO SURFACE WATER**

The following Dischargers are subject to waste discharge requirements (WDR's) as set forth in this General Order upon authorization by a Notice of Applicability:

Table 1. Discharger Information

Dischargers	Individuals, public agencies, private businesses, and other legal entities discharging the following: Tier 1: Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. Tier 1A: Discharges of less than 0.25 million gallons per day (MGD) or less than 4 months in duration (or as determined by the Executive Officer); and Tier 1B: Discharges greater than or equal to 0.25 MGD and greater than or equal to 4 months in duration (or as determined by the Executive Officer). Tier 2: Discharges that may contain toxic organic constituents, volatile organic compounds, petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and/or other chemical constituents that require treatment prior to discharge. Tier 3: Discharges of wastewater from hard rock mines.

Table 2. Administrative Information

This Order was adopted on:	14 October 2016
This Order shall become effective on:	1 February 2017
This Order shall expire on:	30 January 2022
Those enrollees who are covered under this Order at the time of expiration will continue to be covered until coverage becomes effective under a reissued Order.	
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as a minor discharge.	

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **14 October 2016**, and amended by Order R5-2018-0002 on **1 February 2018**.

Original Signed By
PAMELA C. CREEDON, Executive Officer

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I. DISCHARGE INFORMATION

This Limited Threat General Order applies to individuals, public agencies, private businesses, and other legal entities (hereafter Dischargers) discharging limited threat wastewater to waters of the United States as follows:

- Tier 1:** Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality.
- Tier 1A.** Discharges of less than 0.25 million gallons per day (MGD) or less than 4 months in duration (or as determined by the Executive Officer); or
- Tier 1B.** Discharges greater than or equal to 0.25 MGD and greater than or equal to 4 months in duration (or as determined by the Executive Officer).
- Tier 2:** Wastewater that may contain toxic organic constituents, volatile organic compounds (VOCs), petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and other chemical constituents for which treatment technologies are well-established to eliminate constituents that pose a threat to water quality and that require treatment prior to discharge.
- Tier 3:** Wastewater from hard rock mines (excluding aggregate mines, which may be included in Tiers 1 or 2).

Table 3, below, lists several examples of the types of discharges that are eligible for coverage under this General Order and the applicable tiers based on the volume discharged, the duration of discharge, and whether treatment is required to meet screening levels.

Table 3. Eligible Discharges with Applicable Tiers

Type of Discharge	Wastewater Does Not Exceed Screening Levels, Y/N?	Maximum Daily Discharge < 0.25 MGD or < 4 months	Maximum Daily Discharge ≥ 0.25 MGD and ≥ 4 months
Well Development Water	Y ¹	Tier 1A	Tier 1B
Construction Dewatering	Y ¹	Tier 1A	Tier 1B
Pump/Well Testing	Y ¹	Tier 1A	Tier 1B
Pipeline/Tank Pressure Testing	Y ¹	Tier 1A	Tier 1B
Pipeline/Tank Flushing or Dewatering	Y ¹	Tier 1A	Tier 1B
Condensate	Y ¹	Tier 1A	Tier 1B
Water Supply System	Y ¹	Tier 1A	Tier 1B
Aggregate Mine	Y ¹	Tier 1A	Tier 1B
Filter Backwash Water	Y ¹	Tier 1A	Tier 1B
Other Wastewater Without a Treatment System	Y ¹	Tier 1A	Tier 1B

Type of Discharge	Wastewater Does Not Exceed Screening Levels, Y/N?	Maximum Daily Discharge < 0.25 MGD or < 4 months	Maximum Daily Discharge ≥ 0.25 MGD and ≥ 4 months
Superchlorination Project Wastewater That Does Not Meet Effluent Limitations Without Treatment	N	Tier 2	Tier 2
Equipment Decontamination Wastewater That Does Not Meet Effluent Limitations Without Treatment	N	Tier 2	Tier 2
Cleanup Site Wastewater That Does Not Meet Effluent Limitations Without Treatment	N	Tier 2	Tier 2
Groundwater Cleanup of Petroleum Fuel Pollution	Y or N	Tier 2	Tier 2
Hard Rock Mine Wastewater (Excluding Aggregate Mines) With or Without Treatment	N	Tier 3	Tier 3

¹ If the wastewater exceeds the screening levels this type of discharge will be assigned to Tier 2.

II. NOTIFICATION REQUIREMENTS

A. General Order Application – Notice of Intent (NOI)

It is the responsibility of the Discharger to obtain coverage under this Limited Threat General Order prior to commencement of any discharge to surface waters. To obtain coverage under this General Order, which also serves as the National Pollutant Discharge Elimination System (NPDES) Permit, the Discharger must submit a complete NOI, as detailed below and in Attachment J.

1. **Requirements for all Discharges.** The following documents and information must be submitted as part of the NOI:
 - a. State Water Board Form 200;
 - b. A full description of the proposed project on official letterhead that includes the items listed in section 2 of Attachment J;
 - c. A project map showing the location of the project, discharge points, receiving water(s), and effluent and receiving water monitoring locations;
 - d. The fee for enrollment under this Order shall be based on Category 3 in section 2200(b)(9) of title 23, California Code of Regulations . Checks must be made payable to the State Water Resources Control Board. The current fee schedule is available at the following website:
http://www.waterboards.ca.gov/water_issues/programs/npdes/
 - e. Discharge type (see section 4 of the Notice of Intent, Attachment J);
 - f. An evaluation of disposal/reclamation options (see section 5 of the Notice of Intent, Attachment J);

- 6

NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.

- d. **Intake Water Credits.** When the intake water is from the same water body as the receiving water body and monitoring data of the source water indicates that the source water is above the screening levels in Attachment I, then the discharge may qualify for intake water credits granted in accordance with section 1.4.4 of the SIP. The Executive Officer of the Central Valley Water Board will decide whether to authorize the intake water credit on a pollutant-by-pollutant and discharge-by-discharge basis. The Executive Officer will base the decision on the monitoring data included with the NOI and other information submitted by the Discharger, and the requirements specified in the SIP, section 1.4.4, and listed in Attachment D, section III.B.4. Additional requirements for application for intake water credits include:
 - i. A written request for an intake water credit on a pollutant-by-pollutant basis (Attachment H). The written request must be prepared in accordance with the NOI requirements specified in Attachment J.
 - ii. Analytical results of sampling of the intake water for the pollutants for which intake water credits are requested.
- e. **Wastewater that Requires Treatment Prior to Discharge.** Additional requirements for Tier 2 and Tier 3 Discharges where treatment is required to reduce pollutants to levels that will meet the effluent limitations prior to discharging to surface waters:
 - i. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations. The treatment methods proposed by the Discharger must use common, already well-studied, well-tested, and well-used technologies, previously demonstrated and acknowledged to perform as expected and as stated.
 - ii. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.

B. General Order Coverage

1. New Discharges

Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a Notice of Applicability to the Discharger. The Notice of Applicability will specify that the discharge is authorized under the terms and conditions of this General Order and will prescribe effluent limitations and include a monitoring and reporting program. New discharges that are not covered by an existing individual or general NPDES permit may not commence discharging until issuance of a Notice of Applicability. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

New analytical results must be submitted every 5 years from the date of the NOA, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a Notice of Applicability from the Executive Officer.

2. Existing Discharges

Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2013-0073-01 (NPDES Permit No. CAG995002) are automatically authorized under this General Order to continue discharging. However to maintain general order coverage, the current enrollees must submit a complete Notice of Intent (NOI), as described in sections II.A.1.a through h, above, and in Attachment J, within 90 days of the adoption date of this Order, to adequately characterize the discharge for coverage under this Order.

New analytical results must be submitted every 5 years, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged. Those dischargers that have not submitted the suite of analytical results specified in Table I-1 of Attachment I in five years or more must submit the data within 180 days of adoption of this Order.

Upon submittal of an acceptable NOI, the Executive Officer will issue a revised Notice of Applicability to existing enrollees that coverage under the General Order will continue, specifying any new and continuing effluent limitations and a monitoring and reporting program. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

3. Changes in Discharge/Coverage

Eligible changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the Notice of Applicability by the Executive Officer.

- a.** Notify the Executive Officer 60 days prior to planned or expected changes to the wastewater and/or to the treatment system.
- b.** Notify the Executive Officer within 60 days after receipt of laboratory results indicating unplanned or unexpected changes to wastewater.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g. submittal of a modified NOI to the Executive Officer), including applicable laboratory analyses, the Executive Officer may issue a revised Notice of Applicability for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary and/or a discharge no longer qualifies for this Order, the Discharger must immediately apply for an individual NPDES permit. See the Fact Sheet for further discussion of anti-backsliding and antidegradation issues.

4. Termination of Discharge/Coverage

Upon cessation of the discharge, the Discharger shall request, using the Request for Termination of Coverage in Attachment E, official termination of coverage under this General Order from the Executive Officer. The Discharger is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee and monitoring reports associated with this General Order until the Discharger receives a Notice of Termination (NOT) from the Executive Officer. Upon receipt of the NOT, the Discharger will no longer be authorized to discharge wastewater covered by this General Order. Failure to submit the annual fee and monitoring reports may subject the Discharger to mandatory minimum penalties or discretionary penalties.

- a.** When the Central Valley Water Board issues an individual NPDES permit or Waste Discharge Requirements (WDR's) with more specific requirements to a Discharger,

the applicability of this General Order to that Discharger is automatically terminated on the effective date of the individual permit or WDR's.

- b. Dischargers with drinking water supply systems authorized to discharge under this General Order who have been granted an exception to the priority pollutant criteria and objectives in the California Toxics Rule (CTR) and SIP, as allowed by section 5.3 of the SIP, must provide certification by a qualified biologist that the beneficial uses of the receiving water have been restored upon completion of the discharge. The certification must be submitted with the Request for Termination of Coverage, Attachment E.

5. Expiration of General Order

This General Order will expire 5 years after the effective date (30 January 2022), as specified on the cover page of this General Order. In accordance with 40 C.F.R. section 122.6, if the permit is not reissued by the expiration date, the conditions of this General Order will continue in force and effect until a new General Order is issued.

C. Eligibility Criteria

1. All Limited Threat Discharges

To be authorized by this General Order, all Dischargers of limited threat discharges (Tier 1A, Tier 1B, Tier 2, and Tier 3) shall comply with the terms and provisions of this General Order and must demonstrate that the discharge or proposed discharge meets the following criteria:

- a. The wastewater does not contain sewage of human origin;
- b. The wastewater does not contain acid mine drainage;
- c. The discharge point is to a surface water or surface water drainage course;
- d. All discharges to CWA section 303(d) listed waters shall not exceed the applicable criteria or comply with established Total Maximum Daily Loads (TMDLs), at the point of discharge;
- e. A representative sample of the wastewater has been analyzed for the constituents listed in Table I-1 of Attachment I;
- f. The analytical test results from Step e, above, have been compared to the water quality screening levels for the constituents listed in Attachment I;
 - i. If the analytical test results of the wastewater show that the results are at or below the screening levels in Attachment I, then the Discharger will be enrolled under Tier 1A or Tier 1B of this Order and treatment of the wastewater will not be required for the discharge.
 - ii. Excluding hard rock mines, if the analytical test results of the wastewater show that constituent concentrations exceed the water quality screening levels listed in Attachment I, then the Discharger will be enrolled under Tier 2 of this Order and treatment will be required for the discharge.
 - iii. For hard rock mines, the Discharger will be enrolled under Tier 3 of this Order.
- g. The discharged wastewater does not cause acute or chronic toxicity in the receiving water;
- h. Except for any pollutant eligible for an intake water credit, pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to

an excursion above any applicable federal water quality criterion established by U.S. EPA pursuant to CWA section 303;

- i. Except for any pollutant eligible for an intake water credit, pollutant concentrations in the discharge, do not cause, have a reasonable potential to cause, or contribute to an excursion above any water quality objective adopted by the Central Valley Water Board or State Water Resources Control Board (State Water Board), including prohibitions of discharge for the receiving waters;
- j. The effluent discharge meets the Effluent Limitations in this Order as specified in the NOA if the discharge does not qualify for intake water credit.

2. Tier 1 Discharges.

To be authorized as a Tier 1 discharge under this General Order, the Discharger must demonstrate that the discharge or proposed discharge meets the criteria in section II.C.1 above and the following criteria:

- a. The untreated discharge does not exceed the screening levels listed in Attachment I; and
- b. The maximum daily discharge rate and discharge duration are as follows:
 - Tier 1A. To be authorized as a Tier 1A discharge under this General Order, the proposed discharge rate is < 0.25 MGD or the discharge is less than 4 months in duration (or as determined by the Executive Officer in the NOA).
 - Tier 1B. To be authorized as a Tier 1B discharge under this General Order, the proposed discharge rate is ≥ 0.25 MGD and the discharge is greater than 4 months in duration (or as determined by the Executive Officer in the NOA).

3. Tier 2 and Tier 3 Discharges.

To be authorized as a Tier 2 or Tier 3 discharge under this General Order, treatment is required, and the Discharger must demonstrate that the discharge or proposed discharge meets the criteria in section II.C.1 above and the following criteria:

- a. A representative sample of the discharge, has been analyzed for the constituents with effluent limitations specified in the NOA; and
- b. The concentrations of constituents in the discharge, do not exceed the Effluent Limitations listed in section V of this Order, as specified in the NOA.

III. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

- A. Legal Authorities.** This Order serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for limited threat point source discharges, as described herein, to surface waters.

40 C.F.R. section 122.28 authorizes U.S. EPA and approved states to issue general permits to regulate a point source category if the sources:

- 1. Involve the same or substantially similar types of operations;
- 2. Discharge the same type of waste;

3. Require the same type of effluent limitations or operating conditions;
4. Require similar monitoring; and
5. Are more appropriately regulated under a general permit rather than individual permits.

On 22 September 1989, U.S. EPA granted the State of California, through the State Water Board and the Regional Water Boards, the authority to issue general NPDES permits pursuant to 40 C.F.R. parts 122 and 123.

- B. Basin Plans.** The Central Valley Water Board adopted a Water Quality Control Plan, Fourth Edition (Revised April 2016), for the Sacramento and San Joaquin River Basins and a Water Quality Control Plan, Second Edition (Revised January 2015 with approved amendments), for the Tulare Lake Basin (hereinafter Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plans. Requirements in this Order implement the Basin Plans.
- C. Background and Rationale for Requirements.** The Central Valley Water Board developed the requirements in this Order based on readily available information and permit requirements for several similar dischargers and the requirements contained in Orders R5-2013-0074 and R5-2013-0073-01. The Fact Sheet (Attachment D), which contains additional background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through C and E through J are also incorporated into this Order.
- D. Monitoring and Reporting.** 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program, as specified in the Notice of Applicability and in Attachment F, establishes monitoring and reporting requirements to implement federal and State requirements.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet (Attachment D).

- E. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment B. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The Central Valley Water Board has also included in this Order special provisions applicable to the Dischargers.

The rationale for the special provisions contained in this Order is provided in the Fact Sheet (Attachment D).

- F. Notification of Interested Parties for this General Order.** The Central Valley Water Board has notified potential and existing Dischargers and interested agencies and persons of its intent to prescribe WDR's for limited threat waste discharges and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet (Attachment D).
- G. Consideration of Public Comment for this General Order.** The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to limited threat wastewater discharges to surface water or surface water drainage courses. Details of the Public Hearing are provided in the Fact Sheet (Attachment D).
- H. Notification of Interested Parties for Individual NOAs.** It is the intent of this General Order that the public comment period for this General Order shall be adequate for the enrollees under this Order. However, there may be individual discharges that, due to the threat to water quality, complexity of the discharge, and/or extent of public concern, require a public comment period and Board hearing, which will be determined at the discretion of the Executive Officer. Details of the notification will be provided in the NOA for the project.
- I. Consideration of Public Comment for Individual NOAs.** For those NOAs that require a public comment period and Board hearing at the discretion of the Executive Officer, the Central Valley Water Board, in a public meeting, will hear and consider all comments pertaining to individual limited threat wastewater discharges to surface water or surface water drainage courses. Details of the Public Hearing will be provided in the NOA for the project.

THEREFORE, IT IS HEREBY ORDERED that Limited Threat General Order R5-2013-0073-01 (Waste Discharge Requirements for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water), is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this General Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for past violations of the previous Orders.

IV. DISCHARGE PROHIBITIONS

- A.** The discharge of wastes, other than those described in section I and meeting the eligibility criteria in sections II.C.1, II.C.2, and II.C.3 of this General Order, is prohibited unless the Discharger obtains a waiver, coverage under another general order, or coverage under an individual Order that regulates the discharge of such wastes.
- B.** The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment B).
- C.** Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

V. EFFLUENT LIMITATIONS

The Executive Officer shall indicate the applicable Effluent Limitations in the Notice of Applicability (NOA) when a Discharger is enrolled under this General Order. The NOA will contain applicable final effluent limitations for each specific Discharger that shall be based on the effluent limitations shown below in this Order. The discharge shall not exceed the final effluent limitations for the constituents and parameters identified in the NOA from the Executive Officer:

A. Water Quality-Based Effluent Limitations

1. All Discharges - Tier 1A, Tier 1B, Tier 2, and Tier 3

- a. **Flow.** The discharge flow rate, discharge duration, and/or total volume of discharge shall not exceed the limitations specified in the Notice of Applicability.
- b. **pH.**
 - i. The pH of all discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.
 - ii. The pH of all discharges to Goose Lake in Modoc County shall at all times be within the range of 7.5 and 9.5.
 - iii. The pH of all discharges within the Tulare Lake Basin shall at all times be within the range of 6.5 and 8.3.
- c. **Pesticides.**
 - i. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the discharge at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer for the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for the Tulare Lake Basin.
 - ii. Thiobencarb shall not be discharged in excess of 1.0 µg/L for the Sacramento and San Joaquin River Basins.
 - iii. For other pesticides not listed here, see the Pesticide Water Quality Objective in the Basin Plans.
- d. **Salinity.** The salinity of all discharges within the Sacramento and San Joaquin River Basins and within the Tulare Lake Basin shall not exceed any applicable TMDLs, Delta standards, or Basin Plan water quality objectives or numeric limits. Effluent limitations shall be established on a water-body-specific basis, as applicable and shall be as electrical conductivity (EC), total dissolved solids (TDS), chloride, and/or boron.
- e. **Constituents and Parameters of Concern.** The constituents and parameters, subject to effluent limitations as identified in the Notice of Applicability (NOA) from the Executive Officer, shall not exceed the effluent limitations in Table 4 below:

Table 4. Effluent Limitations for Constituents and Parameters of Concern

Parameter	Units	Effluent Limitations			
		MUN ¹		No MUN ¹	
		Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
Aluminum, Total Recoverable	µg/L	310	620	374	750
Iron, Total Recoverable	µg/L	470	930	--	--
Manganese, Total Recoverable	µg/L	80	160	--	--
Nitrate Nitrogen, Total (as N)	mg/L	10	20	--	--
Nitrite (as N)	mg/L	1	2	--	--
Total Residual Chlorine	mg/L	0.01	0.02	0.01	0.02

¹ MUN = Municipal and Domestic Supply Beneficial Use

- f. Effluent Limitations for Priority Pollutants.** The priority pollutants, subject to effluent limitations as identified in the Notice of Applicability from the Executive Officer, shall not exceed the effluent limitations in Table 5 below:

Table 5. Effluent Limitations for Priority Pollutants

CTR #	Parameter	Units	Effluent Limitations			
			MUN ¹		No MUN ¹	
			AMEL ²	MDEL ³	AMEL ²	MDEL ³
1	Antimony, Total Recoverable	µg/L	6	12	4300	8600
2	Arsenic, Total Recoverable	µg/L	10	20	120	250
3	Beryllium, Total Recoverable	µg/L	4	8	--	--
4	Cadmium, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
5a	Chromium (III)	µg/L	⁴	⁴	⁴	⁴
5b	Chromium (VI)	µg/L	8	16	8	16
6	Copper, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
7	Lead, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
8	Mercury, Total Recoverable	µg/L	0.05	0.10	0.05	0.10
9	Nickel, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
10	Selenium, Total Recoverable	µg/L	4.1	8.2	4.1	8.2
11	Silver, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
12	Thallium, Total Recoverable	µg/L	1.7	3.4	6.3	13
13	Zinc, Total Recoverable	µg/L	⁴	⁴	⁴	⁴
14	Cyanide, Total (as CN)	µg/L	4.3	8.5	4.3	8.5
15	Asbestos	MFL	7	14	--	--
16	2,3,7,8-TCDD	µg/L	1.3E-08	2.6E-08	--	--
17	Acrolein	µg/L	320	642	--	--
18	Acrylonitrile	µg/L	0.059	0.118	0.118	0.237
19	Benzene	µg/L	1	2	71	142
20	Bromoform	µg/L	4.3	8.6	360	720
21	Carbon Tetrachloride	µg/L	0.25	0.50	4.4	8.8
22	Chlorobenzene	µg/L	70	140	--	--
23	Chlorodibromomethane	µg/L	0.401	0.804	34	68
24	Chloroethane	µg/L	--	--	--	--
25	2-Chloroethylvinyl Ether	µg/L	--	--	--	--
26	Chloroform	µg/L	80	161	1015	2037
27	Dichlorobromomethane	µg/L	0.56	1.12	46	943
28	1,1-Dichloroethane	µg/L	5	10	--	--
29	1,2-Dichloroethane	µg/L	0.38	0.76	--	--
30	1,1-Dichloroethylene	µg/L	0.057	0.114	--	--
31	1,2-Dichloropropane	µg/L	0.52	1.04	--	--
32	1,3-Dichloropropylene	µg/L	0.5	1.0	--	--
33	Ethylbenzene	µg/L	300	602	--	--
34	Methyl Bromide	µg/L	48	96	--	--
35	Methyl Chloride	µg/L	--	--	--	--
36	Methylene Chloride	µg/L	4.7	9.4	--	--
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	0.34	--	--
38	Tetrachloroethylene	µg/L	0.8	1.6	--	--
39	Toluene	µg/L	150	301	--	--
40	1,2-Trans-Dichloroethylene	µg/L	10	20	--	--
41	1,1,1-Trichloroethane	µg/L	200	401	--	--
42	1,1,2-Trichloroethane	µg/L	0.60	1.20	--	--
43	Trichloroethylene	µg/L	2.7	5.4	--	--

CTR #	Parameter	Units	Effluent Limitations			
			MUN ¹		No MUN ¹	
			AMEL ²	MDEL ³	AMEL ²	MDEL ³
44	Vinyl Chloride	µg/L	0.5	1.0	--	--
45	2-Chlorophenol	µg/L	120	241	--	--
46	2,4-Dichlorophenol	µg/L	93	187	--	--
47	2,4-Dimethylphenol	µg/L	540	1,083	2300	4600
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	26.9	115	230
49	2,4-Dinitrophenol	µg/L	70	140	115	230
50	2-Nitrophenol	µg/L	--	--	--	--
51	4-Nitrophenol	µg/L	--	--	--	--
52	3-Methyl-4-Chlorophenol	µg/L	--	--	--	--
53	Pentachlorophenol	µg/L	0.28	0.56	8.2	16.4
54	Phenol	µg/L	21000	42130	--	--
55	2,4,6-Trichlorophenol	µg/L	2.1	4.2	6.5	13
56	Acenaphthene	µg/L	1200	2407	--	--
57	Acenaphthylene	µg/L	--	--	--	--
58	Anthracene	µg/L	9,600	19,259	110000	220000
59	Benzidine	µg/L	0.00012	0.00024	0.00054	0.0011
60	Benzo(a)Anthracene	µg/L	0.0044	0.0088	0.049	0.098
61	Benzo(a)Pyrene	µg/L	0.0044	0.0088	0.049	0.098
62	Benzo(b)Fluoranthene	µg/L	0.0044	0.0088	0.049	0.098
63	Benzo(ghi)Perylene	µg/L	--	--	--	--
64	Benzo(k)Fluoranthene	µg/L	0.0044	0.0088	0.049	0.098
65	Bis(2-Chloroethoxy)Methane	µg/L	--	--	--	--
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	0.062	1.4	2.8
67	Bis(2-Chloroisopropyl)Ether	µg/L	1400	2809	170000	340000
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	3.6	5.9	11.8
69	4-Bromophenyl Phenyl Ether	µg/L	--	--	--	--
70	Butylbenzyl Phthalate	µg/L	3000	6019	5200	10400
71	2-Chloronaphthalene	µg/L	1700	3411	4300	8600
72	4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	--
73	Chrysene	µg/L	0.0044	0.0088	0.049	0.098
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	0.0088	0.049	0.098
75	1,2-Dichlorobenzene	µg/L	600	1,204	--	--
76	1,3-Dichlorobenzene	µg/L	400	802	--	--
77	1,4-Dichlorobenzene	µg/L	5	10	--	2600 ⁶
78	3,3 Dichlorobenzidine	µg/L	0.04	0.08	0.077	0.154
79	Diethyl Phthalate	µg/L	23000	46142	120000	240000
80	Dimethyl Phthalate	µg/L	313000	627937	2900000	5800000
81	Di-n-Butyl Phthalate	µg/L	2700	5417	12000	24000
82	2,4-Dinitrotoluene	µg/L	0.11	0.22	9.1	18.2
83	2,6-Dinitrotoluene	µg/L	--	--	--	--
84	Di-n-Octyl Phthalate	µg/L	--	--	--	--
85	1,2-Diphenylhydrazine	µg/L	0.040	0.080	0.54	1.08
86	Fluoranthene	µg/L	300	602	370	742
87	Fluorene	µg/L	1300	2608	14000	28000
88	Hexachlorobenzene	µg/L	0.00075	0.00150	0.00077	0.0015
89	Hexachlorobutadiene	µg/L	0.44	0.88	--	50 ⁶
90	Hexachlorocyclopentadiene	µg/L	50	100	--	--
91	Hexachloroethane	µg/L	1.9	3.8	8.9	17.8
92	Indeno(1,2,3-cd)Pyrene	µg/L	0.0044	0.0088	0.049	0.098
93	Isophorone	µg/L	8.4	16.9	600	1200

CTR #	Parameter	Units	Effluent Limitations			
			MUN ¹		No MUN ¹	
			AMEL ²	MDEL ³	AMEL ²	MDEL ³
94	Naphthalene	µg/L	--	--	--	--
95	Nitrobenzene	µg/L	17	34	1900	3800
96	N-Nitrosodimethylamine	µg/L	0.00069	0.00138	8.1	16.2
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	0.010	1.4	2.8
98	N-Nitrosodiphenylamine	µg/L	5.0	10.0	16	32
99	Phenanthrene	µg/L	--	--	--	--
100	Pyrene	µg/L	960	1926	11000	22000
101	1,2,4-Trichlorobenzene	µg/L	5	10	--	--
102	Aldrin	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
103	alpha-BHC	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
104	beta-BHC	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
105	gamma-BHC (Lindane)	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
106	delta-BHC	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
107	Chlordane	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
108	4,4'-DDT	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
109	4,4'-DDE (linked to DDT)	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
110	4,4'-DDD	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
111	Dieldrin	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
112	alpha-Endosulfan	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
113	beta-Endosulfan	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
114	Endosulfan Sulfate	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
115	Endrin	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
116	Endrin Aldehyde	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
117	Heptachlor	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
118	Heptachlor Epoxide	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
119-125	PCBs sum ⁵	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷
126	Toxaphene	µg/L	ND ⁷	ND ⁷	ND ⁷	ND ⁷

¹ MUN = Municipal and Domestic Supply Beneficial Use

² AMEL = Average Monthly Effluent Limitation

³ MDEL = Maximum Daily Effluent Limitation

⁴ See Tables 6A through 6G below for effluent limitations for the hardness-dependent metals; cadmium, chromium III, copper, lead, nickel, silver, and zinc.

⁵ This effluent limitation applies to the sum of PCB aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260;

⁶ CTR Human Health Criterion, fish consumption only;

⁷ The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L (SIP minimum level).

g. Effluent Limitations for Hardness-Dependent Metals. The priority pollutants, subject to effluent limitations as identified in the Notice of Applicability from the Executive Officer, shall not exceed the respective effluent limitations contained in Tables 6A through 6G, below for cadmium, chromium III, copper, lead, nickel, silver, and zinc. In this General Order, effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and zinc are based on a range of hardness concentrations, with the middle value selected. The statistical parameter, Coefficient of Variation (CV) is used to calculate the effluent limitations for the hardness-dependent metals. A CV of 0.6 will be used by the Central Valley Water Board to calculate effluent limitations for hardness-dependent metals.

Table 6A. Cadmium Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Cadmium (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	0.080	0.15
5 ≤ H < 10	0.12	0.24
10 ≤ H < 15	0.22	0.43
15 ≤ H < 20	0.32	0.63
20 ≤ H < 25	0.42	0.84
25 ≤ H < 30	0.52	1.1
30 ≤ H < 35	0.63	1.3
35 ≤ H < 40	0.74	1.5
40 ≤ H < 45	0.86	1.7
45 ≤ H < 50	0.97	2.0
50 ≤ H < 55	1.1	2.2
55 ≤ H < 60	1.2	2.4
60 ≤ H < 65	1.3	2.7
65 ≤ H < 70	1.4	2.9
70 ≤ H < 75	1.6	3.1
75 ≤ H < 80	1.7	3.3
80 ≤ H < 90	1.8	3.6
90 ≤ H < 100	1.9	3.9
100 ≤ H < 110	2.1	4.2
110 ≤ H < 120	2.2	4.5
120 ≤ H < 130	2.4	4.8
130 ≤ H < 140	2.6	5.1
140 ≤ H < 150	2.7	5.4
150 ≤ H < 200	3.1	6.3
200 ≤ H < 250	3.8	7.6
250 ≤ H < 300	4.5	8.9
300 ≤ H < 350	5.1	10
350 ≤ H < 400	5.7	11
H ≥ 400	6.0	12

Table 6B. Chromium III Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Chromium III (µg/L) (CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	15	30
5 ≤ H < 10	20	41
10 ≤ H < 15	31	62
15 ≤ H < 20	41	82
20 ≤ H < 25	49	99
25 ≤ H < 30	57	110
30 ≤ H < 35	66	130
35 ≤ H < 40	74	150
40 ≤ H < 45	82	160
45 ≤ H < 50	90	180
50 ≤ H < 55	98	200
55 ≤ H < 60	110	210
60 ≤ H < 65	110	230
65 ≤ H < 70	120	250
70 ≤ H < 75	130	260
75 ≤ H < 80	140	280
80 ≤ H < 90	150	300
90 ≤ H < 100	160	330
100 ≤ H < 110	180	360
110 ≤ H < 120	190	380
120 ≤ H < 130	200	410
130 ≤ H < 140	210	430
140 ≤ H < 150	230	460
150 ≤ H < 200	270	540
200 ≤ H < 250	330	660
250 ≤ H < 300	380	770
300 ≤ H < 350	440	890
350 ≤ H < 400	500	1000
H ≥ 400	520	1100

Table 6C. Copper Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Copper (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	0.41	0.83
5 ≤ H < 10	0.61	1.2
10 ≤ H < 15	0.98	2.0
15 ≤ H < 20	1.4	2.7
20 ≤ H < 25	1.7	3.4
25 ≤ H < 30	2.1	4.1
30 ≤ H < 35	2.4	4.9
35 ≤ H < 40	2.8	5.6
40 ≤ H < 45	3.1	6.3
45 ≤ H < 50	3.5	6.9
50 ≤ H < 55	3.8	7.6
55 ≤ H < 60	4.1	8.3
60 ≤ H < 65	4.5	9.0
65 ≤ H < 70	4.8	9.7
70 ≤ H < 75	5.2	10
75 ≤ H < 80	5.5	11
80 ≤ H < 90	6.0	12
90 ≤ H < 100	6.6	13
100 ≤ H < 110	7.3	15
110 ≤ H < 120	8.0	16
120 ≤ H < 130	8.6	17
130 ≤ H < 140	9.3	19
140 ≤ H < 150	9.9	20
150 ≤ H < 200	12	24
200 ≤ H < 250	15	30
250 ≤ H < 300	18	36
300 ≤ H < 350	21	42
350 ≤ H < 400	24	47
H ≥ 400	25	50

Table 6D. Lead Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Lead (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	0.057	0.12
5 ≤ H < 10	0.096	0.19
10 ≤ H < 15	0.18	0.37
15 ≤ H < 20	0.28	0.57
20 ≤ H < 25	0.39	0.78
25 ≤ H < 30	0.50	1.0
30 ≤ H < 35	0.62	1.2
35 ≤ H < 40	0.75	1.5
40 ≤ H < 45	0.88	1.8
45 ≤ H < 50	1.0	2.0
50 ≤ H < 55	1.1	2.3
55 ≤ H < 60	1.3	2.6
60 ≤ H < 65	1.4	2.9
65 ≤ H < 70	1.6	3.2
70 ≤ H < 75	1.7	3.5
75 ≤ H < 80	1.9	3.8
80 ≤ H < 90	2.1	4.2
90 ≤ H < 100	2.4	4.9
100 ≤ H < 110	2.8	5.6
110 ≤ H < 120	3.1	6.2
120 ≤ H < 130	3.5	6.9
130 ≤ H < 140	3.8	7.7
140 ≤ H < 150	4.2	8.4
150 ≤ H < 200	5.3	11
200 ≤ H < 250	7.3	15
250 ≤ H < 300	9.4	19
300 ≤ H < 350	12	23
350 ≤ H < 400	14	28
H ≥ 400	15	31

Table 6E. Nickel Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Nickel (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	3.4	6.8
5 ≤ H < 10	4.8	9.6
10 ≤ H < 15	7.4	15
15 ≤ H < 20	9.8	20
20 ≤ H < 25	12	24
25 ≤ H < 30	14	29
30 ≤ H < 35	17	33
35 ≤ H < 40	19	37
40 ≤ H < 45	21	42
45 ≤ H < 50	23	46
50 ≤ H < 55	25	50
55 ≤ H < 60	27	54
60 ≤ H < 65	29	58
65 ≤ H < 70	31	61
70 ≤ H < 75	33	65
75 ≤ H < 80	34	69
80 ≤ H < 90	37	75
90 ≤ H < 100	41	82
100 ≤ H < 110	45	89
110 ≤ H < 120	48	96
120 ≤ H < 130	52	100
130 ≤ H < 140	55	110
140 ≤ H < 150	58	120
150 ≤ H < 200	69	140
200 ≤ H < 250	85	170
250 ≤ H < 300	100	200
300 ≤ H < 350	120	230
350 ≤ H < 400	130	260
H ≥ 400	140	280

Table 6F. Silver Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Silver (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	0.012	0.023
5 ≤ H < 10	0.024	0.047
10 ≤ H < 15	0.057	0.11
15 ≤ H < 20	0.10	0.20
20 ≤ H < 25	0.16	0.31
25 ≤ H < 30	0.22	0.44
30 ≤ H < 35	0.29	0.59
35 ≤ H < 40	0.37	0.75
40 ≤ H < 45	0.46	0.93
45 ≤ H < 50	0.56	1.1
50 ≤ H < 55	0.67	1.3
55 ≤ H < 60	0.78	1.6
60 ≤ H < 65	0.90	1.8
65 ≤ H < 70	1.0	2.1
70 ≤ H < 75	1.2	2.3
75 ≤ H < 80	1.3	2.6
80 ≤ H < 90	1.5	3.1
90 ≤ H < 100	1.9	3.7
100 ≤ H < 110	2.1	4.2
110 ≤ H < 120	2.2	4.5
120 ≤ H < 130	2.4	4.8
130 ≤ H < 140	2.6	5.1
140 ≤ H < 150	2.7	5.4
150 ≤ H < 200	3.1	6.3
200 ≤ H < 250	3.8	7.6
250 ≤ H < 300	4.5	8.9
300 ≤ H < 350	5.1	10
350 ≤ H < 400	5.7	11
H ≥ 400	6.0	12

Table 6G. Zinc Effluent Limitations

Hardness in mg/L (H)	Effluent Limitations for Zinc (µg/L) (Total Recoverable and CV=0.6)	
	Average Monthly	Maximum Daily
H < 5	4.7	9.5
5 ≤ H < 10	6.7	13
10 ≤ H < 15	10	21
15 ≤ H < 20	14	27
20 ≤ H < 25	17	34
25 ≤ H < 30	20	40
30 ≤ H < 35	23	46
35 ≤ H < 40	26	52
40 ≤ H < 45	29	58
45 ≤ H < 50	32	64
50 ≤ H < 55	35	69
55 ≤ H < 60	37	75
60 ≤ H < 65	40	80
65 ≤ H < 75	45	90
75 ≤ H < 90	50	100
90 ≤ H < 100	55	110
100 ≤ H < 110	60	120
110 ≤ H < 120	65	130
120 ≤ H < 130	70	140
130 ≤ H < 140	75	150
140 ≤ H < 150	80	160
150 ≤ H < 200	95	190
200 ≤ H < 250	120	240
250 ≤ H < 300	140	280
300 ≤ H < 350	160	330
350 ≤ H < 400	180	370
H ≥ 400	190	390

2. Tier 1B, Tier 2, and Tier 3 Discharges

- a. **Whole Effluent Toxicity, Chronic.** There shall be no chronic toxicity in the discharge. See the Monitoring and Reporting Program (Attachment C) and the Notice of Applicability from the Executive Officer.

3. Tier 2 and Tier 3 Discharges

- a. **Whole Effluent Toxicity, Acute.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
- i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.

See the Monitoring and Reporting Program (Attachment C) and the Notice of Applicability from the Executive Officer.

4. Application of Intake Water Credits

For pollutants that have intake water credits granted as part of the NOA, the average pollutant concentration and mass in the effluent shall not exceed the corresponding average concentration and mass as measured in the influent.

For constituents where compliance with an effluent limitation is the measured maximum daily effluent concentration, discharges shall be considered in compliance if the measured maximum daily effluent concentration does not exceed the respective maximum daily intake total recoverable metal concentration (sampled on the same calendar day).

Where a facility uses multiple intake sources, the monthly average influent concentration and mass shall be reported based on the flow-weighted amount from each intake source. It shall be assumed that the pollutant concentration from any water sources other than the receiving water has a pollutant concentration that is no greater than the most stringent applicable water quality objective.

5. Discharges to Specific Waterbodies

- a. The discharge of pollutants, subject to effluent limitations as identified in the Notice of Applicability from the Executive Officer, shall not exceed the effluent limitations contained in Table 7 for all limited threat discharges to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, Folsom Lake, and the Sacramento-San Joaquin Delta. The effluent limitations contained in Table 7 apply in lieu of those contained in Section V.A.1.f and g, above for respective parameters applicable to the discharge.

Table 7. Effluent Limitations – Discharges to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, Folsom Lake, and the Sacramento – San Joaquin Delta

Parameter	Units	Maximum Daily
Arsenic, Total Recoverable	µg/L	10
Copper, Total Recoverable	µg/L	10 ¹
Silver, Total Recoverable	µg/L	10
Zinc, Total Recoverable	µg/L	100 ¹

¹ Does not apply to Sacramento River above the State Highway 32 Bridge at Hamilton City.

- b. The discharge of pollutants subject to effluent limitations, as identified in the Notice of Applicability from the Executive Officer, shall not exceed the effluent limitations contained in Tables 8A, 8B, and 8C for all limited threat discharges to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. Effluent limitations contained in Tables 8A, 8B, and 8C for copper, zinc, and cadmium are based on hardness, which shall be provided by the Discharger as part of the application. For waters with hardness concentrations less than 100 mg/L (as CaCO₃), effluent limitations have been segmented into 10 mg/L increments. For each segment the central value between the lower and upper bounds was used to determine the corresponding effluent limit. For waters with hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, effluent limitations shall be based on a hardness value of 150 mg/L. For waters with hardness concentrations greater than or equal to 200 mg/L, effluent limitations shall be based on a hardness value of 200 mg/L. The effluent limitations contained in Tables 8A, 8B, and 8C apply in lieu of those contained in Section V.A.1.g, above for respective parameters applicable to the discharge.

Table 8A. Effluent Limitations – Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness 0 to <40 mg/L

Parameter	Units	Hardness in mg/L (H)			
		H <10	10 ≤ H <20	20 ≤ H <30	30 ≤ H <40
		Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily
Cadmium, Total Recoverable	µg/L	0.02	0.07	0.13	0.19
Copper, Total Recoverable	µg/L	0.9	2.3	3.7	5.0
Zinc, Total Recoverable	µg/L	2.8	7.1	11	14

Table 8B. Effluent Limitations – Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness 40 to <80 mg/L

Parameter	Units	Hardness in mg/L (H)			
		40 ≤ H <50	50 ≤ H <60	60 ≤ H <70	70 ≤ H <80
		Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily
Cadmium, Total Recoverable	µg/L	0.26	0.32	0.39	0.46
Copper, Total Recoverable	µg/L	6.2	7.5	8.7	9.9
Zinc, Total Recoverable	µg/L	18	21	24	27

Table 8C. Effluent Limitations – Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness ≥80 mg/L

Parameter	Units	Hardness in mg/L (H)			
		80 ≤ H <90	90 ≤ H <100	100 ≤ H <200	H ≥200
		Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily
Cadmium, Total Recoverable	µg/L	0.54	0.61	1.0	1.4
Copper, Total Recoverable	µg/L	11	12	19	24
Zinc, Total Recoverable	µg/L	30	33	48	61

- c. The discharge of pollutants subject to effluent limitations, as identified in the Notice of Applicability from the Executive Officer, shall not exceed the effluent limitations contained in Table 9 for all limited threat discharges to all waters in the Sacramento and San Joaquin River Basins and waters designated as COLD in the Tulare Lake Basin. The effluent limitations contained in Table 9 apply in lieu of those contained in Section V.A.1.c and f above for respective parameters applicable to the discharge.

Table 9. Effluent Limitations – Discharges to All Waters in the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin

Parameter	Units	Instantaneous Maximum
Persistent Chlorinated Hydrocarbon Pesticides	µg/L	ND ¹

¹ The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 µg/L (SIP minimum level). Persistent chlorinated hydrocarbon pesticides include aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

- d. **Temperature.** For discharges within the legal boundaries of the Sacramento-San Joaquin Delta, if specified in the Notice of Applicability, the maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.

B. Technology-Based Effluent Limitations

1. Tier 1A, Tier 1B, Tier 2, and Tier 3 – All Discharges

- a. **BOD, TSS, and Settleable Solids.** BOD, TSS, and settleable solids in the discharge shall not exceed the effluent limitations in Table 10, below, as identified in the Notice of Applicability from the Executive Officer.

Table 10. Effluent Limitations for BOD, TSS, and Settleable Solids

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	20
Total Suspended Solids	mg/L	10	20
Settleable Solids	mL/L	--	0.1

- 2. Volatile Organic Compounds (VOC's) Applicable to Remediation Sites.** The discharge of treated wastewater from site investigations and/or cleanup of sites contaminated with volatile organic compounds shall not exceed the effluent limitations in Table 11, below, as identified in the Notice of Applicability from the Executive Officer. Table 11 contains a partial list of VOC's and is not intended to limit the Executive Officer from identifying additional VOC's for Water Quality Based Effluent Limitations; all VOC's not listed in Table 11 will have Maximum Daily Effluent Limitations of 0.5 µg/L.

Table 11. VOC Effluent Limitations for Remediation Projects

Parameter	Units	Maximum Daily Effluent Limitations
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.5
Methylene Chloride	µg/L	0.5
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Stoddard Solvent	µg/L	0.5
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

- 3. Discharges Active from Hard Rock Mines.** The discharge from active mining and milling activities and in mine drainage¹ from active copper, lead, zinc, gold, silver, and molybdenum mines shall not exceed the effluent limitations in Table 12, as identified in the Notice of Applicability from the Executive Officer. Water Quality Based Effluent Limitations may be more stringent than the listed Technology Based Effluent Limitations in Table 12 and will be discussed further in the NOA.

Table 12. Technology-Based Effluent Limitations Applicable to Discharges from Active Hard Rock Mines

Parameter	Units	Technology Based Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	6.0	9.0
Total Suspended Solids	mg/L	20	30	--	--
Cadmium, Total Recoverable	µg/L	50	100	--	--
Copper, Total Recoverable	µg/L	150	300	--	--
Lead, Total Recoverable	µg/L	300	600	--	--
Mercury, Total Recoverable	µg/L	1.0	2.0	--	--
Zinc, Total Recoverable	µg/L	750	1,500	--	--

- 4. Petroleum Fuel Pollution Remediation Projects.** Discharges of treated groundwater from cleanup of petroleum fuel pollution shall not exceed the effluent limitations in Table 13, below, as identified in the Notice of Applicability from the Executive Officer. More stringent Water Quality-Based Effluent Limitations for the constituents listed in Table 13 may be included in the Notice of Applicability, if applicable.

¹ Mine drainage is defined at 40 C.F.R. section 440.132(h) as “any water drained, pumped, or siphoned from a mine”.

Table 13. Effluent Limitations – Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Priority Pollutants			
Benzene	µg/L	--	0.5
Ethylbenzene	µg/L	--	0.5
1,2-Dichloroethane	µg/L	0.38	0.5
Naphthalene	µg/L	--	5.0
Toluene	µg/L	--	0.5
Non-conventional Pollutants			
Di-isopropyl Ether	µg/L	--	5
Ethylene Dibromide	µg/L	0.05	0.10
Ethyl Tertiary Butyl Ether	µg/L	--	5
Methanol	µg/L	--	20
Methyl Tertiary Butyl Ether	µg/L	--	1.0
Carcinogenic PAHs ¹	µg/L	0.0044	0.0088
Tertiary Amyl Methyl Ether	µg/L	--	1.0
Tertiary Butyl Alcohol	µg/L	--	10
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	--	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	--	50
Xylene ²	µg/L	--	0.5

¹ Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

² Applies to the sum of o-xylene, m-xylene, and p-xylene.

VI. LAND DISCHARGE SPECIFICATIONS – NOT APPLICABLE

VII. RECYCLING SPECIFICATIONS – NOT APPLICABLE

VIII. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plans for the Sacramento and San Joaquin River Basin and the Tulare Lake Basin and are a required part of this General Order. Compliance with any amendment or revision to the water quality objectives contained in the Basin Plans adopted by the Central Valley Water Board subsequent to adoption of this General Order is also required. Any discharge authorized for coverage under this General Order shall not cause the following in the receiving water:

- 1. Un-ionized Ammonia.** Un-ionized ammonia to be present in amounts that adversely affect beneficial uses for all waterbodies, nor to be present in excess of 0.025 mg/L (as N) in waterbodies in the Tulare Lake Basin.
- 2. Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL in waterbodies with the beneficial use of water contact recreation.

3. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
4. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
5. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
6. **Dissolved Oxygen:**
 - a. For waterbodies outside the Sacramento-San Joaquin Delta and for waterbodies in the Tulare Lake Basin:
 - i. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
 - ii. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; and
 - iii. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time for waterbodies designated as warm freshwater habitat (WARM); or
 - iv. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time for waterbodies designated as cold freshwater habitat (COLD) and/or spawning, reproduction, and/or early development (SPWN).
 - b. Within the legal boundaries of the Sacramento-San Joaquin Delta, the dissolved oxygen concentrations shall not be reduced below:
 - i. 7.0 mg/L in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge;
 - ii. 6.0 mg/L in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and
 - iii. 5.0 mg/L in all other Delta waters except those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.
7. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
8. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
9. **pH:**
 - a. The pH to be depressed below 6.5 or raised above 8.5 for waterbodies in the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County).
 - b. The pH to be depressed below 7.5 nor raised above 9.5 within Goose Lake in Modoc County.
 - c. The pH to be depressed below 6.5, raised above 8.3, nor changed by more than 0.3 units for waterbodies in the Tulare Lake Basin.
10. **Pesticides:**
 - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

- b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
 - c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer for waterbodies in the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for waterbodies in the Tulare Lake Basin designated as cold freshwater habitat (COLD);
 - d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 C.F.R. 131.12.) for waterbodies in the Sacramento and San Joaquin River Basins;
 - e. Pesticide concentrations to exceed the lowest levels technically and economically achievable for waterbodies in the Sacramento and San Joaquin River Basins;
 - f. Pesticides to be present in concentration in excess of the maximum contaminant levels (MCL's) set forth in CCR, Title 22, division 4, chapter 15 for waterbodies in the Sacramento and San Joaquin River Basins or specified in Table 64444-A (Organic Chemicals) of section 64444 of Title 22 of the CCR for waterbodies in the Tulare Lake Basin designated as municipal and domestic supply (MUN); nor
 - g. Thiobencarb to be present in excess of 1.0 µg/L for waterbodies in the Sacramento and San Joaquin River Basins designated as municipal and domestic supply (MUN).
- 11. Radioactivity:**
- a. Radionuclides to be present in concentrations that are harmful or deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
 - b. Radionuclides to be present in excess of the MCL's specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the California Code of Regulations.
- 12. Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- 13. Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- 14. Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
- 15. Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses or domestic or municipal water supplies.
- 16. Temperature.** Where receiving water temperature limitations apply, as specified in the Notice of Applicability:
- a. For water bodies outside the legal boundaries of the Sacramento-San Joaquin Delta, the natural temperature to be increased by more than 5°F.

- b. For water bodies within the legal boundaries of the Sacramento-San Joaquin Delta the discharge shall not cause the following in the water body:
 - i. The creation of a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of the river channel at any point.
 - ii. A surface water temperature rise greater than 4°F above the natural temperature of the receiving water at any time or place.
- c. For discharges to Deer Creek, source to Cosumnes River, temperature changes due to controllable factors shall not cause creek temperatures to exceed the objectives specified in Table 14.

Table 14. Temperature Receiving Water Limitations for Deer Creek

Period	Daily Maximum (°F) ¹	Monthly Average (°F) ²
January and February	63	58
March	65	60
April	71	64
May	77	68
June	81	74
July through September	81	77
October	77	72
November	73	65
December	65	58

¹ Maximum not to be exceeded.

² Defined as a calendar month average.

- 17. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
- 18. **Turbidity.** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.
 - a. For waterbodies in the Sacramento and San Joaquin River Basins, turbidity:
 - i. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;
 - ii. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;
 - iii. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;
 - iv. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor
 - v. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.
 - b. For waterbodies in the Tulare Lake Basin, turbidity shall not increase:
 - i. More than 1 NTU where natural turbidity is between 0 and 5 NTUs.
 - ii. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

- iii. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
- iv. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations – Not Applicable

IX. PROVISIONS

A. Standard Provisions

1. All Dischargers authorized to discharge under this General Order shall comply with all Standard Provisions (federal NPDES standard conditions from 40 C.F.R. part 122) included in Attachment B of this General Order.
2. All Dischargers authorized to discharge under this General Order shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this General Order, the more stringent provision shall apply:
 - a. After notice and opportunity for a hearing, this General Order may be terminated or modified for cause, including, but not limited to:
 - i. violation of any term or condition contained in this General Order;
 - ii. obtaining this General Order by misrepresentation or by failing to disclose fully all relevant facts;
 - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - iv. a material change in the character, location, or volume of discharge.

The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

- b. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this General Order, the Central Valley Water Board will revise or modify this General Order in accordance with such toxic effluent standard or prohibition.

All Dischargers authorized to discharge under this General Order shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this General Order has not yet been modified.

- c. This General Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
 - i. Contains different conditions or is otherwise more stringent than any effluent limitation in this General Order; or
 - ii. Controls any pollutant limited in this General Order.

The General Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- d.** The provisions of this General Order are severable. If any provision of this General Order is found invalid, the remainder of this General Order shall not be affected.
- e.** All Dischargers authorized to discharge under this General Order shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or disposal in violation of this General Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- f.** A copy of this General Order and the Notice of Applicability shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- g.** Safeguard to electric power failure:
 - i.** All Dischargers authorized to discharge under Tier 2 and Tier 3, if applicable, of this General Order shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this General Order.
 - ii.** Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.
 - iii.** Should the treatment system not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this General Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this General Order.
- h.** The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section IX.A.2.i below, of this General Order.

The technical report shall:

- i.** Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.
- iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- i. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- j. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.
- k. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this General Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this General Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the General Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment B, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this General Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

- l. Failure to comply with provisions or requirements of this General Order, or violation of other applicable laws or regulations governing discharges from the discharge facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- m. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this General Order, the Discharger shall notify the Central Valley Water Board by telephone within 24 hours of having knowledge of such noncompliance, and shall

confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

Fresno Office: (559) 445-5116

Rancho Cordova Office: (916) 464-3291

Redding Office: (530) 224-4845

B. Monitoring and Reporting Program (MRP) Requirements

All Dischargers authorized to discharge under this General Order shall comply with the MRP, and future revisions thereto, in Attachment C of this Order and as specified in the Notice of Applicability from the Executive Officer.

C. Special Provisions

1. Reopener Provisions

- a. Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, including, but not limited to:
 - i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
 - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- b. **Regional Monitoring Program.** The Central Valley Water Board is developing a Regional Monitoring Program for the Sacramento-San Joaquin Delta. This Order may be reopened to modify the monitoring requirements to implement the Regional Monitoring Program.
- c. **Drinking Water Policy.** On 26 July 2013 the Central Valley Water Board adopted Resolution No. R5-2013-0098 amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.
- d. **Total Residual Chlorine.** If a state-wide policy for total residual chlorine is adopted during the term of this General Order, this General Order may be reopened to include a revised reporting level (RL) to determine compliance with effluent limitations for total residual chlorine discharges consistent with the state-wide policy.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Toxicity Reduction Evaluation Requirements.** For compliance with the Basin Plan's narrative toxicity objective, this General Order requires all Dischargers of Tier 2 and Tier 3 discharges to conduct chronic whole effluent toxicity (WET) testing, as specified in the MRP (Attachment C, section V). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger may be required to submit a report of waste discharge for application for an

individual NPDES permit. This Provision includes procedures for accelerated chronic toxicity monitoring.

- i. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate accelerated monitoring is >1 TUC, or as specified in the NOA by the Executive Officer (where $TUC = 100/NOEC$). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring.
- ii. **Accelerated Monitoring Specifications.** If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing and the Discharger has 60 or more days remaining prior to termination of the project, the Discharger shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring:
 - (a) If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger cease discharging to surface water under this General Order and require submittal of a report of waste discharge for application for an individual NPDES permit in order to continue discharging to surface water.
 - (b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
 - (c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the discharge may no longer be eligible for coverage under this Order. To continue coverage under this Order the discharger must demonstrate to the satisfaction of the Executive Officer that the discharge is not causing chronic toxicity in the receiving water. Otherwise, in order to continue discharging to surface water the discharger must submit a report of waste discharge for application for an individual NPDES permit. The discharge to surface water shall not continue until the Executive Officer authorizes continued coverage under this General Order or until the Central Valley Water Board adopts an individual NPDES permit for the discharge.
- b. **Closure Certification for Discharges from Drinking Water Supply Systems.** If a drinking water supply system Discharger received an exception as allowed by section 5.3 of the SIP, then upon termination of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Closure Certification is to be submitted with the request for termination of coverage (Attachment E).

3. Best Management Practices and Pollution Prevention

- a. Best Management Practices (BMP's).** Each Discharger with a treatment system (Tier 2 and Tier 3) authorized to discharge under this General Order shall develop and implement BMP's that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of pollutants from the discharge facility to waters of the State. These BMP requirements are not automatically required for Tier 1 Dischargers. However, when appropriate the Executive Officer may require the BMP requirements for Tier 1 Dischargers in the NOA. The BMP's shall be consistent with the general guidance contained in the U.S. EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed that will ensure proper operation and maintenance, prevent the additional chemicals or other substances from being introduced into the discharge, and prevent the addition of pollutants from the other non-permitted process waters, spills, or other sources of pollutants at the discharge facility. The necessary BMP's shall be identified, developed, and implemented prior to the initiation of the discharge to ensure compliance with this Order and with the effluent limitations specified in the NOA. Each Discharger shall update and amend the BMP Plan as necessary to maintain compliance with this General Order. Each Discharger shall make the BMP Plan available to Central Valley Water Board staff upon request.
- b. Pollution Prevention and Monitoring and Reporting Plan (PPMRP).** Water suppliers enrolling under this General Order that have or propose to have multiple discharge points shall prepare and implement a PPMRP in lieu of the specific Effluent Monitoring Requirements and Receiving Water Monitoring Requirements contained in sections IV and VIII of the Monitoring and Reporting Program (Attachment C). The PPMRP must be submitted with the Notice of Intent and is subject to approval by the Executive Officer. The PPMRP shall include, at a minimum, the elements identified in Attachment G and shall be prepared and implemented in accordance with the General Monitoring Provisions, Other Monitoring Requirements, and Reporting Requirements contained in sections I, IX, and X, respectively, of the Monitoring and Reporting Program (Attachment C).
- c. Salinity.** Each Discharger authorized under this General Order shall use practices to minimize discharges of salinity. For Dischargers with elevated salinity, i.e., effluent electrical conductivity greater than 900 $\mu\text{mhos/cm}$, flow greater than or equal to 0.25 MGD, and planned continuous discharge for 180 days or more, shall submit a Salinity Evaluation and Minimization Plan within 60 days of initiating a new discharge under this Order, to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the discharger will minimize any increase in effluent salinity as the result of treatment of the wastewater, if applicable. Under limited circumstances the Executive Officer may waive this requirement in the NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.

- 4. Construction, Operation and Maintenance Specifications – Not Applicable**
- 5. Special Provisions for Municipal Facilities (POTW's Only) – Not Applicable**

6. Other Special Provisions

- a. Collected screenings and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23 of the CCR and approved by the Executive Officer.

Any proposed change in solids use or disposal practice shall be reported to the Executive Officer and U.S. EPA Regional Administrator at least 90 days in advance of the change.

7. Compliance Schedules – Not Applicable

X. COMPLIANCE DETERMINATION

- A. **Instantaneous Maximum Effluent Limitation for Persistent Chlorinated Hydrocarbon Pesticides (Sections V.A.1.c and V.A.1.f).** The non-detectable (ND) instantaneous maximum effluent limitation for persistent chlorinated hydrocarbon pesticides applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use U.S. EPA standard analytical techniques for analyzing persistent chlorinated hydrocarbon pesticides with a maximum RL not to exceed the minimum levels (ML's) listed in Appendix 4 of the SIP (Table 2d). If the analytical result of a single effluent grab sample is detected for any persistent chlorinated hydrocarbon pesticide and the result is greater than or equal to the applicable ML listed in Appendix 4 of the SIP, a violation will be flagged and the Discharger will be considered out of compliance for that single sample.
- B. **Aluminum Effluent Limitations (Section V.A.1.e).** Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's *Ambient Water Quality Criteria for Aluminum* document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.
- C. **Total Residual Chlorine Effluent Limitations (Table 4, Section V.A.1.e).** Monitoring for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. For Dischargers that dechlorinate, field monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations and greater than or equal to an RL of 0.08 mg/L or a future RL included in a state-wide policy adopted by the State Water Board is a violation.

If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment B).

- D. Priority Pollutant Effluent Limitations (Sections V.A.1.f and g).** Compliance with effluent limitations for priority pollutants shall be determined in accordance with Section 2.4.5 of the SIP, as follows:
1. Dischargers shall be deemed out of compliance with an effluent limitation, if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.
 2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 of the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:
 - a. A sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the RL; or
 - b. A sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL).
 3. When determining compliance with an average monthly effluent limitation (AMEL) and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - a. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
 4. If a sample result, or the arithmetic mean or median of multiple sample results, is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall not be deemed out of compliance.
- E. Dissolved Oxygen Receiving Water Limitation (Section VIII.A.6).** Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the Notice of Applicability, will be used to determine compliance with parts VIII.A.6.a.iii, VIII.A.6.a.iv, VIII.A.6.b.i, VIII.A.6.b.ii, and VIII.A.6.b.iii of the dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in the receiving water to be reduced below the applicable dissolved oxygen concentration at any time. However, should more frequent dissolved oxygen receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts VIII.A.6.a.i and VIII.A.6.a.ii.
- F. pH Receiving Water Limitation (Section VIII.A.9).** Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and

downstream receiving water monitoring locations identified in the Notice of Applicability, will be used to determine compliance with section VIII.A.9, the pH receiving water limitation to ensure the discharge does not cause the pH in the receiving water to be changed more than allowed in parts VIII.A.9.a, VIII.A.9.b, and VIII.A.9.c.

- G. Temperature Receiving Water Limitation (Section VIII.A.16).** Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the Notice of Applicability, will be used to determine compliance with section VIII.A.16.
- H. Temperature Effluent Limitations (Section V.A.5.d).** Compliance with the final effluent limitations for temperature shall be ascertained using the daily average effluent temperature at Monitoring Location EFF-001 and the daily average temperature of the upstream receiving water measured on the same day at Monitoring Location RSW-001U.
- I. Turbidity Receiving Water Limitation (Section VIII.A.18).** Regular receiving water monitoring is required in the Monitoring and Reporting Program (Attachment C), with a frequency specified in the NOA sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the Notice of Applicability, will be used to determine compliance with section VIII.A.18, the turbidity receiving water limitation to ensure the discharge does not cause the turbidity in the receiving water to be increased.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Effluent Concentration Allowance (ECA)

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the

same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters

All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Not Detected (ND)

Sample results which are less than the laboratory's MDL.

Persistent Pollutants

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Valley Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Central Valley Water Board.

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

Toxicity Reduction Evaluation (TRE)

TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Central Valley Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, § 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, § 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Central Valley Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Central Valley Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

- a.** Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
- b.** Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

- 1.** Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
- 2.** Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a.** An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b.** The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c.** The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - d.** The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
- 3.** Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. § 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

- A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Central Valley Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)
- B.** Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
 - 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
 - 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
 - 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
 - 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
 - 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)
- C.** Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):
 - 1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
 - 2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Valley Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Central Valley Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed in accordance with the following:
 - a. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
 - b. For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)
 - c. For a municipality, state, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant

manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

- c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Central Valley Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment C) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Valley Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the

Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Central Valley Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Central Valley Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged (if the discharge is not an existing manufacturing, commercial, mining, or silvicultural discharge). This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged (if the discharge is an existing manufacturing, commercial, mining, or silvicultural discharge). This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Valley Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Valley Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

- 1.** That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
 - a.** 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));
 - b.** 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
 - c.** Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
 - d.** The level established by the Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
- 2.** That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
 - a.** 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));
 - b.** 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
 - c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
 - d.** The level established by the Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT C – MONITORING AND REPORTING PROGRAM

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ATTACHMENT C – MONITORING AND REPORTING PROGRAM (MRP)

Title 40 of the Code of Federal Regulations (CFR), section 122.48 (40 CFR 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Central Valley Regional Water Quality Control Board (Central Valley Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which implement the federal and California regulations. Specific monitoring requirements for constituents with effluent limitations will be specified in the Notice of Applicability.

I. GENERAL MONITORING PROVISIONS

- A.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.
- B.** Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- C.** Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory certified for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event a certified laboratory is not available to the Discharger for any onsite field measurements such as pH, dissolved oxygen (DO), turbidity, temperature, and residual chlorine, such analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, DO, turbidity, temperature, and residual chlorine must be kept onsite in the treatment facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.
- D.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E.** Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.
- F.** Laboratories analyzing monitoring samples shall be certified by DDW, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

- G. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.
- H. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- I. Monitoring intervals and requirements for intermittent discharges will be addressed by the Executive Officer in the NOA.
- J. For intermittent discharges, upon startup of the discharge, the Discharger shall monitor and record data for all constituents listed in the NOA. The frequency of subsequent analysis will then follow the schedule described in Attachment C, the Monitoring and Reporting Program, and specified in the NOA. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies stated in the NOA.
- K. For drinking water system discharges, the Executive Officer may refer to the State Water Board's NPDES Order WQ 2014-0194-DWQ when establishing monitoring requirements in the NOA.

II. MONITORING LOCATIONS

Each Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this General Order:

Table C-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description ³
--	INF-001	A location where a representative sample of the influent to the Facility can be collected.
001 ^{1, 2}	EFF-001	A location where a representative sample of the effluent discharged at Discharge Point 001 can be collected prior to discharging to surface water.
--	RSW-001U	The receiving water, approximately 200 feet upstream of Discharge Point 001 or as defined in the Notice of Applicability.
--	RSW-001D	The receiving water, approximately 200 feet downstream of Discharge Point 001 or as defined in the Notice of Applicability.
002 ^{1, 2}	EFF-002	If applicable, a location where a representative sample of the effluent discharged at Discharge Point 002 can be collected prior to discharging to surface water.
--	RSW-002U	The receiving water, approximately 200 feet upstream of Discharge Point 002 or as defined in the Notice of Applicability.
--	RSW-002D	The receiving water, approximately 200 feet downstream of Discharge Point 002 or as defined in the Notice of Applicability.

¹ Dischargers enrolled under this General Order for more than one discharge point must comply with effluent limitations and monitoring requirements at each discharge point.

² Additional discharge points may be added following the naming conventions used in Table E-1, above

³ Monitoring Station Locations may be further described in the NOA.

III. INFLUENT MONITORING REQUIREMENTS

A. Discharges with Intake Water Credits.

- 1. Influent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the

influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. If required, for every influent sample taken an effluent sample must also be taken.

2. If multiple water sources are used at the facility, including the receiving water, the flow of each water source must be measured to allow for calculation of flow-weighted influent concentration and mass values.

B. Petroleum Fuel Pollution Remediation Projects

1. Each Discharger shall monitor the influent groundwater from cleanup of petroleum fuel pollution at INF-001 as follows:

Table C-2. Influent Monitoring for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Priority Pollutants				
Benzene	µg/L	Grab	1/Month ¹	²
Ethylbenzene	µg/L	Grab	1/Month ¹	²
1,2-Dichloroethane	µg/L	Grab	1/Month ¹	²
Lead, Total Recoverable	µg/L	Grab	1/Month ³	²
Naphthalene	µg/L	Grab	1/Month ¹	²
Toluene	µg/L	Grab	1/Month ¹	²
Non-Conventional Pollutants				
Di-isopropyl ether	µg/L	Grab	1/Month ¹	²
Ethanol	µg/L	Grab	1/Month ¹	²
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month ¹	²
Methanol	µg/L	Grab	1/Month ¹	²
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month ¹	²
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month ¹	²
Tertiary Butyl Alcohol	µg/L	Grab	1/Month ¹	²
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month ¹	²
Total Petroleum Hydrocarbons (Diesel Range)	µg/l	Grab	1/Month ¹	²
Xylene ⁴	µg/L	Grab	1/Month ¹	²

¹ If these constituents are not present in any monitoring well or extraction well at the cleanup site, the monitoring well documentation may be submitted in lieu of the influent monitoring for these constituents. Confirmation samples on an annual basis shall be submitted to verify the absence of these chemicals. If three consecutive monthly influent sampling events result in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to quarterly. If three consecutive quarterly sampling events results in non-detectable concentration, at appropriate detection limits, then the sampling frequency shall be reduced to annually. If a detectable concentration is determined to be present in the wastewater, the frequency will be monthly.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

³ If lead is not detected in the first two sampling events, then testing may be discontinued thereafter.

⁴ Xylene includes o-xylene, m-xylene, and p-xylene.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001:

- Each Discharger shall monitor the Tier 1, Tier 2, or Tier 3 waste discharge at Monitoring Location EFF-001 as follows. The NOA will specify which constituents must be monitored regularly for each discharge point. Monitoring results are to be submitted in the self-monitoring reports (SMR's).

Table C-3 Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Volume, Total	Million Gallons (MG)	Known or Calculated	1	2
Discharge Flow Rate, Total	1	1	1	2
Constituents and Parameters of Concern				
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	1	3
Total Suspended Solids	mg/L	Grab	1	3
Dissolved Oxygen	mg/L	Grab	1	2, 3
Hardness, Total (as CaCO ₃)	mg/L	Grab	1	2, 3, 4
pH	standard units	Grab	1	2, 3
Temperature	°F	Grab	1	2, 3
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1	2, 3
Total Dissolved Solids	mg/L	Grab	1	2, 3
Settleable Solids	mL/L	Grab	1	3
Color	Color Units	Grab	1	3
Turbidity	NTU	Grab	1	2, 3
Total Coliform Organisms	MPN/100mL	Grab	1	3
Escherichia Coliform Organisms	MPN/100mL	Grab	1	3
Un-ionized Ammonia Nitrogen, Total (as N)	mg/L	Grab	1	3, 5
Chlorine, Total Residual	mg/L	Grab	1	2, 3, 6
Acute Toxicity	% Survival	Grab	1	3, 9
Chronic Toxicity	TUc	Grab	1	3, 9
Foaming Agents (MBAS)	µg/L	Grab	1	3
Standard Minerals ⁸	mg/L	Grab	1	3
Aluminum, Total Recoverable	µg/L	Grab	1	3, 7
Barium, Total Recoverable	µg/L	Grab	1	3
Boron	mg/L	Grab	1	3
Chloride	mg/L	Grab	1	3
Chromium, Total	µg/L	Grab	1	3
Fluoride	µg/L	Grab	1	3
Iron, Total Recoverable	µg/L	Grab	1	3
Manganese, Total Recoverable	µg/L	Grab	1	3
Mercury, Methyl	ng/L	Grab	1	3, 10
Molybdenum	µg/L	Grab	1	3
Nitrate Nitrogen, Total (as N) ¹¹	mg/L	Grab	1	3
Nitrite (as N) ¹¹	mg/L	Grab	1	3
Nitrate plus Nitrite (as N) ¹¹	mg/L	Grab	1	3
Phosphorus, Total (as P)	mg/L	Grab	1	3

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Sulfate	mg/L	Grab	1	3
Sulfide (as S)	mg/L	Grab	1	3
Sulfite (as SO ₃)	mg/L	Grab	1	3
Tributyltin	µg/L	Grab	1	3
Alachlor	µg/L	Grab	1	3
Atrazine	µg/L	Grab	1	3
Bentazon	µg/L	Grab	1	3
Carbofuran	µg/L	Grab	1	3
Chlorpyrifos	µg/L	Grab	1	3
2,4-D	µg/L	Grab	1	3
2,4,5-TP (Silvex)	µg/L	Grab	1	3
Dalapon	µg/L	Grab	1	3
Diazinon	µg/L	Grab	1	3
Di(2-ethylhexyl)adipate	µg/L	Grab	1	3
Dinoseb	µg/L	Grab	1	3
Diquat	µg/L	Grab	1	3
Endothal	µg/L	Grab	1	3
Ethylene Dibromide (EDB)	µg/L	Grab	1	3
Methoxychlor	µg/L	Grab	1	3
Molinate (Ordram)	µg/L	Grab	1	3
Oxamyl	µg/L	Grab	1	3
Picloram	µg/L	Grab	1	3
Simazine (Princep)	µg/L	Grab	1	3
Thiobencarb	µg/L	Grab	1	3
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	µg/L	Grab	1	3
1,2-Dichloroethene (cis and trans DCE)	µg/L	Grab	1	3
1,2-Dibromo-3-Chloropropane (DBCP)	µg/L	Grab	1	3
1,2,3-Trichloropropane (TCP)	µg/L	Grab	1	3
1,3-Butadiene	µg/L	Grab	1	3
1,3-Dichloropropene (cis and trans)	µg/L	Grab	1	3
2-Butanone (Methyl ethyl ketone or MEK)	µg/L	Grab	1	3
2-Chloroethylvinyl ether	µg/L	Grab	1	3
2-Hexanone (Methyl n-butyl ketone)	µg/L	Grab	1	3
3-Methyl-4-Chlorophenol	µg/L	Grab	1	3
Acetone	µg/L	Grab	1	3
Carbon Disulfide	µg/L	Grab	1	3
Chloromethane (Methyl chloride)	µg/L	Grab	1	3
MTBE (Methyl tertiary butyl ether)	µg/L	Grab	1	3
Stoddard Solvent	µg/L	Grab	1	3
Styrene	µg/L	Grab	1	3
Trichlorofluoromethane (Freon 11)	µg/L	Grab	1	3
Xylenes	µg/L	Grab	1	3
Priority Pollutants				
Antimony, Total Recoverable	µg/L	Grab	1	3, 12

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Arsenic, Total Recoverable	µg/L	Grab	1	3, 12
Beryllium, Total Recoverable	µg/L	Grab	1	3, 12
Cadmium, Total Recoverable	µg/L	Grab	1	3, 4, 12
Chromium (III)	µg/L	Grab	1	3, 4, 12
Chromium (VI)	µg/L	Grab	1	3, 12
Copper, Total Recoverable	µg/L	Grab	1	3, 4, 12
Lead, Total Recoverable	µg/L	Grab	1	3, 4, 12
Mercury, Total Recoverable	µg/L	Grab	1	3, 10, 12
Nickel, Total Recoverable	µg/L	Grab	1	3, 4, 12
Selenium, Total Recoverable	µg/L	Grab	1	3, 12
Silver, Total Recoverable	µg/L	Grab	1	3, 4, 12
Thallium, Total Recoverable	µg/L	Grab	1	3, 12
Zinc, Total Recoverable	µg/L	Grab	1	3, 4, 12
Cyanide, Total (as CN)	µg/L	Grab	1	3, 12
Asbestos	MFL	Grab	1	3, 12
2,3,7,8-TCDD	µg/L	Grab	1	3, 12
Acrolein	µg/L	Grab	1	3, 12
Acrylonitrile	µg/L	Grab	1	3, 12
Benzene	µg/L	Grab	1	3, 12
Bromoform	µg/L	Grab	1	3, 12
Carbon Tetrachloride (Freon 10)	µg/L	Grab	1	3, 12
Chlorobenzene	µg/L	Grab	1	3, 12
Chlorodibromomethane	µg/L	Grab	1	3, 12
Chloroethane	µg/L	Grab	1	3, 12
2-Chloroethylvinyl Ether	µg/L	Grab	1	3, 12
Chloroform	µg/L	Grab	1	3, 12
Dichlorobromomethane	µg/L	Grab	1	3, 12
1,1-Dichloroethane (DCA)	µg/L	Grab	1	3, 12
1,2-Dichloroethane (DCA)	µg/L	Grab	1	3, 12
1,1-Dichloroethylene (DCE)	µg/L	Grab	1	3, 12
1,2-Dichloropropane	µg/L	Grab	1	3, 12
1,3-Dichloropropylene	µg/L	Grab	1	3, 12
Ethylbenzene	µg/L	Grab	1	3, 12
Methyl Bromide (Bromomethane)	µg/L	Grab	1	3, 12
Methyl Chloride (Chloromethane)	µg/L	Grab	1	3, 12
Methylene Chloride (Dichloromethane)	µg/L	Grab	1	3, 12
1,1,2,2-Tetrachloroethane	µg/L	Grab	1	3, 12
Tetrachloroethylene (PCE)	µg/L	Grab	1	3, 12
Toluene	µg/L	Grab	1	3, 12
1,2-Trans-Dichloroethylene (DCE)	µg/L	Grab	1	3, 12
1,1,1-Trichloroethane (TCA)	µg/L	Grab	1	3, 12
1,1,2-Trichloroethane (TCA)	µg/L	Grab	1	3, 12
Trichloroethylene (TCE)	µg/L	Grab	1	3, 12
Vinyl Chloride (Chloroethene)	µg/L	Grab	1	3, 12

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
2-Chlorophenol	µg/L	Grab	1	3, 12
2,4-Dichlorophenol	µg/L	Grab	1	3, 12
2,4-Dimethylphenol	µg/L	Grab	1	3, 12
2-Methyl-4,6-Dinitrophenol	µg/L	Grab	1	3, 12
2,4-Dinitrophenol	µg/L	Grab	1	3, 12
2-Nitrophenol	µg/L	Grab	1	3, 12
4-Nitrophenol	µg/L	Grab	1	3, 12
3-Methyl-4-Chlorophenol	µg/L	Grab	1	3, 12
Pentachlorophenol (PCP)	µg/L	Grab	1	3, 12
Phenol	µg/L	Grab	1	3, 12
2,4,6-Trichlorophenol	µg/L	Grab	1	3, 12
Acenaphthene	µg/L	Grab	1	3, 12
Acenaphthylene	µg/L	Grab	1	3, 12
Anthracene	µg/L	Grab	1	3, 12
Benzidine	µg/L	Grab	1	3, 12
Benzo(a)Anthracene	µg/L	Grab	1	3, 12
Benzo(a)Pyrene	µg/L	Grab	1	3, 12
Benzo(b)Fluoranthene	µg/L	Grab	1	3, 12
Benzo(ghi)Perylene	µg/L	Grab	1	3, 12
Benzo(k)Fluoranthene	µg/L	Grab	1	3, 12
Bis(2-Chloroethoxy)Methane	µg/L	Grab	1	3, 12
Bis(2-Chloroethyl)Ether	µg/L	Grab	1	3, 12
Bis(2-Chloroisopropyl)Ether	µg/L	Grab	1	3, 12
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	1	3, 12, 13
4-Bromophenyl Phenyl Ether	µg/L	Grab	1	3, 12
Butylbenzyl Phthalate	µg/L	Grab	1	3, 12
2-Chloronaphthalene	µg/L	Grab	1	3, 12
4-Chlorophenyl Phenyl Ether	µg/L	Grab	1	3, 12
Chrysene	µg/L	Grab	1	3, 12
Dibenzo(a,h)Anthracene	µg/L	Grab	1	3, 12
1,2-Dichlorobenzene	µg/L	Grab	1	3, 12
1,3-Dichlorobenzene	µg/L	Grab	1	3, 12
1,4-Dichlorobenzene	µg/L	Grab	1	3, 12
3,3-Dichlorobenzidine	µg/L	Grab	1	3, 12
Diethyl Phthalate	µg/L	Grab	1	3, 12
Dimethyl Phthalate	µg/L	Grab	1	3, 12
Di-n-Butyl Phthalate	µg/L	Grab	1	3, 12
2,4-Dinitrotoluene	µg/L	Grab	1	3, 12
2,6-Dinitrotoluene	µg/L	Grab	1	3, 12
Di-n-Octyl Phthalate	µg/L	Grab	1	3, 12
1,2-Diphenylhydrazine	µg/L	Grab	1	3, 12
Fluoranthene	µg/L	Grab	1	3, 12
Fluorene	µg/L	Grab	1	3, 12
Hexachlorobenzene	µg/L	Grab	1	3, 12

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Hexachlorobutadiene	µg/L	Grab	1	3, 12
Hexachlorocyclopentadiene	µg/L	Grab	1	3, 12
Hexachloroethane	µg/L	Grab	1	3, 12
Indeno(1,2,3-cd)Pyrene	µg/L	Grab	1	3, 12
Isophorone	µg/L	Grab	1	3, 12
Naphthalene	µg/L	Grab	1	3, 12
Nitrobenzene	µg/L	Grab	1	3, 12
N-Nitrosodimethylamine	µg/L	Grab	1	3, 12
N-Nitrosodi-n-Propylamine	µg/L	Grab	1	3, 12
N-Nitrosodiphenylamine	µg/L	Grab	1	3, 12
Phenanthrene	µg/L	Grab	1	3, 12
Pyrene	µg/L	Grab	1	3, 12
1,2,4-Trichlorobenzene	µg/L	Grab	1	3, 12
Aldrin	µg/L	Grab	1	3, 12
alpha-BHC (benzene hexachloride)	µg/L	Grab	1	3, 12
beta-BHC (benzene hexachloride)	µg/L	Grab	1	3, 12
gamma-BHC (benzene hexachloride or lindane)	µg/L	Grab	1	3, 12
delta-BHC (benzene hexachloride)	µg/L	Grab	1	3, 12
Chlordane	µg/L	Grab	1	3, 12
4,4'-DDT	µg/L	Grab	1	3, 12
4,4'-DDE	µg/L	Grab	1	3, 12
4,4'-DDD	µg/L	Grab	1	3, 12
Dieldrin	µg/L	Grab	1	3, 12
alpha-Endosulfan	µg/L	Grab	1	3, 12
beta-Endosulfan	µg/L	Grab	1	3, 12
Endosulfan Sulfate	µg/L	Grab	1	3, 12
Endrin	µg/L	Grab	1	3, 12
Endrin Aldehyde	µg/L	Grab	1	3, 12
Heptachlor	µg/L	Grab	1	3, 12
Heptachlor Epoxide	µg/L	Grab	1	3, 12
Polychlorinated Biphenyls (PCB's) ¹⁴	µg/L	Grab	1	3, 12
Toxaphene	µg/L	Grab	1	3, 12

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
1 The minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter), and where applicable, units and sample type, will be specified in the Notice of Applicability (NOA). 2 A hand-held field meter may be used, provided the meter utilizes a U.S.EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility. 3 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board. 4 Monitoring for hardness shall be performed concurrently with effluent sampling for cadmium, chromium (III), copper, lead, nickel, silver, and/or zinc if effluent sampling for any of these pollutants is required. 5 Concurrent with whole effluent toxicity monitoring. 6 Total chlorine residual must be monitored with a method sensitive to and accurate at a reporting level (RL) of 0.08 mg/L. 7 Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's <i>Ambient Water Quality Criteria for Aluminum</i> document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer. 8 Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance). 9 See the MRP (Attachment C, section V, below) for toxicity monitoring requirements. 10 Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: <i>Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels</i>, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1630/1631 (Revision E) with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury. 11 Monitoring for nitrite and nitrate shall be conducted concurrently. 12 For priority pollutant constituents the reporting level shall be consistent with Sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California 13 In order to verify if bis (2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant. Sampling and analysis of Bis (2-ethylhexyl) phthalate shall be conducted using ultra-clean techniques that eliminate the possibility of sample contamination. 14 Applies to the sum of Polychlorinated biphenyls (PCB's) aroclors 1242, 1254, 1221, 1232, 1248, 1280, and 1016.				

B. Monitoring Location EFF-002 and Additional Monitoring Locations:

All dischargers with more than one discharge location shall be required to monitor all discharge locations as described above in Table E-1 and as specified in the NOA.

C. Effluent Monitoring for Facilities with Intake Water Credits

Effluent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. If required, for every effluent sample taken an influent sample must also be taken.

D. Effluent Monitoring for Petroleum Fuel Pollution Remediation Projects

1. For discharges from petroleum fuel pollution cleanup projects, effluent samples shall be collected at EFF-001 and analyzed in accordance with Table C-4, as specified in the NOA:

Table C-4. Effluent Monitoring for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	GPD	Estimate	1/Day ¹	²
Conventional Pollutants				
pH	standard units	Grab	1/Month	²
Priority Pollutants				
Benzene	µg/L	Grab	1/Month ³	^{2,4}
Ethylbenzene	µg/L	Grab	1/Month ³	^{2,4}
1,2-Dichloroethane	µg/L	Grab	1/Month ³	^{2,4}
Lead, Total Recoverable	µg/L	Grab	1/Month ⁵	^{2,4}
Naphthalene	µg/L	Grab	1/Month ³	^{2,4}
Toluene	µg/L	Grab	1/Month ³	^{2,4}
Non-Conventional Pollutants				
Carcinogenic PAHs ⁶	µg/L	Grab	1/Month ³	²
Di-isopropyl Ether	µg/L	Grab	1/Month ³	²
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	²
Ethanol	µg/L	Grab	1/Month ³	²
Ethylene Dibromide	µg/L	Grab	1/Month ³	²
Ethyl Tertiary Butyl Ether	µg/L	Grab	1/Month ³	²
Hardness (as CaCO ₃) ⁵	mg/L	Grab	1/Month	²
Methanol	µg/L	Grab	1/Month ³	²
Methyl Tertiary Butyl Ether	µg/L	Grab	1/Month ³	²
Temperature	°F	Grab	1/Month	²
Tertiary Amyl Methyl Ether	µg/L	Grab	1/Month ³	²
Tertiary Butyl Alcohol	µg/L	Grab	1/Month ³	²
Total Dissolved Solids	mg/L	Grab	1/Month	²
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	Grab	1/Month ³	²
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	Grab	1/Month ³	²
Xylene ⁶	µg/L	Grab	1/Month ³	²
Whole Effluent Toxicity (see Section V. below)	--	--	--	--

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

¹ When discharging to surface water.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

³ 1) Analysis shall be conducted weekly for 4 consecutive weeks following initial discharge from the treatment system. 2) If any sample shows detectable concentrations, the Discharger shall immediately resample and reanalyze the effluent for the detected constituent(s), and shall continue sampling the effluent on a weekly basis until the constituent(s) concentrations are below permitted levels. 3) If three consecutive monthly sampling events result in non-detectable concentrations, at appropriate detection limits, then the sampling frequency shall be reduced to quarterly. 4) If a detectable concentration is determined to be present in the wastewater the frequency will revert back to monthly. 5) Subsequent to the initial testing required in 1) above, if a constituent is not present in the influent sample, then the testing for that constituent may be discontinued until detected in the influent.

⁴ For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

⁵ If lead is not detected in the first two sampling events, then testing may be discontinued thereafter.

⁶ Carcinogenic PAHs include: benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

⁷ Monitoring shall be performed concurrently with effluent sampling for lead and cadmium, chromium (III), copper, nickel, silver, or zinc if treatment for any of the these pollutants is required.

⁸ Xylene includes o-xylene, m-xylene, and p-xylene.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing. Tier 2 and Tier 3 dischargers shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. Every Tier 2 and Tier 3 Discharger shall meet the following acute toxicity testing requirements:

- 1. Monitoring Frequency** – Tier 2 and Tier 3 dischargers shall perform acute toxicity testing every six months or as directed by the Executive Officer in the Notice of Applicability. Dischargers of Tier 1 discharges are not required to conduct acute toxicity testing.
- 2. Sample Types** – Each Discharger may use flow-through or static renewal testing. For static renewal testing, the effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001 and any other effluent discharge location specified in the NOA.
- 3. Test Species** – The test species shall be fathead minnows (*Pimephales promelas*) or rainbow trout (*Oncorhynchus mykiss*), as specified in the Notice of Applicability.
- 4. Methods** – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. Chronic Toxicity Testing. Tier 1B, Tier 2 and Tier 3 dischargers shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – Tier 1B, Tier 2, and Tier 3 dischargers shall perform annual three species chronic toxicity testing or as directed by the Executive Officer in the Notice of Applicability. Dischargers of Tier 1A discharges are not required to conduct chronic toxicity testing.
2. Sample Types – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001 and any other effluent discharge location specified in the NOA.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
 - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
 - The green alga, *Selenastrum capricornutum* (growth test).
5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002.
6. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. Dilutions – For chronic toxicity monitoring, the test shall be performed using 100% effluent and one control. A laboratory water control shall be used.
8. Test Failure – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
 - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
 - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in the Special Provision at section IX.C.2.a.i. of the Order.

C. WET Testing Notification Requirements. Each Discharger shall notify the Central Valley Water Board within 24-hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. WET Testing Reporting Requirements. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. Chronic WET Reporting. Regular chronic toxicity monitoring results shall be reported to the Central Valley Water Board within 30 days following completion of the test, and shall contain, at minimum:

- a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.
- b. The statistical methods used to calculate endpoints;
- c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
- d. The dates of sample collection and initiation of each toxicity test; and
- e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, or accelerated.

2. Acute WET Reporting. Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. Quality Assurance (QA). Each Discharger must provide the following information for QA purposes:

- a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
- b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
- c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001U, RSW-001D, and any/all additional monitoring locations.

- Each Discharger shall monitor the receiving water at Monitoring Locations RSW-001U, RSW-001D, and all additional locations, if specified by the Executive Officer in the Notice of Applicability, as follows:

Table C-5 Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	1	2, 3
Dissolved Oxygen	mg/L	Grab	1	2, 3
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1	2, 3
Hardness, Total (as CaCO ₃)	mg/L	Grab	1	2, 3
Temperature	°F	Grab	1	2, 3
Turbidity	NTU	Grab	1	2, 3

¹ The minimum sampling frequency (e.g., 2/Week, 1/Month, 1/Quarter) shall be specified by the Executive Officer in the Notice of Applicability.

² Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

³ A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained by the Discharger.

- If receiving water monitoring is required in the Notice of Applicability, a log shall be kept of the receiving water conditions throughout the reach bounded by Monitoring Locations RSW-001U, RSW-001D, and all additional locations. Attention shall be given to the presence or absence of:
 - Floating or suspended matter;
 - Discoloration;
 - Bottom deposits;
 - Aquatic life;
 - Visible films, sheens, or coatings;
 - Fungi, slimes, or objectionable growths; and
 - Potential nuisance conditions.

Notes on receiving water conditions shall be summarized in the monitoring report.

IX. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

- New Dischargers who have received a Notice of Applicability for coverage under this General Order shall inform the Central Valley Water Board 24 hours before the start of the discharge.
- Before commencing a new discharge, a representative sample of the untreated effluent shall be collected and analyzed for all the constituents identified in Table I-1, compared with the appropriate screening levels, and submitted with the NOI.

3. Authorized Dischargers shall comply with all Standard Provisions (Attachment B) related to monitoring, reporting, and recordkeeping.
4. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
5. Monitoring reports shall be submitted to the Central Valley Water Board each quarter. In situations where no effluent monitoring is required, the frequency for submitting monitoring reports may be reduced to annually in the NOA. If no discharge occurred during the reporting period, the monitoring report shall document that there was no discharge.

B. Self-Monitoring Reports (SMR's)

1. At any time during the term of this permit, the State Water Board or the Central Valley Water Board may notify enrolled Dischargers to electronically submit Self-Monitoring Reports (SMR's) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). Until such notification is given, each Discharger shall electronically submit SMR's as described in the NOA.
2. Dischargers shall report in the SMR the results for all monitoring specified in this Monitoring and Reporting Program under sections III through IX. Dischargers shall submit SMR's including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If a Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table C-6 Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date ¹
1/Discharge Event	Notice of Applicability effective date	All	1 May 1 August 1 November 1 February
Continuous	Notice of Applicability effective date	All	1 May 1 August 1 November 1 February
1/Hour	Notice of Applicability effective date	Hourly	1 May 1 August 1 November 1 February
1/Day	Notice of Applicability effective date	Midnight through 11:59 PM (or any 24-hour period that reasonably represents a calendar day for purposes of sampling).	1 May 1 August 1 November 1 February

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date ¹
1/Week	Notice of Applicability effective date	Sunday through Saturday	1 May 1 August 1 November 1 February
1/Month	Notice of Applicability effective date	1 st day of calendar month through last day of calendar month	1 May 1 August 1 November 1 February
1/Quarter	Notice of Applicability effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February
2/Year	Notice of Applicability effective date	1 January through 30 June 1 July through 31 December	1 August 1 February
1/Year	Notice of Applicability effective date	1 January through 31 December	1 February

¹ In situations where no effluent monitoring is required, the frequency for submitting SMR's may be reduced to annually in the NOA. Unless otherwise specified in the NOA, annual SMR's are due 1 February and include monitoring data for 1 January through 31 December for the previous calendar year.

- 4. Reporting Protocols.** Dischargers shall report with each sample result the applicable RL and the current laboratory's Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

Dischargers shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ($\pm$ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

- 5. Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported

determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
6. Dischargers shall submit SMR's in accordance with the following requirements:
 - a. Each Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. Each Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDR's; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. Each Discharger shall attach all laboratory analysis sheets, including quality assurance/quality control information, with all its SMR's for which sample analyses were performed.
7. Dischargers shall submit in the SMR's calculations and reports in accordance with the following requirements:
 - a. **Dissolved Oxygen Receiving Water Limitations.** The Discharger shall report in the SMR's the dissolved oxygen concentrations in the effluent (Monitoring Location EFF-001) and the receiving water (Monitoring Location RSW-001U and RSW-001D).
 - b. **Temperature Receiving Water Limitations.** Each Discharger shall calculate and report the temperature change in the receiving water based on the difference in temperature at Monitoring Locations RSW-001U and RSW-001D.
 - c. **Turbidity Receiving Water Limitations.** Each Discharger shall calculate and report the turbidity change in the receiving water turbidity based on the different turbidity at Monitoring Locations RSW-001U and RSW-001D.
 - d. **Temperature Effluent Limitation.** For every day receiving water temperature samples are collected at Monitoring Location RSW-001U, the Discharger shall calculate and report the difference between the daily average effluent temperature and the upstream receiving water temperature based on the difference in the daily average effluent temperature at Monitoring Location EFF-001 and the average

receiving water temperature of grab samples collected at Monitoring Location RSW-001U.

C. Discharge Monitoring Reports (DMR's) – Not Applicable

D. Other Reports

- 1. Salinity Evaluation and Minimization Plan.** For Dischargers with effluent electrical conductivity greater than 900 $\mu\text{mhos/cm}$, flow greater than or equal to 0.25 MGD, and continuous discharge duration 180 days or longer, shall submit a Salinity Evaluation and Minimization Plan within 60 days of initiating a new discharge under this Order, to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the discharger will minimize any increase in effluent salinity as the result of treatment of the wastewater, if applicable. Under limited circumstances the Executive Officer may waive this requirement in the NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.
- 2. Pollution Prevention and Monitoring and Reporting Plan.** Drinking water suppliers that have or propose to have numerous discharge points covered by this general order are required to develop a site specific Pollution Prevention and Monitoring and Reporting Plan (PPMRP) and submit the document with the Notice of Intent. The information required for the PPMRP is shown in Attachment G.
- 3. Best Management Practices (BMP) Plan.** Each Discharger with a treatment system (Tier 2 and Tier 3) authorized under this General Order shall develop and implement BMP's that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of additional pollutants from the discharge facility to waters of the State. These BMP requirements are not automatically required for Tier 1 Dischargers. However, when appropriate the Executive Officer may require the BMP requirements for Tier 1 Dischargers in the NOA. The BMP's shall be consistent with the general guidance contained in the U.S. EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed that will ensure proper operation and maintenance, prevent the additional chemicals or other substances from being introduced into the discharge, and prevent the addition of pollutants from the other non-permitted process waters, spills, or other sources of pollutants at the discharge facility. The necessary BMP's shall be identified, developed, and implemented prior to the initiation of the discharge. Each Discharger shall update and amend the BMP Plan as necessary to maintain compliance with this General Order. By the date that discharge begins, each Discharger shall make the BMP Plan available to Central Valley Water Board staff upon request.
- 4. Closure Certification for Discharges from Drinking Water Supply Systems.** If a drinking water supply system Discharger received an exception as allowed by section 5.3 of the SIP, then upon termination of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Closure Certification is to be submitted with the request for termination.

ATTACHMENT D – FACT SHEET

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ATTACHMENT D – FACT SHEET

As described in section V.C of this General Order, the Central Valley Water Board incorporates this Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this General Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This General Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this General Order that are specifically identified as “not applicable” have been determined not to apply to the Dischargers. Sections or subsections of this General Order not specifically identified as “not applicable” are fully applicable to the Dischargers.

I. PERMIT INFORMATION

A. Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

On 22 September 1989, the United States Environmental Protection Agency (U.S. EPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue general NPDES permits pursuant to 40 Code of Federal Regulations (C.F.R.) parts 122 and 123.

40 C.F.R. 122.28 provides for issuance of general permits to regulate a category of point sources if the sources involve the same or substantially similar types of operations; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general order rather than individual orders.

1. Limited Threat General Order R5-2013-0073-01

The previous Limited Threat General Order R5-2013-0073-01 (Waste Discharge Requirements for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water) was adopted by the California Regional Water Quality Control Board, Central Valley Region, on 31 May 2013 and amended on 6 June 2014. The previous Limited Threat General Order applied to the following:

- a. Treated or Untreated Groundwater from Cleanup Sites;
- b. Wastewater from Superchlorination Projects; and
- c. Other miscellaneous limited threat wastewaters (including hard rock mines).

The hard rock mine component of Order R5-2013-0073-01 is not comprehensive, low threat discharges are excluded, the cleanup component of the Order is restricted to groundwater, and the Order is limited on the other types of discharges that can be included.

2. Low Threat General Order R5-2013-0074

Individuals, public agencies, private businesses, and other legal entities often need to discharge clean or relatively pollutant-free wastewater that poses little or no threat to water quality. These discharges are often short-term and low volume in nature.

Water suppliers may have numerous intentional and unintentional releases of fresh water to surface waters and surface water drainage courses due to many factors, including system failures, pressure releases, and pipeline/tank flushing and dewatering. For the purpose of this Order, these multiple discharges from water suppliers shall be considered a project. Public and private water suppliers, such as irrigation districts, water districts, and water agencies, may apply for coverage under the Low Threat General Order.

The Low Threat General Order covers certain categories of dewatering and other low threat discharges to waters of the United States, which are either 4 months or less in duration or have a daily average discharge flow that does not exceed 0.25 million gallons per day (MGD).

There is a new State Board General Order, WQ 2014-0194-DWQ intended for drinking water supply systems. Most of the drinking water supply discharges under the Low Threat General Order are now covered by State Board Order WQ 2014-0194-DWQ. However, some drinking water supply systems are not covered by WQ 2014-0194-DWQ and remain covered by the Low Threat General Order.

New enrollees will be enrolled under the new Limited Threat General Order as they apply. Existing enrollees will be enrolled under the new Limited Threat General Order upon expiration of the Low Threat General Order, which will be allowed to expire without renewal.

This Order replaces the previous Limited Threat General Order, allows for future enrollment of drinking water supply systems that do not fit under State Board Order WQ 2014-0194-DWQ, specifically includes wastewater discharges from hard rock mines, and broadens the eligibility requirements.

3. **2016 Minor Modification.** On 28 October 2016 the Executive Officer issued a minor modification of the Limited Threat General Order to correct typographical errors.
4. **2018 Permit Amendment.** On 1 February 2018, the Central Valley Water Board adopted Order R5-2018-0002 amending the Limited Threat General Order. A summary of the changes are described below:
 - a. **Salinity Evaluation and Minimization Plan.** The Limited Threat General Order includes additional requirements for discharges with elevated salinity, i.e., electrical conductivity levels greater than 900 $\mu\text{mhos/cm}$, flows greater than or equal to 0.25 MGD, and continuous discharge duration 180 days or longer. In these elevated salinity situations the discharger is required to submit a salinity evaluation and minimization plan. The Limited Threat General Order was amended to allow the Executive Officer under limited circumstances to waive this requirement in the notice of applicability (NOA). For example, for construction dewatering projects where the groundwater is naturally high in salinity. In these specific situations a salinity evaluation and minimization plan is not effective.
 - b. **New Temperature Requirements.**
 - i. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on 7 January 1971, and amended this plan on 18 September 1975. The Thermal Plan contains temperature objectives for surface waters that are applicable within the Sacramento-San Joaquin Delta. The Limited Threat General Order was amended to include the requirements of the Thermal Plan to be applied for

elevated temperature waste discharges within the Sacramento-San Joaquin Delta. The effluent and receiving water temperature requirements per the Thermal Plan will be specified in the NOA.

- ii. **Deer Creek Temperature Requirements.** The Water Quality Control Plan for the Sacramento-San Joaquin River Basins contains site-specific temperature limits for Deer Creek in El Dorado and Sacramento Counties. The Limited Threat General Order was amended to incorporate the site-specific receiving water limitations that will be specified in the NOA for discharges to Deer Creek.
- c. **Best Management Practices (BMP's) Plan.** Each Discharger with a treatment system (Tier 2 and Tier 3) authorized to discharge under the Limited Threat General Order are required to develop and implement BMP's that include site-specific plans and procedures implemented and/or to be implemented to prevent the generation and potential release of pollutants from the discharge facility to waters of the State. In certain circumstances BMP requirements should be required for Tier 1 Dischargers. Therefore, the Limited Threat General Order was amended to allow the Executive Officer, when appropriate, to require the BMP requirements for Tier 1 Dischargers in the NOA.
- d. **Secondary Maximum Contaminant Levels (MCLs) (Iron and Manganese).** The State Water Board Division of Drinking Water (DDW) has developed Secondary MCL - Consumer Acceptance Limits for iron and manganese. The Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations and are derived from human welfare considerations (e.g., taste, odor, laundry staining), not for toxicity. DDW has advised that compliance with the dissolved fraction of MCLs in source waters is fully protective of the MUN beneficial use. Furthermore, iron and manganese are not toxic contaminants, therefore, short-term exceedances do not result in any health consequence and DDW recommends compliance with the Secondary MCLs based on annual average concentrations. The Limited Threat General Order was amended to specify that the screening levels for iron and manganese based on the Secondary MCLs are established as dissolved metals and, when sufficient data exists, the reasonable potential analyses can be conducted based on the annual average effluent concentration.
- e. **Acute Whole Effluent Toxicity.** The Limited Threat General Order requires that all Tier 2 and Tier 3 discharges must submit acute whole effluent toxicity data with the Notice of Intent (NOI) application. While acute toxicity is a concern for Tier 3 discharges (i.e., hard rock mines), Tier 2 dischargers are limited threat discharges that are not expected to exhibit acute toxicity. Therefore, the Limited Threat General Order was amended to remove the requirement to submit acute whole effluent toxicity data with the NOI. When applicable the Executive Officer will establish acute whole effluent toxicity monitoring requires in the NOA.
- f. **Attachment F Removal.** Attachment F to the Limited Threat General Order was originally planned to be used as an attachment to the NOA to establish the monitoring requirements. However, to reduce the size of the NOAs and for clarification purposes the effluent and receiving water monitoring requirements are being established as tables within the NOAs. Therefore, there is no longer a need to include Attachment F and the Limited Threat General Order was amended to remove the attachment.

- g. **General Order for Treated Groundwater from Cleanup of Petroleum Fuel Pollution, Order R5-2013-0075.** The presence of petroleum constituents in groundwater at various sites throughout the Central Valley Region poses a threat to existing and potential beneficial uses of the groundwater. As responsible parties investigate and remediate these sites, the number of groundwater cleanups of petroleum constituents is increasing. Remediation at many of these sites includes groundwater treatment, with discharge of the treated groundwater. General Order R5-2013-0075 was developed to regulate the discharge of treated groundwater from cleanups of petroleum constituents to waters of the United States. This Order has been amended to regulate discharges of treated groundwater from cleanups of petroleum fuel pollution. It replaces the previous Petroleum General Order R5-2013-0075.

B. General Criteria

This Limited Threat General NPDES Order is designed to allow limited threat waste discharges to surface waters or surface water drainage courses as long as the discharge does not include human waste or acid mine drainage. Surface waters or surface water drainage courses include but are not limited to streams, dry stream courses, ephemeral streams, creeks, rivers, lakes, reservoirs, and storm drains. Although the primary focus of the Central Valley Water Board is water quality, the program deals with all environments, including surface water, groundwater, soil, sediment, the vadose zone, and air. Tier 1 discharges are clean or relatively clean wastewater projects and include but are not limited to well development, construction dewatering, pump/well testing, pipeline pressure testing, pipeline flushing or dewatering, condensate, water supply systems, aggregate mines, and filter backwash. Tier 2 discharges are those that require treatment prior to discharge and include but are not limited to discharges that may contain low levels of toxic organic constituents, volatile organic compounds (VOCs), petroleum fuel pollution constituents, pesticides, inorganic constituents, chlorine, and other chemical constituents that require treatment prior to discharge such as industrial facilities, dry cleaners, pipeline leaks and spills, underground tanks, aboveground tank farms, petroleum fuel pollution groundwater remediation projects, pesticide and fertilizer facilities, superchlorination projects, equipment decontamination, and brownfields. Tier 3 discharges are liquid mine waste discharges from hard rock mines.

II. DISCHARGE INFORMATION

Eligible Discharges. This Limited Threat General Order applies to individuals, public agencies, private businesses, and other legal entities (hereafter Dischargers) discharging limited threat wastewaters to waters of the United States as follows:

- Tier 1:** Clean or relatively pollutant-free wastewaters that pose little or no threat to water quality.
- Tier 1A.** Discharges of less than 0.25 million gallons per day (MGD) or less than 4 months in duration (or as determined by the Executive Officer); and
- Tier 1B.** Discharges greater than or equal to 0.25 MGD and greater than or equal to 4 months in duration (or as determined by the Executive Officer).
- Tier 2:** Wastewater that may contain toxic organic constituents, volatile organic compounds (VOCs), pesticides, inorganic constituents, chlorine, and other chemical constituents for which treatment technologies are well-established to eliminate constituents that pose a threat to water quality and that require treatment prior to discharge.

Filter bags or other filtration units for removal/reduction of turbidity may or may not be considered treatment by the Executive Officer. Wastewaters that may be covered under this General Order as a Tier 2 Discharger include but are not limited to the following:

- a. Superchlorination projects;
- b. Equipment decontamination projects;
- c. Wastewater from cleanup sites including industrial facilities, dry cleaners, pipeline leaks and spills, underground tanks, aboveground tank farms, petroleum fuel pollution, pesticide and fertilizer facilities, and brownfields; and
- d. Miscellaneous discharges that do not meet effluent limitations without treatment.

Tier 3: Hard rock mines often discharge wastewater to surface waters. Treatment is often required prior to discharge. Wastewater from hard rock mines will be covered under this General Order as a Tier 3 discharger. (Discharges from aggregate mines may be included in Tier 1 or Tier 2.)

Table D-1, below, lists some of the types of discharges that are eligible, the volume discharged, the duration of discharge, and the appropriate Tier under this General Order, that is applicable.

Table D-1. Eligible Discharges with Applicable Permits

Type of Discharge	Wastewater Does Not Exceed Screening Levels, Y/N?	Maximum Daily Discharge < 0.25 MGD or < 4 months	Maximum Daily Discharge ≥ 0.25 MGD and ≥ 4 months
Well Development Water	Y ¹	Tier 1A	Tier 1B
Construction Dewatering	Y ¹	Tier 1A	Tier 1B
Pump/Well Testing	Y ¹	Tier 1A	Tier 1B
Pipeline/Tank Pressure Testing	Y ¹	Tier 1A	Tier 1B
Pipeline/Tank Flushing or Dewatering	Y ¹	Tier 1A	Tier 1B
Condensate	Y ¹	Tier 1A	Tier 1B
Water Supply System s	Y ¹	Tier 1A	Tier 1B
Aggregate Mines	Y ¹	Tier 1A	Tier 1B
Filter Backwash Water	Y ¹	Tier 1A	Tier 1B
Miscellaneous Wastewaters without a Treatment System	Y ¹	Tier 1A	Tier 1B

Type of Discharge	Wastewater Does Not Exceed Screening Levels, Y/N?	Maximum Daily Discharge < 0.25 MGD or < 4 months	Maximum Daily Discharge ≥ 0.25 MGD and ≥ 4 months
Superchlorination Project Wastewaters that Do Not Meet Effluent Limitations without Treatment	N	Tier 2	Tier 2
Equipment Decontamination Wastewaters that Do Not Meet Effluent Limitations without Treatment	N	Tier 2	Tier 2
Wastewaters from Cleanup Sites That Do Not Meet Effluent Limitations without Treatment	N	Tier 2	Tier 2
Groundwater Cleanup of Petroleum Fuel Pollution	Y or N	Tier 2	Tier 2
Wastewaters from Hard Rock Mines (Excluding Aggregate Mines) with or without Treatment	N	Tier 3	Tier 3

¹ If the wastewater exceeds the screening levels this type of discharge will be assigned to Tier 2.

III. NOTIFICATION REQUIREMENTS

A. Requirements for All Discharges. All Dischargers enrolling for coverage under this General Order are required to submit a complete Notice of Intent (NOI), as detailed in Attachment J, which includes:

1. State Water Board Form 200.
2. A full description of the proposed project on official letterhead.
3. A project map which includes the location of the project, discharge point(s), and receiving water.
4. The appropriate first annual fee.

California Water Code section 13260(d) requires each person for whom waste discharge requirements (WDRs) are issued to pay an annual fee to the State Water Board. California Water Code section 13260(f) requires: (1) the State Water Board to adopt a schedule of fees by emergency regulation; and (2) fees to be adjusted annually to conform to the revenue levels set forth in the State Budget Act for the activities that have been issued WDRs.

The fee for enrollment under this Order shall be based on Category 3 in section 2200(b)(9) of title 23, California Code of Regulations, which can be found at http://www.waterboards.ca.gov/water_issues/programs/npdes/ and is payable to the State Water Board.

5. Discharge Type from the following list;
 - a. Well Development Water, which includes discharges associated with supply well installation, development, test pumping and purging;
 - b. Construction Dewatering;
 - c. Pump/Well Testing, which includes discharges associated with the operation and maintenance activities of existing pumps and wells;

- d. Water Supply System, which include discharges associated with fire hydrant flushes and system operation, maintenance, and testing activities of a water supply system;
 - e. Pipeline/Tank Pressure Testing, which includes discharges associated with hydrostatic testing;
 - f. Pipeline/Tank Flushing or Dewatering, which includes discharges associated with flushing, cleaning, and disinfection;
 - g. Condensate, which includes discharges associated with atmospheric condensates such as refrigeration, air conditioners, and compressor condensates and cooling towers;
 - h. Filter Backwash waters;
 - i. Aggregate Mine, which includes sediment-laden wastewaters;
 - j. Groundwater Extraction and/or Cleanup Project
 - k. Superchlorination
 - l. Equipment Decontamination
 - m. Wastewater from Cleanup Site
 - n. Liquid mine waste from hard rock mine
 - o. Petroleum fuel pollution remediation projects
 - p. Other
6. Evaluation of disposal/reclamation options;
- Pursuant to section 2, Article X, California Constitution, and Water Code section 275, on preventing waste and unreasonable use of waters of the state, the Central Valley Water Board encourages, wherever practicable, water conservation and/or re-use of wastewater. Therefore, to obtain coverage under this General Order, Dischargers are required to evaluate their reclamation options. These options include:
- a. Sanitary Sewage System
- If all the discharge is accepted by the local municipal wastewater treatment plant (WWTP), then authorization to discharge under an NPDES permit is not needed for the proposed project. Dischargers may submit any denial or restrictive flow letter from the WWTP as proof that this option is not viable or explain why it is infeasible to connect to the WWTP.
- b. Land Disposal
- The land disposal option is usually restricted to the dry season (May through October) unless the Discharger can prove that the discharge can be retained on land during the wet season (November through April). All Dischargers must fully explain why land disposal is not a viable option.
- c. Underground Injection
- This option may be available for Dischargers at cleanup sites that find it is economically infeasible to treat the groundwater prior to discharging into surface waters that may be impacted by constituents that are found in impacted areas (e.g., sites discharging to 303(d) listed receiving waters). Additional information regarding the feasibility of underground injection as a disposal option can be obtained from the U.S. EPA Region 9 Office, Underground Injection Control Unit.
7. Analytical results of sampling of the untreated effluent for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged;

- a. **New Discharges.** Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a Notice of Applicability to the Discharger. The Notice of Applicability will specify that the discharge is authorized under the terms and conditions of this General Order and will prescribe effluent limitations and include a monitoring and reporting program. New discharges that are not covered by an existing individual or general NPDES permit may not commence discharging until issuance of a Notice of Applicability. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

New analytical results must be submitted every 5 years from the date of the NOA, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a Notice of Applicability from the Executive Officer.

- b. **Existing Discharges.** Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2013-0073-01 (NPDES Permit No. CAG995002) are automatically authorized under this General Order to continue discharging. However to maintain general order coverage, the current enrollees must submit a complete Notice of Intent (NOI), as described in sections II.A.1.a through h, above, and in Attachment J, within 180 days of the adoption date of this Order, to adequately characterize the discharge for coverage under this Order.

New analytical results must be submitted every 5 years, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged. Those dischargers that have not submitted the suite of analytical results specified in Table I-1 of Attachment I in five years or more must submit the data within 180 days of adoption of this Order.

Upon submittal of an acceptable NOI, the Executive Officer will issue a revised Notice of Applicability to existing enrollees that coverage under the General Order will continue, specifying any new and continuing effluent limitations and a monitoring and reporting program. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

8. Certification by authorized personnel.

B. Additional Requirements for Specific Discharges. Additional NOI submittal requirements are included for specific dischargers:

1. **Impaired waterbodies.** Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 11 October 2011 U.S. EPA gave final approval to California's 2008-2010 section 303(d) List of Water Quality Limited Segments. The Basin Plans reference this list of Water Quality Limited Segments (WQLSs), which are defined as "*...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 C.F.R. part 130, et seq.)*." The Basin Plans also state,

“Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.” Impaired waters do not fully support beneficial uses. If proposing to discharge into an impaired surface water, the Discharger must provide wastewater analysis of the 303(d) listed constituents of concern as part of the Notice of Intent.

The list of impaired surface waters can be found under the CWA section 303(d) List at the following web site:

http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list

Additional requirements include:

- a. Analytical results of sampling of the proposed receiving water and effluent for pollutants causing impairment under CWA section 303(d) List, if applicable.
 - b. Demonstration of adequate treatment to ensure compliance at the point of discharge (i.e., end-of-pipe).
 - i. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations;
 - ii. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer; and
 - iii. Analytical results of sampling of the treated effluent for the applicable pollutants with effluent limitations specified in the NOA;
2. **Drinking water supply systems.** Categorical Exception for Priority Pollutant Criteria and Objectives.
- a. As discussed in section II.A.2.b of this General Order, section 5.3 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) allows the Central Valley Water Board to allow certain Dischargers short-term or seasonal exceptions from meeting priority pollutant criteria and objectives for discharges that are necessary to implement control measures that fulfill statutory requirements regarding drinking water. Dischargers applying for a categorical exception to the priority pollutant criteria and objectives as authorized by section 5.3 of the SIP must submit the appropriate requirements with the application as specified by the SIP, including:
 - i. A detailed description of the proposed action, including the proposed method of completing the action;
 - ii. A time schedule;
 - iii. A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures);
 - iv. CEQA documentation;
 - v. Contingency plans;
 - vi. Identification of alternate water supply (if needed); and
 - vii. Residual waste disposal plans.

- b. A Pollution Prevention and Monitoring and Reporting Plan (PPMRP), as outlined in Attachment G, if the project includes more than one existing or proposed discharge point.
 - c. Upon completion of the discharge, certification is required by a qualified biologist that the beneficial uses of the receiving water have been restored. The Certification must be submitted with the Request for Termination of Coverage form in Attachment E
- 3. **High salinity effluent.** All Dischargers with effluent electrical conductivity greater than 900 $\mu\text{mhos/cm}$, flows greater than or equal to 0.25 MGD, and continuous discharge duration 180 days or longer, shall submit a Salinity Evaluation and Minimization Plan within 60 days of initiating a new discharge under this Order, to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the discharger will minimize any increase in effluent salinity as the result of treatment of the wastewater, if applicable.
- 4. **Intake Water Credit.** Discharges qualify for Tier 2 of this Order because monitoring data indicate that the effluent demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality objectives. However, when the water intake from the receiving water is the major source of the pollutants and is responsible for the reasonable potential to exceed applicable water quality standards, an intake water credit can be granted in accordance with section 1.4.4 of the Policy for Implementation of the Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries in California (SIP). When an Intake Water Credit has been granted for a specific pollutant by the Executive Officer in the NOA, then treatment for that pollutant is not required.

A Discharger must submit a written request for an intake water credit. The written request must be prepared in accordance with the NOI requirements in Attachment H and as specified in Attachment J, section 10. The Executive Officer of the Central Valley Water Board will decide whether to authorize the intake water credit, based on the monitoring data included with the NOI and other information submitted by the Discharger, and the requirements specified in the SIP, section 1.4.4.

The SIP, section 1.4.4 specifies that a California Water Board may consider an intake water credit on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water-quality based effluent limitations, provided that the Discharger satisfactorily demonstrates that the following conditions are met:

- a. The observed maximum ambient background concentrations, as determined in section 1.4.3.1 of the SIP, and the intake water concentration of the pollutant exceed the most stringent applicable criterion/objective for the pollutant;
- b. The intake water credits are consistent with any TMDL applicable to the discharge that has been approved by the Central Valley Water Board, the State Water Resources Control Board, and USEPA;
- c. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing:
 - i. the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to the that of the intake water;
 - ii. there is direct hydrological connection between the intake and discharge points;

- iii. the water quality characteristics are similar in the intake and receiving waters; and
- iv. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The Central Valley Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

- d. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
- e. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water.

5. Wastewater that requires treatment prior to discharge.

- a. A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations; and
- b. Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.

IV. General Order Coverage

A. New Discharges

Upon receipt of the complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a Notice of Applicability to the Discharger. The Notice of Applicability will specify that the discharge is authorized under the terms and conditions of this General Order and will prescribe effluent limitations and include a monitoring and reporting program. New discharges that are not covered by an existing individual or general NPDES permit may not commence until issuance of a Notice of Applicability. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

New analytical results must be submitted every 5 years from the date of the NOA, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a Notice of Applicability from the Executive Officer.

B. Existing Discharges

Current enrollees authorized to discharge under the existing Limited Threat General Order R5-2013-0073-01 (NPDES Permit No. CAG995002) are automatically authorized under this General Order to continue discharging. However to maintain general order coverage, the current enrollees must submit a complete Notice of Intent (NOI), as described in sections in Attachment J, within 180 days of the adoption date of this Order, to adequately characterize the discharge for coverage under this Order.

New analytical results must be submitted every 5 years, for the pollutants specified in Table I-1 of Attachment I for the type of wastewater discharged. Those dischargers that have not

submitted the suite of analytical results specified in Table I-1 of Attachment I in five years or more must submit the data within 180 days of adoption of this Order.

Upon submittal of an acceptable NOI, the Executive Officer will provide a new Notice of Applicability to existing enrollees that coverage under the General Order will continue, specifying any new and continuing effluent limitations and a monitoring and reporting program. Failure to submit a new and acceptable NOI, as described above, may result in termination of coverage.

C. Changes in Discharge/Coverage

Some permanent changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the Notice of Applicability by the Executive Officer.

1. Notify the Executive Officer 60 days prior to planned or expected changes to the wastewater and/or to the treatment system.
2. Notify the Executive Officer within 60 days after receipt of laboratory results indicating unplanned or unexpected changes to wastewater.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g. submittal of a modified NOI to the Executive Officer), including applicable laboratory analyses, the Executive Officer may issue a revised Notice of Applicability for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary and/or a discharge no longer qualifies for this Order, the Discharger must cease discharge immediately and apply for an individual NPDES permit. Discharge may resume only after receipt of a new individual NPDES permit. See the Fact Sheet for further discussion of anti-backsliding and antidegradation issues.

D. Termination of Discharge/Coverage

Upon completion of treatment (if applicable) and cessation of the discharge, the Discharger shall request, using the Request for Termination of Coverage in Attachment E, official termination of coverage under this General Order from the Executive Officer. Upon approval of this request, the Discharger will no longer be authorized to discharge wastewater covered by this General Order. The Discharger is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee and monitoring reports associated with this General Order until the Discharger receives a Notice of Termination (NOT) from the Executive Officer. Failure to submit the annual fee and monitoring reports may subject the Discharger to mandatory minimum penalties or discretionary penalties.

1. When the Central Valley Water Board issues an individual NPDES permit or Waste Discharge Requirements (WDR's) with more specific requirements to a Discharger, the applicability of this General Order to that Discharger is automatically terminated on the effective date of the individual permit or WDR's.
2. Dischargers with drinking water supply systems authorized to discharge under this General Order who have been granted an exception to the priority pollutant criteria and objectives in the California Toxics Rule (CTR) and SIP, as allowed by section 5.3 of the SIP, must provide certification by a qualified biologist that the beneficial uses of the receiving water have been restored upon completion of the discharge.

E. Expiration of General Order

This General Order will expire 5 years after the effective date (30 January 2022), as specified on the cover page of this General Order. In accordance with 40 C.F.R. section 122.6, if the

permit is not reissued by the expiration date, the conditions of this General Order will continue in force and effect until a new General Order is issued.

F. Ineligible Discharges

The following discharges are ineligible for coverage under this General Order:

1. Discharges containing sewage of human origin;
2. Discharges of acid mine drainage;
3. Discharges to municipal wastewater collection systems; and
4. Discharges to ponds, infiltration basins, spray disposal areas, subsurface infiltration, injection wells, or other methods not involving discharge to surface waters and surface water drainage courses.

G. Screening Levels

Eligible Dischargers enrolling under this General Order are required to analyze the wastewater for constituents listed in the appropriate column of Table I-1 in Attachment I and submit the results with the Notice of Intent (NOI) or application.

Attachment I contains screening levels based on water quality objectives/criteria from the California Toxics Rule (CTR), applicable Basin Plans, and other constituents and pollutants of concern. The most restrictive criteria are necessary because this Order is intended as a general order and covers limited threat discharges to all surface waters in the Central Valley of California. If MUN is a beneficial use of the surface water, then the most restrictive human health based criteria are used. If MUN is not a beneficial use, then the most restrictive human health based criteria may not be necessary. If the aquatic life criteria are more restrictive than the human health based criteria, then the aquatic life criteria are used.

If the analytical test results of the discharge show that constituent concentrations do not exceed the screening levels, then the Discharger will be enrolled under this Order as a Tier 1 discharger.

If the analytical test results of the discharge show that constituent concentrations exceed the Attachment I, section II and section III screening levels, then the Discharger will be enrolled under this Order as a Tier 2 discharger and treatment will be required.

If the proposed project/site is a Hard Rock Mine, then the Discharger will be enrolled under this Order as a Tier 3 discharger.

The Executive Officer shall indicate the appropriate Tier, applicable effluent limitations, and monitoring requirements in the Notice of Applicability (NOA) when a Discharger is enrolled under this permit.

Attachment I also includes screening requirements for several parameters which do not have applicable water quality criteria. If the analytical test results of the discharge show that these parameters are present in the effluent, then the Discharger will be enrolled under this Order and will be required to conduct additional effluent and downstream receiving water sampling to determine compliance with receiving water limitations.

V. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for limited threat point source discharges, as described herein, to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code. The Central Valley Water Board's actions on issuing this permit for existing and new potable water discharges, and on the exceptions allowed by section 5.3 of the SIP is exempt from CEQA in accordance with California Code of Regulations, Title 14, Section 15061 (b)(3) which states that CEQA only applies to projects which have the potential for causing adverse environmental effects.

To satisfy the Categorical Exception requirements of Section 5.3 of the SIP, Dischargers seeking enrollment under this General Order will be required to submit project-specific information to the Executive Officer on the discharge and its water quality effects. The information required by the SIP is presented in the application requirements contained in section 8 of Attachment J.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plans.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.
 - a. **Basin Plans.** The Central Valley Water Board adopted a Water Quality Control Plan, Fourth Edition (Revised April 2016), for the Sacramento and San Joaquin River Basins and a Water Quality Control Plan, Second Edition (Revised January 2015 with approved amendments), for the Tulare Lake Basin (hereinafter Basin Plans) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plans. In addition, the Basin Plans implement State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plans identify the typical beneficial uses as follows: municipal and domestic supply; agricultural irrigation; stock watering; process supply; service supply; hydropower supply; water contact recreation; canoeing and rafting recreation; other non-contact water recreation; warm freshwater aquatic habitat; cold freshwater habitat; warm fish migration habitat; cold fish migration habitat; warm and cold spawning habitat; wildlife habitat; navigation; rare, threatened, or endangered species habitat; groundwater recharge; and freshwater replenishment.
 - b. **Bay-Delta Plan.** The *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* (Bay-Delta Plan) was adopted in May 1995 by the State Water Board superseding the 1991 Bay-Delta Plan. The

Bay-Delta Plan identifies the beneficial uses of the estuary and includes objectives for flow, salinity, and endangered species protection.

The State Water Board adopted Decision 1641 (D-1641) on 29 December 1999, and revised on 15 March 2000. D-1641 implements flow objectives for the Bay-Delta Estuary, approves a petition to change points of diversion of the Central Valley Project and the State Water Project in the Southern Delta, and approves a petition to change places of use and purposes of use of the Central Valley Project. The requirements within this Order are consistent with the Bay-Delta Plan.

- c. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain federal water quality criteria for priority pollutants.
- d. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005, that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

Section 5.3 of the SIP authorizes the Central Valley Water Board, after compliance with CEQA, to allow certain Dischargers short-term or seasonal exceptions from meeting priority pollutant criteria and objectives. This General Order authorizes a categorical exception to priority pollutant criteria and objectives for Dischargers who submit the appropriate information required by the SIP as required in the Notice of Intent (see Attachment J).

- e. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
- f. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a

reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

- g. Domestic Water Quality.** In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
- h. Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

D. Other Plans, Policies and Regulations

- a. Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on 7 January 1971, and amended this plan on 18 September 1975. This plan contains temperature objectives for surface waters that are applicable within the Sacramento-San Joaquin Delta. For elevated temperature waste discharges within the Sacramento-San Joaquin Delta, effluent and receiving water temperature requirements are applicable and will be specified in the Notice of Applicability.

VI. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., §1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to federal regulations, 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that *“are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.”* Federal regulations, 40 C.F.R. section 122.44(d)(1)(vi), further provide that *“[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”*

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements

in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include WQBEL's to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan for the Sacramento and San Joaquin River Basins at page IV-17.00 and the Basin Plan for the Tulare Lake Basin at page IV-21, contain implementation policies, "Policy for Application of Water Quality Objectives" and "Application of Water Quality Objectives", respectively, that specify that the Central Valley Water Board *"will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives."* This Policy complies with 40 C.F.R. section 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board's "Policy for Application of Water Quality Objectives")(40 C.F.R. § 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plans include numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: *"All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life."* (narrative toxicity objective) The Basin Plans state that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, *"...water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)"* in Title 22 of CCR. The Basin Plans further state that to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCL's. The narrative tastes and odors objective states: *"Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."*

A. Discharge Prohibitions

- 1. Prohibition IV.A (No discharge or application of waste other than that described in this General Order).** This prohibition is based on Water Code section 13260 that requires filing of a report of waste discharge (ROWD) before discharges can occur. Dischargers seeking authorization to discharge under this General Order are required to submit a ROWD as part of the Notice of Intent for the discharges described in this General Order; therefore, discharge of wastes, other than those described in section I.A and meeting the eligibility criteria in sections II.C.1, 2, and 3, of this General Order are prohibited.
- 2. Prohibition IV.B (No bypasses or overflow of untreated wastewater, except under the conditions at 40 C.F.R. section 122.41(m)(4)).** As stated in section I.G of Attachment B, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal regulations, 40 C.F.R. section 122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites

the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

3. **Prohibition IV.C (No controllable condition shall create a nuisance).** This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. Active hard rock mines with discharges authorized by this General Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards (ELG's) for the Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory of the Ore Mining and Dressing Point Source Category in 40 C.F.R. part 440, subpart J and/or Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop ELG's representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of BPJ to derive technology-based effluent limitations on a case-by-case basis where ELG's are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Central Valley Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

a. Technology-Based Effluent Limitations for Biochemical Oxygen Demand, Total Suspended Solids, and Settleable Solids

The types of discharges authorized by this General Order are described in sections II and III of this Fact Sheet. These types of discharges are considered relatively pollutant-free and pose a low or limited threat to water quality. Based on available effluent data from the limited threat discharges authorized by this General Order, the Central Valley Water Board has established technology-based effluent limitations for biochemical oxygen demand (BOD), total suspended solids (TSS), and settleable solids based on BPJ, as follows.

Table D-2. Technology-Based Effluent Limitations for Biochemical Oxygen Demand, Total Suspended Solids, and Settleable Solids

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	20
Total Suspended Solids	mg/L	10	20
Settleable Solids	mL/L	--	0.1

b. Technology-Based Effluent Limitations for Remediation Sites

Since this General Order regulates the discharge of wastewater that may be impacted by toxic organic constituents, VOC's, pesticides, inorganic constituents and other regulated chemical constituents, various types of treatment systems could be employed to remove these pollutants in wastewater to meet applicable permit limits. For example, air stripping, carbon absorption, or chemical oxidation treatment systems could be used to remove VOC's in groundwater. Reverse osmosis, ion exchange, or pH adjustment could be used as treatment technologies to remove metals. Biological systems could be used to degrade or remove conventional pollutants and semi-volatile organic compounds.

Technology-based effluent limitations for remediation of VOC's with proven technology have been included in this General Order, as shown in Table D-3. These effluent limitations reflect the expected performance of existing treatment technologies. However, with the potential diversity of limited threat discharges and the uncertainty regarding the specific constituents of concern to be regulated, this General Order does not establish technology-based effluent limitations based on the performance of non-proven treatment technologies that may be used at specific remediation projects. According to 40 C.F.R. section 122.44(k), best management practices (BMP's), can be required in lieu of technology-based effluent limitations when numeric effluent limitations are infeasible. Therefore, based on BPJ, BMP's will serve as the equivalent of technology-based effluent limitations, in order to carry out the purposes and intent of the CWA. Each Discharger of limited threat discharges is required to develop and implement BMPs that establish site-specific plans and procedures that will ensure proper operation and maintenance, prevent the addition of chemicals or other substances from being introduced into the wastewater, and prevent the addition of pollutants from other non-permitted process waters, spills, or other sources of pollutants at the facilities.

Water quality based effluent limitations may also be required for the constituents in Table D-3. The more stringent of the water quality-based effluent limitations and the technology-based effluent limitations will be established in the NOA.

Table D-3. Technology-based Effluent Limitations for Remediation Sites

Parameter	Units	Maximum Daily Effluent Limitations
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.5
Methylene Chloride	µg/L	0.5
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Stoddard Solvent	µg/L	0.5
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

c. Technology-Based Effluent Limitations for Active Hard Rock Mines

ELG's for discharges from mines that produce copper, lead, zinc, gold, silver, or molybdenum bearing ores, or any combination of these ores from open-pit or

underground operations other than placer deposits have been promulgated at 40 C.F.R. part 440, subpart J. 40 C.F.R. sections 440.102(a) and 440.103(a) established technology-based effluent limitations representing BPT and BAT, respectively, for pollutants discharged in mine drainage as follows:

Table D-4. Technology-based Effluent Limitations for Active Hard Rock Mines

Parameter		Units	Effluent Limitations			
			Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH		standard units	--	--	6.0	9.0
Total Suspended Solids		mg/L	20	30	--	--
Cadmium, Total Recoverable		µg/L	50	100	--	--
Copper, Total Recoverable		µg/L	150	300	--	--
Lead, Total Recoverable		µg/L	300	600	--	--
Mercury, Total Recoverable		µg/L	1.0	2.0	--	--
Zinc, Total Recoverable		µg/L	750	1,500	--	--

Water quality-based effluent limitations may also be required for the constituents in Table D-4. The more stringent of the water quality-based effluent limitations and the technology-based effluent limitations will be established in the NOA.

d. Technology-Based Effluent Limitations for Petroleum Fuel Pollution Remediation Projects

The primary constituents of concern with petroleum products are total petroleum hydrocarbons in the gasoline, diesel, and heavier ranges, and may include jet fuel, motor oil, kerosene, and other fuel oils; benzene; toluene; ethylbenzene; xylene; and methyl tertiary butyl ether. In addition, other oxygenates and additives such as methanol, tertiary butyl alcohol, di-isopropyl ether, ethyl tertiary butyl ether, and tertiary amyl methyl ether may also be found in groundwater from cleanup of petroleum fuel pollution. Existing wastewater treatment technology, primarily utilizing air stripping and/or activated carbon, is capable of dependably removing these constituents to concentrations that are generally non-detectable by current analytical technology.

Order R5-2013-0075 established technology-based effluent limitations for a number of pollutants based on the analytical capability at that time (as represented by the analytical method reporting level). This Order also establishes technology-based effluent limitations based on the current reporting levels for the pollutants of concern.

Table D-5. Technology-Based Effluent Limitations for Petroleum Fuel Pollution Remediation Projects

Parameter	Units	Maximum Daily Effluent Limitation
Benzene	µg/L	0.5
Di-isopropyl Ether	µg/L	5.0
Ethylbenzene	µg/L	0.5
Ethylene Dibromide	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5
Ethyl Tertiary Butyl Ether	µg/L	5.0
Methanol	µg/L	20
Methyl Tertiary Butyl Ether	µg/L	1.0
Naphthalene	µg/L	5.0

Parameter	Units	Maximum Daily Effluent Limitation
Tertiary Amyl Methyl Ether	µg/L	1.0
Tertiary Butyl Alcohol	µg/L	10
Toluene	µg/L	0.5
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	50
Xylene ¹	µg/L	0.5

¹ Applies to the sum of o-xylene, m-xylene, and p-xylene.

C. Water Quality-Based Effluent Limitations (WQBEL's)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBEL's must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBEL's when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plans, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plans designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plans. In addition, the Basin Plans implement State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan for the Sacramento and San Joaquin River Basins on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*" and with respect to disposal of wastewaters states that "*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*" The Basin Plan for the Tulare Lake Basin on page II-1 states: "*Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality objectives, the*

Regional Water Board must consider past, present, and probable future beneficial uses of water.” and with respect to disposal of wastewaters states that “...use of waters for disposal of wastewaters is not included as a beneficial use...and are subject to regulation as activities that may harm protected uses.”

The federal CWA section 101(a)(2), states: “*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*” Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 C.F.R. sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 C.F.R. section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

- a. **Receiving Water and Beneficial Uses.** The limited threat discharges described in this Order may potentially discharge to any surface water in the Central Valley. Refer to IV.C.1 above for a complete listing of the receiving water beneficial uses. This Order contains both effluent limitations based on the municipal and domestic supply beneficial use and effluent limitations when the municipal and domestic supply beneficial use does not apply.
- b. **Effluent Data.** Specific monitoring data is not available to establish effluent limitations that would apply to all potential Dischargers seeking coverage under this General Order. This General Order requires Dischargers seeking authorization to discharge under this General Order to provide analysis of the proposed effluent. As described below, based on these analyses, the Central Valley Water Board will conduct an RPA in accordance with section 1.3, Step 7 of the SIP by comparing the results to the screening levels contained in Attachment I of this General Order. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Central Valley Water Board may use the SIP as guidance for water quality-based toxics control.¹ The SIP states in the introduction “*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency.*” Therefore, in this General Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents.

¹ See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

- c. Assimilative Capacity/Mixing Zone.** The effluent limitations for discharges covered by this General Order are calculated assuming no dilution. In most instances, it is assumed that discharges from these operations do not flow directly into a receiving water with significant volume to consider dilution credit or to allocate a mixing zone. Many creeks and streams in the Central Valley are dry during the summer months. Therefore, for many months of the year, these discharges may represent all or nearly all of the flow in some portions of the receiving creeks or streams. Because this General Order is intended to serve as a general order and covers discharges to all surface waters in the Central Valley, the effluent limitations established pursuant to this General Order are established to achieve the most protective water quality objective for the surface water beneficial uses in the Central Valley. Therefore, it is assumed there is no assimilative capacity and no dilution credits have been granted.

An exception to this assumption may be applied based on the demonstration of a mixing zone in accordance with section 1.4.2 of the SIP and an approved mixing zone study demonstrating compliance with water quality objectives in the receiving water as prescribed in the Basin Plans. This exception process is more appropriate for an individual order, and would not be appropriate for a general order, that should be protective of most stringent water quality objectives and beneficial uses. If a Discharger requests that a dilution credit be included in the computation of an effluent limitation or that a mixing zone be allowed, an individual order will be required. However, if no mixing zone is proposed, this General Order provides coverage for all discharges to receiving waters in the Central Valley Region.

- d. Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc which are presented in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total recoverable criteria.
- e. Hardness-Dependent CTR Metals Criteria.** The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc. While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, effluent limitations for the hardness-dependent metals.

This General Order has established the criteria for hardness-dependent metals based on the hardness of the receiving water (actual ambient hardness) as required by the SIP¹ and the CTR². The SIP and the CTR require the use of “receiving water” or “actual ambient” hardness, respectively, to determine effluent limitations for these metals. The CTR requires that the hardness values used shall be consistent with the design discharge conditions for design flows and mixing zones³. The CTR does not define the term “ambient,” as applied in the regulations. Therefore, the Central Valley Water Board has considerable discretion to consider upstream and

¹ The SIP does not address how to determine the hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water.

² The CTR requires that, for waters with a hardness of 400 mg/L (as CaCO₃), or less, the actual ambient hardness of the surface water must be used (40 C.F.R. § 131.38(c)(4)).

³ 40 C.F.R. §131.3(c)(4)(ii)

downstream ambient conditions when establishing the appropriate water quality criteria that fully complies with the CTR and SIP.

The State Water Board provided direction regarding the selection of hardness in two precedential water quality orders; WQO 2008-0008 for the City of Davis Wastewater Treatment Plant (Davis Order) and WQO 2004-0013 for the Yuba City Wastewater Treatment Plant (Yuba City Order). The State Water Board recognized that the SIP and the CTR do not discuss the manner in which hardness is to be ascertained, thus regional water boards have considerable discretion in determining ambient hardness so long as the selected value is protective of water quality criteria under the given flow conditions. (Davis Order, p.10). The State Water Board explained that it is necessary that, *"The [hardness] value selected should provide protection for all times of discharge under varying hardness conditions."* (Yuba City Order, p. 8). The Davis Order also provides that, *"Regardless of the hardness used, the resulting limits must always be protective of water quality criteria under all flow conditions."* (Davis Order, p. 11)

The equation describing the total recoverable regulatory criterion, as established in the CTR, is as follows:

$$\text{CTR Criterion} = \text{WER} \times (e^{m[\ln(H)]+b}) \quad (\text{Equation 1})$$

Where:

H = ambient hardness (as CaCO₃)¹

WER = water-effect ratio

m, b = metal- and criterion-specific constants

The direction in the CTR regarding hardness selection is that it must be based on ambient hardness and consistent with design discharge conditions for design flows and mixing zones. Consistent with design discharge conditions and design flows means that the selected "design" hardness must result in effluent limitations under design discharge conditions that do not result in more than one exceedance of the applicable criteria in a three year period.² Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. Effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Use of the lowest observed ambient hardness is protective of aquatic life beneficial uses.

Ambient hardness may be variable. Because of the variation, there is no single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum, mid-point). While the hardness selected must be the hardness of the ambient receiving water, selection of an ambient receiving water hardness that is too high would result in effluent limitations that do not protect beneficial uses. Also, the use of minimum ambient hardness would result in criteria that may not be representative considering the wide range of ambient conditions.

This General Order includes effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and zinc which are dependent on water hardness. The CTR expresses the objectives for these metals through equations where the hardness of the receiving water is a variable. To simplify the permitting process for this General Order, it was necessary that fixed hardness values be used in these equations.

¹ For this discussion, all hardness values are expressed in mg/L as CaCO₃.

² 40 C.F.R. §131.38(c)(2)(iii) Table 4, notes 1 and 2

This General Order requires Dischargers to analyze the effluent for hardness. The Discharger shall submit the analytical results with the Notice of Intent. Upon approval of the Executive Officer, these hardness values will be used to determine the effluent limitations from the appropriate table of limits (see section V.A.1.g, Tables 6A through 6G) of this General Order. Tables 6A through 6G contain effluent limitations for cadmium, chromium III, copper, lead, nickel, silver, and zinc with ranges of hardness between 0 mg/L and 400 mg/L.

3. Determining the Need for WQBEL's

- a. **All Limited Threat Discharges.** Effluent limitations must be established for discharges that have the reasonable potential to exceed water quality standards. Since this is a General Order for all limited threat discharges to surface waters in the Central Valley of California, specific data are not available to establish generic effluent limitations. Therefore, screening levels are established in Attachment I of this General Order for pollutants, constituents, and parameters, and are based on the most protective water quality criteria, including CTR criteria and MCL's. The Discharger is required to analyze a representative sample of the discharge as specified in Table I-1 of Attachment I. If the analytical data demonstrate that constituent concentrations in the discharge exceed the screening levels also listed in Attachment I of this General Order, the discharge will be enrolled under Tier 2 and treatment will be required. The respective effluent limitations, as calculated in section V.A.1 below, shall be applicable to the discharge, as specified in the Notice of Applicability (NOA) from the Executive Officer. If the analytical data demonstrate that constituent concentrations in the discharge are below the screening levels listed in Attachment I of this General Order, the discharge will be authorized for coverage under Tier 1 of this General Order and water quality-based effluent limitations will not be applicable to the discharge. Hard rock mines will be enrolled under Tier 3 of this General Order and treatment and water quality-based effluent limitations will be applied as necessary.
- b. **Priority Pollutants.** Most priority pollutants have applicable CTR criteria or maximum contaminant levels (MCL's) and therefore, water quality limits have been developed. The Notice of Applicability (NOA) will specify whether the effluent limitations apply for a specific discharger. Several priority pollutants do not have applicable CTR criteria or maximum contaminant levels (MCL's). However, water quality limits have been developed to interpret narrative Basin Plan objectives for several of these pollutants which include chloroethane, methyl chloride, 2-nitrophenol, 4-nitrophenol, 3-methyl-4-chlorophenol, 4-bromophenyl phenyl ether, 2,6-dinitrotoluene, naphthalene, and delta-BHC. Analysis of dilution, proximity of downstream diversions, and other factors is required in order to determine the applicability of interpreting the narrative objective for these pollutants based on water quality limits. This type of analysis is beyond the scope of this General Order. In addition to these pollutants, several priority pollutants have no CTR criteria, MCL's, or alternative water quality limits to interpret narrative Basin Plan objectives. These pollutants include 2-chloroethylvinyl ether, acenaphthylene, benzo(ghi)perylene, bis(2-chloroethoxy)methane, 4-chlorophenyl phenyl ether, di-n-octyl phthalate, and phenanthrene. Results of effluent sampling for priority pollutants, including those that do not have applicable water quality criteria, is required in Attachment C. If detectable concentrations of these pollutants are present in the discharge, additional effluent and ambient receiving water monitoring may be established, as specified in the Notice of Applicability from the Executive Officer. The additional monitoring would be used to determine if the discharge is adversely impacting a beneficial use (i.e.,

violating Receiving Water Limitations in section VIII.A). If the discharge is found to be adversely affecting beneficial uses, the Central Valley Water Board would take the appropriate enforcement actions, terminate coverage for the discharge under this General Order, and/or take other actions to resolve the violation.

- c. Constituents with Numeric Water Quality Objectives.** The Basin Plans contain numeric water quality objectives. Some objectives apply to all waterbodies within the applicable basins, whereas others apply only to certain waterbodies. This General Order requires effluent sampling for those Priority Pollutant constituents with applicable numeric water quality objectives in the Basin Plans. If the analytical data demonstrate that constituent concentrations in the discharge exceed an applicable numeric water quality objective from the Basin Plan, treatment will be required and an effluent limitation shall be applied, as specified in the Notice of Applicability (NOA) from the Executive Officer.
- d. Aluminum.** Aluminum is the third most abundant element in the earth's crust and is ubiquitous in both soils and aquatic sediments. When mobilized in surface waters, aluminum has been shown to be toxic to various fish species. However, the potential for aluminum toxicity in surface waters is directly related to the chemical form of aluminum present, and the chemical form is highly dependent on water quality characteristics that ultimately determine the mechanism of aluminum toxicity. Surface water characteristics, including pH, temperature, colloidal material, fluoride and sulfate concentrations, and total organic carbon, all influence aluminum speciation and its subsequent bioavailability to aquatic life. Calcium [hardness] concentrations in surface water may also reduce aluminum toxicity by competing with monomeric aluminum (Al^{3+}) binding to negatively charged fish gills.

State of California Department of Public Health (DPH) has established Secondary Maximum Contaminant Levels (MCLs) to assist public drinking water systems in managing their drinking water for aesthetic conditions such as taste, color, and odor. The Secondary MCL for aluminum is 200 $\mu g/L$ for protection of the MUN beneficial use. Title 22 requires compliance with Secondary MCLs on an annual average basis.

The Code of Federal Regulations promulgated criteria for priority toxic pollutants for California's surface waters as part of section 131.38 Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (California Toxics Rule or CTR), including metals criteria. However, aluminum criteria were not promulgated as part of the CTR. Absent numeric aquatic life criteria for aluminum, WQBEL's in the Central Valley Region's NPDES permits are based on the Basin Plans' narrative toxicity objective. The Basin Plans' *Policy for Application of Water Quality Objectives* requires the Central Valley Water Board to consider, "on a case-by-case basis, direct evidence of beneficial use impacts, all material and relevant information submitted by the discharger and other interested parties, and relevant numerical criteria and guidelines developed and/or published by other agencies and organizations. In considering such criteria, the Board evaluates whether the specific numerical criteria which are available through these sources and through other information supplied to the Board, are relevant and appropriate to the situation at hand and, therefore, should be used in determining compliance with the narrative objective." Relevant information includes, but is not limited to (1) USEPA Ambient Water Quality Criteria (NAWQC) and subsequent Correction, (2) site-specific conditions of Auburn Ravine, the receiving water, and (3) site-specific aluminum studies conducted by dischargers within the Central Valley Region, which includes the City of Auburn WWTP and

Auburn Ravine. (Sacramento River Basin and San Joaquin Basin Plan, p. IV.17.00; see also, 40 CFR 122.44(d)(vi).)

USEPA recommended the NAWQC aluminum acute criterion at 750 µg/L based on test waters with a pH of 6.5 to 9.0. USEPA also recommended the NAWQC aluminum chronic criterion at 87 µg/L based upon toxicity tests. All test waters contained hardness at 12 mg/L as CaCO₃.

This General Order contains screening levels for aluminum of 200 µg/L when the MUN beneficial use is applicable or 750 µg/L when the MUN beneficial use is not applicable. This Order also contains effluent limitations for aluminum based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of aluminum above the screening levels and the discharge is planned for more than one year, the Notice of Applicability may include aluminum effluent limitations and a requirement for treatment of aluminum.

- e. **Ammonia.** Untreated domestic wastewater contains ammonia in concentrations that, without treatment, would be harmful to fish and would violate the Basin Plan narrative toxicity objective if discharged to the receiving water. To be authorized by this General Order, all Dischargers of limited threat discharges to surface waters and surface water drainage courses must demonstrate that the wastewater to be discharged does not contain human sewage and does not contain a screening level of ammonia exceeding 0.025 mg/L (as N). Consequently, the Central Valley Water Board finds the limited threat discharges, in the Sacramento and San Joaquin River Basins, authorized by this General Order will not exhibit reasonable potential to cause or contribute to an exceedance of the narrative toxicity objective for ammonia, and this Order does not include effluent limitations for ammonia.

This General Order includes receiving water limitations for unionized ammonia such that un-ionized ammonia shall not be present in amounts that adversely affect beneficial uses for all waterbodies, nor to be present in excess of 0.025 mg/L (as N) in waterbodies in the Tulare Lake Basin.

This General Order includes sampling requirements for ammonia in Attachment C. If the analytical test results of the wastewater indicate significant concentrations of ammonia in the discharge, the Discharger will not be enrolled under this General Order and will be required to submit an ROWD for an individual NPDES permit.

- f. **Iron.** The Secondary MCL – Consumer Acceptance Limit for iron is 300 µg/L (dissolved), which is used to implement the Basin Plan's chemical constituent objective for the protection of the municipal and domestic supply beneficial use.

This General Order contains a screening level for iron of 300 µg/L when the MUN beneficial use is applicable and no screening level when the MUN beneficial use is not applicable. This Order also contains an effluent limitation for iron based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of iron above the screening level and the discharge is planned for more than one year, the Notice of Applicability may include an iron effluent limitation and a requirement for treatment of iron. If sufficient data is available, the RPA for iron will be evaluated based on an annual average.

- g. **Manganese.** The Secondary MCL – Consumer Acceptance Limit for manganese is 50 µg/L (dissolved), which is used to implement the Basin Plan's chemical constituent objective for the protection of municipal and domestic supply.

This General Order contains screening levels for manganese of 50 µg/L when the MUN beneficial use is applicable and no screening level when the MUN beneficial

use is not applicable. This Order also contains effluent limitations for manganese based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of manganese above the screening level and the discharge is planned for more than one year, the Notice of Applicability may include a manganese effluent limitation and a requirement for treatment of manganese. If sufficient data is available, the RPA for manganese will be evaluated based on an annual average.

- h. Metals, Hardness-Dependent.** The California Toxics Rule (CTR) includes hardness-dependent criteria for the protection of freshwater aquatic life for cadmium, chromium III, copper, lead, nickel, silver, and zinc. See the discussion regarding hardness, above.

This General Order contains screening levels for hardness-dependent metals (see Attachment I, section II.C). This Order also contains effluent limitations for hardness-dependent metals based on the criteria discussed above (see section V.A.1.g Tables 6A through 6G of this Order). Based on the monitoring requirements, if the proposed discharge contains concentrations of hardness-dependent metals above the screening levels, the Notice of Applicability may include effluent limitations for hardness-dependent metals and a requirement for treatment.

- i. Nitrate, Nitrite, and Nitrate plus Nitrite.** The State Water Board, Division of Drinking Water (DDW) has adopted a Primary MCL for the protection of human health for nitrate equal to 10 mg/L (measured as nitrogen). U.S. EPA has developed Drinking Water Standards (10 mg/L as Primary MCL) and National Ambient Water Quality Criteria (NAWQC) for protection of human health (10 mg/L for non-cancer health effects) for nitrate. The DDW has adopted a Primary MCL for the protection of human health for nitrite equal to 1 mg/L (measured as nitrogen). DDW has also adopted a Primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen. USEPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen).

Treated groundwater and other types of limited threat wastewaters covered by this Order may contain concentrations of nitrate plus nitrite that exceed the Primary MCL for nitrate plus nitrite.

This General Order contains a screening level for nitrate plus nitrite of 10 mg/L when the MUN beneficial use is applicable and no screening level when the MUN beneficial use is not applicable. This Order also contains an effluent limitation for nitrate plus nitrite based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of nitrate plus nitrite above the screening level, the Notice of Applicability may include a nitrate plus nitrite effluent limitation and a requirement for treatment.

- j. pH.** The Sacramento and San Joaquin River Basin Plan and the Tulare Lake Basin Plan contain the following pH water quality objectives:
- i. The pH of all discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.
 - ii. The pH of all discharges to Goose Lake in Modoc County shall at all times be within the range of 7.5 and 9.5.
 - iii. The pH of all discharges within the Tulare Lake Basin shall at all times be within the range of 6.5 and 8.3.

This General Order contains screening levels for pH and effluent limitations for pH based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains pH outside the screening levels, the Notice of Applicability will include a requirement for treatment of pH.

- k. **Pesticides.** The Sacramento and San Joaquin River Basin Plan and the Tulare Lake Basin Plan contain the following water quality objectives for pesticides:
- i. Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the discharge at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer for the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for the Tulare Lake Basin.
 - ii. Thiobencarb shall not be discharged in excess of 1.0 µg/L for the Sacramento and San Joaquin River Basins.
 - iii. For other pesticides not listed here, see the Pesticide Water Quality Objective in the Basin Plan.

This General Order contains screening levels for pesticides and effluent limitations for pesticides based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains pesticide concentrations above the effluent limitations, the Notice of Applicability may include pesticide effluent limitations and a requirement for treatment of pesticides.

- l. **Salinity.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, and chloride. The USEPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no USEPA water quality criteria for the protection of aquatic life for electrical conductivity, total dissolved solids, and sulfate. Additionally, there are no USEPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan Amendment that will establish a salt and nitrate Management Plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objective is to be interpreted for the protection of agricultural use. All studies conducted through this Order to establish an agricultural limit to implement the narrative objective will be reviewed by and consistent with the efforts currently underway by CV-SALTS.
- i. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.
 - ii. **Electrical Conductivity.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal, that is used as a screening level, is 700 µmhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United

Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 µmhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. These crops are either currently grown in the area or may be grown in the future. Most other crops can tolerate higher EC concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

- iii. **Sulfate.** The Secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.
- iv. **Total Dissolved Solids.** The Secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum.

Limited Threat General Order R5-2013-0073-01 contained screening levels and effluent limitations for electrical conductivity. The screening level was 700 µmhos/cm. The effluent limitations were for groundwater remediation projects only and were 700 µmhos/cm, with the beneficial use of Agricultural Irrigation, and 900 µmhos/cm, without the beneficial use of Agricultural Irrigation. Both effluent limitations were applied as monthly averages to discharges from groundwater cleanup sites only. This General Order contains a screening level for electrical conductivity of 900 µmhos/cm. Based on the monitoring requirements, if the proposed discharge contains concentrations of electrical greater than 900 µmhos/cm, flows are greater than or equal to 0.25 MGD, and continuous discharge duration is 180 days or longer, the Discharger must submit a Salinity Evaluation and Minimization Plan to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the Discharger will minimize any increase in effluent salinity as the result of treatment of the wastewater, if applicable. Under limited circumstances the Executive Officer may waive this requirement in the NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.

The salinity of all discharges within the Sacramento and San Joaquin River Basins and within the Tulare Lake Basin shall not exceed any applicable TMDLs, Delta standards, or Basin Plan water quality objectives or numeric limits. Effluent limitations shall be established on a water-body-specific basis, as applicable and shall be as electrical conductivity (EC), total dissolved solids (TDS), and/or chloride. Anti-backsliding issues are discussed below in section VI.D.3 of this Fact Sheet.

- m. **Total Residual Chlorine.** USEPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.

This General Order does not contain screening levels for chlorine residual. However, this Order does contain effluent limitations for residual chlorine based on the criteria discussed above. Based on the monitoring requirements, if the proposed discharge contains concentrations of chlorine residual above the effluent limitations, the Notice of Applicability will include total residual chlorine effluent limitations and a requirement for treatment.

The San Francisco Bay Regional Water Quality Control Board (San Francisco Water Board) included a reporting level (RL) of 0.08 mg/L to determine compliance with the effluent limitations contained in the *General Order for Discharges from Surface Water Treatment Facilities for Potable Supply* (Order R2-2003-0062, NPDES No. CAG382001). The RL of 0.08 mg/L represents a level that handheld field meters are capable of achieving. The Central Valley Water Board concurs with the approach used by the San Francisco Water Board. Therefore, this General Order requires dischargers to utilize a method capable of achieving a RL of 0.08 mg/L, consistent with the RL required by the San Francisco Water Board, until the State Water Board adopts a statewide policy with a specified RL achievable in the field and laboratory. A reopener has been included that will allow the Central Valley Water Board to reopen this General Order if a statewide policy for total residual chlorine takes effect during the term of the permit, to allow the Central Valley Water Board to make modifications consistent with the statewide policy.

- n. **Limited Threat Discharges to Specific Waterbodies.** The Basin Plans establish specific water quality criteria for discharges to specific watersheds/reaches and are included as screening levels in Attachment I, section III. If the discharge is within an applicable watershed/reach included in Attachment I, section III, the Discharger is required to analyze a representative sample of the discharge for the applicable pollutants. The screening levels contained in Attachment I, section III supersede those contained in Attachment I, section II for respective parameters applicable to the discharge. If the analytical data demonstrate that constituent concentrations in the discharge exceed the water quality screening levels listed in Attachment I, section III, treatment will be required and the respective effluent limitations shall apply in addition to applicable effluent limitations established due to exceedances of the screening levels for additional parameters contained in Attachment I, section II, as specified in the Notice of Applicability from the Executive Officer.
- o. **Temperature.** For elevated temperature waste discharges within the Sacramento-San Joaquin Delta the Thermal Plan requirements are applicable. The Thermal Plan requires that, "*The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.*" If applicable, an effluent limit for temperature will be specified in the NOA.
- p. **Petroleum Constituents.** Discharges of groundwater from cleanup of petroleum fuel pollution has a reasonable potential to cause or contribute to an in-stream excursion above water quality objectives for petroleum products, specifically, benzene, ethylbenzene, ethylene dibromide, 1,2-Dichloroethane, methanol, methyl tertiary butyl ether, naphthalene, carcinogenic PAHs, toluene, total petroleum hydrocarbons, and xylene. In order to protect the receiving water when discharging groundwater from cleanup of petroleum fuel pollution, this Order contains water quality-based effluent limitations or technology-based effluent limitations for these constituents, whichever are more stringent. The applicable water quality-based effluent limitations for the abovementioned petroleum products are discussed below.
 - (i) **Benzene.** The California Division of Drinking Water Primary MCL for benzene is 1 µg/L and the CTR contains a human health criterion of 1.2 µg/L based on the consumption of water and organisms. WQBEL's based on the primary MCL are an AMEL and MDEL of 1 µg/L and 2 µg/L, respectively. WQBEL's are not included in this Order for benzene because the applicable technology-based effluent limitation is more stringent. Order R5-2013-0075 established effluent limitations for benzene of 0.35 µg/L as a daily maximum based on the Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) Cancer

Potency Factor as a Drinking Water Level for benzene. The promulgated primary MCL is the appropriate water quality objective to apply for benzene to protect the MUN beneficial use. This relaxation of effluent limitations complies with antidegradation and antibacksliding requirements (see Section VI.D).

- (ii) **Ethylbenzene.** The USEPA Secondary MCL-Consumer Acceptance Limit for ethylbenzene as a taste and odor threshold is 30 µg/L. The WQBEL's based on the Secondary MCL are an AMEL and MDEL of 47 µg/L and 93 µg/L, respectively. WQBEL's are not included in this Order for ethylbenzene because the applicable technology-based effluent limitation is more stringent.
- (iii) **Ethylene Dibromide (1,2-Dibromomethane).** The California Primary MCL for ethylene dibromide is 0.05 µg/L. For discharges to waterbodies with the MUN beneficial use, an AMEL and an MDEL of 0.05 µg/L and 0.10 µg/L, respectively, have been established in this Order for ethylene dibromide based on protection of the Basin Plans' narrative chemical constituents objective.
- (iv) **Ethylene Dichloride (1,2-Dichloroethane).** The CTR includes a criterion for ethylene dichloride of 0.38 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. For discharges to waterbodies with the MUN beneficial use, an AMEL and an MDEL for ethylene dichloride of 0.38 µg/L and 0.76 µg/L, respectively, are applicable to the discharge. However, as discussed further in section VI.B.2.d of this Fact Sheet, the technology-based effluent limitation of 0.5 µg/L as an MDEL is more stringent than the water quality-based MDEL and is the basis for the final MDEL for ethylene dichloride in this Order.
- (v) **Methanol.** The USEPA Integrated Risk Information System (IRIS) Reference Dose as a Drinking Water Level for methanol is 14,000 µg/L (there are no MCLs or CTR criteria for methanol). As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for methanol because the applicable technology-based effluent limitation is more stringent.
- (vi) **Methyl Tertiary Butyl Ether.** The Secondary MCL-Consumer Acceptance Limit for methyl tertiary butyl ether is 5 µg/L. The WQBELs based on the Secondary MCL are an AMEL and MDEL of 8 µg/L and 16 µg/L, respectively. As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for methyl tertiary butyl ether because the applicable technology-based effluent limitation is more stringent.
- (vii) **Naphthalene.** The California Notification Level for naphthalene is 17 µg/L (there are no MCLs or CTR criteria for naphthalene). The WQBEL's based on the Notification Level are an AMEL and MDEL of 17 µg/L and 34 µg/L, respectively. As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for naphthalene because the applicable technology-based effluent limitation is more stringent.
- (viii) **Polynuclear Aromatic Hydrocarbons.** USEPA has developed recommended Ambient Water Quality Criteria for carcinogenic polynuclear aromatic hydrocarbons (PAHs) based on a one-in-a-million cancer risk estimate for sources of drinking water at 0.0044 µg/L. For discharges to waterbodies with

the MUN beneficial use, an AMEL and an MDEL of 0.0044 µg/L and 0.0088 µg/L, respectively, have been established in this Order for carcinogenic PAHs based on the protection of the MUN beneficial use.

- (ix) **Toluene.** The USEPA Secondary MCL-Consumer Acceptance Limit for toluene as a taste and odor threshold is 40 µg/L. The WQBEL's based on the taste and odor threshold are an AMEL and MDEL of 62 µg/L and 125 µg/L, respectively. As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for toluene because the applicable technology-based effluent limitation is more stringent.
- (x) **Total Petroleum Hydrocarbons (Gasoline and Diesel Ranges).** The USEPA Suggested-No-Adverse-Response-Level (SNARL) for diesel oil is 100 µg/L. The WQBELs based on the SNARL are an AMEL and MDEL of 100 µg/L and 200 µg/L, respectively. As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for total petroleum hydrocarbons because the applicable technology-based effluent limitation is more stringent.
- (xi) **Xylene.** The USEPA Secondary MCL-Consumer Acceptance Limit for xylene as a taste and odor threshold is 20 µg/L. The WQBEL's based on the taste and odor threshold are an AMEL and MDEL of 31 µg/L and 62 µg/L, respectively. As discussed further in section VI.B.2.d of this Fact Sheet, WQBEL's are not included in this Order for xylene because the applicable technology-based limit is more stringent.

Table D-6.WQBELs for Petroleum Constituents

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Benzene	µg/L	1 ³	2 ³
Ethylbenzene	µg/L	47 ³	93 ³
Ethylene Dibromide (1,2-Dibromomethane)	µg/L	0.05	0.10
Ethylene Dichloride (1,2-Dichloroethane)	µg/L	0.38	0.76 ³
Methanol	µg/L	3,500 ³	7,000 ³
Methyl Tertiary Butyl Ether	µg/L	8 ³	16 ³
Naphthalene	µg/L	17 ³	34 ³
Carcinogenic Polynuclear Aromatic Hydrocarbons ¹	µg/L	0.0044	0.0088
Toluene	µg/L	62 ³	125 ³
Total Petroleum Hydrocarbons (Gasoline and Diesel Ranges)	µg/L	100 ³	200 ³
Xylene ²	µg/L	31 ³	62 ³

¹ Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

² Applies to the sum of o-xylene, m-xylene, and p-xylene.

³ More stringent technology-based effluent limitations applied in this Order (see section VI.B.2.d).

4. WQBEL Calculations

- a. This General Order includes WQBEL's for Priority Pollutants, constituents with numeric water quality objectives discharged to specific water bodies, aluminum, ammonia, iron, manganese, nitrate, nitrite, pH, pesticides, and total residual chlorine. The general methodology for calculating WQBEL's based on the different criteria/objectives is described in subsections VI.C.4.b through d of this Attachment, directly below.
- b. **Effluent Concentration Allowance.** For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from Section 1.4 of the SIP:

$$\begin{aligned} ECA &= C + D(C - B) && \text{where } C > B, \text{ and} \\ ECA &= C && \text{where } C \leq B \end{aligned}$$

where:

ECA = effluent concentration allowance
D = dilution credit
C = the priority pollutant criterion/objective
B = the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples. For ECA's based on MCL's, which implement the Basin Plan's chemical constituents objective and are applied as annual averages, an arithmetic mean is also used for B due to the long-term basis of the criteria.

- c. **Aquatic Toxicity Criteria.** WQBEL's based on acute and chronic aquatic toxicity criteria are calculated in accordance with Section 1.4 of the SIP. The ECA's are converted to equivalent long-term averages (i.e. LTA_{acute} and $LTA_{chronic}$) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.
- d. **Human Health Criteria.** WQBEL's based on human health criteria, are also calculated in accordance with Section 1.4 of the SIP. The AMEL is set equal to the ECA and a statistical multiplier was used to calculate the MDEL.

$$\begin{aligned} AMEL &= mult_{AMEL} \left[\min \left(\overbrace{M_A ECA_{acute}, M_C ECA_{chronic}}^{LTA_{acute}} \right) \right] \\ MDEL &= mult_{MDEL} \left[\min \left(\overbrace{M_A ECA_{acute}, M_C ECA_{chronic}}^{LTA_{chronic}} \right) \right] \\ MDEL_{HH} &= \left(\frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH} \end{aligned}$$

where:

$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL

$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL

M_A = statistical multiplier converting acute ECA to LTA_{acute}

M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plans' narrative toxicity objective, this General Order requires each Tier 3 Discharger to conduct whole effluent toxicity testing for acute toxicity and submit the results with the NOI. In addition, Tier 3 Dischargers are required to conduct acute toxicity testing every six months, or as directed in the NOA. This General Order also requires each Tier 1B, Tier 2 and Tier 3 Discharger to conduct whole effluent toxicity testing for chronic toxicity, annually, or as directed in the NOA. Monitoring and Reporting Program (Attachment C, section V) contains the specifications for WET Monitoring and Reporting. This General Order also contains numeric effluent limitations for acute toxicity and a narrative effluent limitation for chronic toxicity. This General Order, in section IX.C.3, requires the Discharger to implement best management practices (BMP's) to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity and to maintain a BMP Plan as described in Attachment C.

- a. **Acute Aquatic Toxicity.** The Basin Plans contain a narrative toxicity objective that states, *"All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life."* (Basin Plan for the Sacramento and San Joaquin River Basins at page III-8.00 and Basin Plan for the Tulare Lake Basin at page III-6) The Basin Plans also state that, *"...effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate..."*.

For priority pollutants, the SIP dictates the procedures for conducting the RPA. Acute toxicity is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Therefore, due to the site-specific conditions of the potential discharges to be covered under this General Order, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, *"State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting authority might also determine that WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's discharging to contact recreational waters)." Acute toxicity effluent limits are required to ensure compliance with the Basin Plan's narrative toxicity objective.*

U.S. EPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, *"In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For*

chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc." Accordingly, effluent limitations for acute toxicity have been included in this General Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay----- 70%
Median for any three consecutive bioassays ----- 90%

Only discharges that do not demonstrate acute toxicity are eligible for this General Order; therefore, there is an assumption that the Tier 1 discharges do not have reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective and the numeric limitations shown above.

Because the Tier 1 discharges authorized by this General Order are low threat discharges, they are not expected to contribute to acute toxicity. Therefore, acute WET testing is not required for Tier 1 discharges in this General Order.

The Tier 3 discharges authorized by this General Order are expected to have the potential to be a threat to water quality. The potential impacts of acute toxicity are based on short-term exposure. Dischargers of Tier 3 discharges are required to conduct acute WET testing every six months or as directed in the NOA, to ensure compliance with the narrative toxicity objective of the Basin Plans.

- b. Chronic Aquatic Toxicity.** The Basin Plans contain a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan for the Sacramento and San Joaquin River Basins at page III-8.00 and Basin Plan for the Tulare Lake Basin at page III-6.) Only discharges that do not demonstrate chronic toxicity are eligible for this General Order; therefore, there is an assumption that the Tier 1A discharges do not have reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective.

The Tier 1A discharges authorized by this General Order do not pose a threat to water quality. Because the Tier 1A discharges authorized by this General Order do not exceed applicable aquatic life water quality criteria, and are low volume and/or short term, they are not expected to contribute to chronic toxicity. Therefore, chronic WET testing is not required for Tier 1A discharges in this General Order.

The Tier 1B, Tier 2, and Tier 3 discharges authorized by this General Order are expected to have the potential to be a threat to water quality. The potential impacts of chronic toxicity are based on long-term exposure. To ensure compliance with the Basin Plan's narrative toxicity objective, Dischargers of Tier 1B, Tier 2, and Tier 3 discharges are required to conduct annual chronic WET testing or as directed by the Executive Officer in the Notice of Applicability. Chronic WET testing shall be conducted as specified in the Monitoring and Reporting Program (Attachment C, section V). Furthermore, the Special Provision contained at section XI.C.2.a of this General Order includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring to determine if a pattern of toxicity is demonstrated. Discharges that cause chronic toxicity in the receiving water are not eligible for coverage under this General Order; therefore, as required in Section XI.C.2.a, if the discharge demonstrates a pattern of toxicity is causing chronic toxicity in the receiving water, the Discharger is required to submit a ROWD for issuance of an individual NPDES permit.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations

40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order does not include effluent limitations expressed in terms of mass pursuant to the exceptions to mass limitations provided in 40 C.F.R. section 122.45(f)(1) because the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCL's) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

However, when a Discharger is granted an intake water credit for a pollutant the effluent limits for that pollutant are based on a no net addition of the pollutant. Therefore, the effluent limits are based on mass (i.e., the pollutant mass in the effluent may not exceed the pollutant mass in the intake water).

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45(d) requires maximum daily and average monthly discharge limitations for all dischargers unless impracticable.

3. Satisfaction of Anti-Backsliding Requirements – Removal of Salinity Effluent Limits

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(l).

All effluent limitations in this Order are at least as stringent as the effluent limitations in previous Order R5-2013-0073-01, except for electrical conductivity. Previous Order R5-2013-0073-01 contained effluent limitations for electrical conductivity of 700 µmhos/cm for groundwater treatment systems only where the agricultural irrigation beneficial use is applicable and 900 µmhos/cm where it is not applicable. This Order contains no effluent limitations for electrical conductivity. However, this Order does require that Dischargers shall submit a Salinity Evaluation and Minimization Plan, within 60 days of initiating a new discharge under this Order, to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity and by which the discharger will minimize any increase in effluent salinity as the result of treatment of the wastewater, if applicable.

CWA section 402(o)(1) and 303(d)(4). CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits “*except in compliance with Section 303(d)(4).*” CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.

- a.** For waters where standards are not attained, CWA section 304(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDL's or WLAs will assure the attainment of such water quality standards.
- b.** For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

Nonattainment Waters. Various water bodies within the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin are considered nonattainment waters for salinity and/or electrical conductivity. The salinity and/or electrical conductivity effluent limitations in previous Order R5-2013-0073-01 were not based on TMDLs or other WLAs. In addition the cumulative effect of eliminating the effluent limits will be negligible as TMDLs or WLAs will assure the attainment of such water quality standards. Thus, removal of the effluent limitations for salinity and/or electrical conductivity from this Order meets the exception in CWA section 303(d)(4)(A).

The salinity of all discharges within the Sacramento and San Joaquin River Basins and within the Tulare Lake Basin shall not exceed any applicable TMDLs, Delta standards, or Basin Plan water quality objectives or numeric limits. Effluent limitations shall be established on a water-body-specific basis, as applicable and shall be as electrical conductivity (EC), total dissolved solids (TDS), and/or chloride.

Attainment Waters. Various water bodies within the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin are considered attainment waters for salinity and/or electrical conductivity because the receiving water is not listed as impaired on the 303(d) list for this constituent.¹ As discussed in section VI.D.5, below, removal of the effluent limits complies with federal and state antidegradation requirements. Thus, removal of the effluent limitations for salinity and/or electrical conductivity from this Order meets the exception in CWA section 303(d)(4)(B).

For the purposes of meeting either of the exceptions above, a receiving water shall be considered an attainment water if the receiving water is not listed as impaired on the 303(d) list for the constituent.²

4. **Satisfaction of Anti-Backsliding Requirements – Effluent Limitation Modifications in the NOA**

If new monitoring results show that a constituent is not detected for a minimum of 1 year, then the Notice of Applicability may be modified to remove or modify the effluent limitation for that constituent in accordance with this General Order and as allowed under CWA section 402(o)(2).

CWA section 402(o)(2). CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The Notice of Applicability may remove or relax effluent limitations where the removal or relaxation complies with any of these exceptions.

One of these exceptions, CWA 402(o)(2)(B)(i), allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Updated information

¹ “The exceptions in Section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list.” State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility.

² “The exceptions in Section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list.” State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility.

that may be used to satisfy this exception include updated effluent and receiving water monitoring data collected subsequent to the issue date of the NOA that indicates that the discharge no longer exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives/criteria.

5. Satisfaction of Anti-Backsliding Requirements – Effluent Limitations for Petroleum Constituents

The effluent limitations for benzene in this Order for discharges from petroleum fuel pollution cleanup projects are less stringent than in previous General Order R5-2013-0075 for petroleum fuel pollution groundwater cleanup projects. The relaxation of effluent limitations complies with federal antibacksliding regulations as discussed below.

CWA section 402(o)(1) and 303(d)(4). CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits “except in compliance with Section 303(d)(4).” For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy. All waterbodies in the Central Valley Region are in attainment for benzene. As discuss in Section VI.D.6, below, the relaxation of effluent limitations for benzene complies with the antidegradation requirements. Therefore, the exception to backsliding under CWA 303(d)(4)(B) is applicable.

6. Antidegradation Policies

The permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Due to the expected short-term duration, low volume, and/or low threat nature of the wastewater regulated under this General Order, the impact on existing water quality will be insignificant. This Order requires monitoring of all wastewater proposed for discharge prior to allowing the discharge. This Order requires all wastewater that requires treatment to be monitored before discharge is allowed. This Order requires all Tier 1B, Tier 2, and Tier 3 dischargers to conduct chronic toxicity testing. This Order requires all Tier 2 and Tier 3 dischargers to conduct acute toxicity testing and to develop and implement Best Management Practices in order to prevent the generation and potential release of pollutants to receiving waters. If, however, the Central Valley Water Board, subsequent to review of any application, finds that the impact of a discharge will not be insignificant, then authorization for coverage under this General Order will be denied and coverage under an individual permit will be required (including preparation of an anti-degradation analysis).

Some permanent changes to the wastewater flow rate, characteristics, and/or treatment system can be covered by revisions to the Notice of Applicability by the Executive Officer.

Upon receipt of notification from the Discharger regarding changes to the discharge (e.g. submittal of a modified NOI to the Executive Officer), including applicable laboratory analyses, the Executive Officer may issue a revised Notice of Applicability for discharges that continue to qualify for this Order. Revisions to the NOA may include new effluent limitations, removal of effluent limitations, changes to discharge flow rates, and addition or removal of discharge locations. Discharges may continue during this process. When notified by the Executive Officer that an antidegradation analysis is necessary and/or a discharge no longer qualifies for this Order, the Discharger must apply for an individual NPDES permit.

This General Order allows updated NOAs to remove existing effluent limitations for constituents in which updated monitoring data demonstrate that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water. The Central Valley Water Board finds that the modification of the NOA for removal of effluent limitations will not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

This General Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Some Dischargers may be granted an intake water credit to account for pollutants in the intake water. Implementation of an intake water credit in accordance with the SIP allows a Discharger to discharge a mass and concentration of the intake water pollutants that is no greater than the mass and concentration found in the facility's intake water. If a Discharger adds mass of a pollutant to its waste stream, an equal or greater mass must be removed prior to discharge, resulting in no net addition of the pollutant in the discharge compared to the intake water.

Effluent Limitations for Petroleum Constituents. As discussed in Section VI.D.5, the effluent limitations for benzene in this Order for discharges from petroleum fuel pollution cleanup projects are less stringent than in previous General Order R5-2013-0075 for petroleum fuel pollution groundwater cleanup projects. The change in benzene effluent limits will not result in an increased discharge of benzene. The effluent limits for the primary constituents of concern for petroleum fuel pollution groundwater cleanup projects, such as MTBE and 1,2-Dichloromethane, are carried over from previous General Order R5-2013-0075 and remain the same. To continue to meet these existing effluent limits, treatment systems for petroleum fuel pollution groundwater cleanup projects will not change, and as a result, the discharge of benzene will also remain the same and not increase. This complies with state and federal antidegradation requirements.

7. **Summary of Final Effluent Limitations.** See Limitations and Discharge Requirements Section V.A for Water Quality-Based Effluent Limitations and Section V.B for Technology-Based Effluent Limitations. Screening levels are in Attachment I.

- E. **Interim Effluent Limitations – Not Applicable**
- F. **Land Discharge Specifications – Not Applicable**
- G. **Recycling Specifications – Not Applicable**

VII. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plans. The Basin Plans state that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plans includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This General Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for ammonia, bacteria, biostimulatory substances,

color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

B. Groundwater – Not Applicable

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment B. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

- a. Regional Monitoring Program.** The Central Valley Water Board is developing a Regional Monitoring Program for the Sacramento-San Joaquin Delta. This Order may be reopened to modify the monitoring requirements to implement the Regional Monitoring Program.
- b. Drinking Water Policy.** On 26 July 2013 the Central Valley Water Board adopted Resolution No. R5-2013-0098 amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.
- c. Total Residual Chlorine.** The State Water Board has developed a draft policy, which, when adopted, is intended to establish consistent standards and implementation procedures for regulating chlorine state-wide. This reopener allows the Central Valley Water Board to reopen this General Order to include a revised RL to determine compliance with effluent limitations for total residual chlorine if a state-wide policy for total residual chlorine is adopted during the term of this General Order.

2. Special Studies and Additional Monitoring Requirements

- a. Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan for the Sacramento and San Joaquin River Basins at page III-8.00 and Basin Plan for the Tulare Lake Basin at

page III-6.) If through chronic WET testing it is demonstrated that the discharge exceeds the numeric toxicity trigger, the Discharger is required to submit a ROWD for application of an individual NPDES permit.

The Monitoring and Reporting Program of this Order requires chronic WET monitoring for demonstration of compliance with the narrative toxicity objective. In addition to WET monitoring, this provision includes a numeric toxicity monitoring trigger, requirements for accelerated monitoring, and instructions if a pattern of toxicity is demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of >1 TUc, or as specified by the Executive Officer in the NOA (where TUc = 100/NOEC), is applied in the provision, because this General Order does not allow any dilution for the chronic condition.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is toxicity before proceeding with further requirements. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring is provided in the *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, “EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required.” Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test).

- b. **Pollution Prevention and Monitoring and Reporting Plan (PPMRP).** Water suppliers may have numerous intentional and unintentional releases of fresh water to surface waters and surface water drainage courses due to many factors, including system failures, pressure releases, and pipeline/tank flushing and dewatering. For the purposes of this General Order, these multiple discharges shall be considered a project. Water suppliers covered by this General Order may include irrigation districts, water districts, and water agencies. In lieu of the specific effluent and receiving water monitoring requirements included in the Monitoring and Reporting Program (Attachment C), water suppliers with more than one discharge point must develop and implement a PPMRP in accordance with the requirements of Attachment G.

3. Best Management Practices and Pollution Prevention

- a. **Best Management Practices.** Because of the expected diversity of limited threat discharges covered by this General Order, specific technology-based effluent limitations for the universe of toxic compounds that could be found in wastewater have not been established. As allowed under 40 C.F.R. section 122.44(k).
- b. **Salinity.** The Central Valley Water Board, with the cooperation of the State Water Board, has begun the process to develop a new policy for the regulation of salinity in the Central Valley. In order to address increasing salinity levels in receiving

waters throughout the Central Valley Region of California, Dischargers with electrical conductivity greater than 900 $\mu\text{mhos/cm}$, flows greater than or equal to 0.25 MGD, and continuous discharge duration 180 days or longer, enrolled under this General Order shall implement practices to minimize the discharge of salinity to the receiving water. Under limited circumstances the Executive Officer may waive this requirement in the NOA. For example, for construction dewatering projects where the groundwater is naturally high in salinity.

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTW's Only) – Not Applicable

6. Other Special Provisions

- a. This General Order requires collected screenings and other solids removed from liquid wastes to be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23 of the CCR and approved by the Executive Officer.

This Order also requires any proposed change in solids use or disposal practice to be reported to the Executive Officer and U.S. EPA Regional Administrator at least 90 days in advance of the change.

7. Compliance Schedules – Not Applicable

IX. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment C of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP.

A. Influent Monitoring for Dischargers with Intake Water Credits

1. Dischargers that have been granted an intake water credit in the NOA must monitor the influent for each applicable pollutant. Influent samples must be taken concurrent with effluent samples. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.
2. Where multiple intake water sources are used and an intake water credit is granted, the influent flow from each source must be monitored to calculate a flow-weighted influent concentration. In accordance with the SIP, the pollutant from the receiving water shall be assumed to have a concentration that is no greater than the concentration in the Discharger intake water. Therefore, monitoring of the intake water from the receiving body must be performed for each pollutant. The pollutant concentrations from intake sources other than the receiving water are assumed to have a concentration that is no greater than the most stringent applicable water quality objective. Therefore, monitoring for hardness of the intake water from the receiving water body is also required when the effluent is monitored to derive the most stringent water quality objective for one or more of the hardness-dependent metals contained in the CTR (cadmium, chromium III, copper, lead, nickel, silver, and zinc) and/or applicable Basin Plan. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.
2. The Executive Officer will specify varying monitoring frequencies in the discharge-specific Notice of Applicability because of the expected diversity of discharges and the uncertainty of the length of time associated with each discharge. The following effluent monitoring requirements may be included in the Notice of Applicability:
 - a. Monitoring for flow (when discharging).
 - b. Monitoring for electrical conductivity and/or total dissolved solids to characterize the salinity of the effluent.
 - c. Monitoring for priority pollutants to determine compliance with applicable effluent limitations. Monitoring for hardness is also required if effluent limitations for cadmium, chromium (III), copper, lead, nickel, silver, and/or zinc are applicable.
 - d. Monitoring for pH using grab samples to determine compliance with effluent limitations, if applicable.
 - e. Monitoring for total residual chlorine using grab samples is established for all low threat discharges and superchlorination project discharges to determine compliance with effluent limitations. As discussed in section VI.C.3 of this Fact Sheet, the Central Valley Water Board acknowledges the complications of achieving relatively low RL's in field locations. This General Order allows Dischargers to use handheld monitoring devices to monitor total residual chlorine in the effluent. This General Order also requires Dischargers to utilize a method capable of achieving an RL of 0.08 mg/L until the State Water Board adopts a state-wide policy with a specified reporting level achievable in the field and laboratory. The RL of 0.08 mg/L represents a level that hand-held field meters are capable of achieving.
 - f. Monitoring for other constituents of concern listed in Table I-2 to determine compliance with applicable effluent limitations.
3. Dischargers that have been granted an intake water credit in the NOA must monitor the effluent for each applicable pollutant. Effluent samples must be taken concurrent with influent samples. Due to the site-specific situation for each Discharger that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the effluent pollutant mass and concentration.

C. Whole Effluent Toxicity Testing Requirements

1. **Low Volume Exemption from Acute and Chronic Toxicity Monitoring.** Individuals and miscellaneous public and private businesses often need to discharge clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. These discharges are typically low volume discharges (i.e., less than 0.25 million gallons fall under Tier 1A) and/or short-term in nature (i.e., 4 months or less fall under Tier 1A). The SIP, in section 1.3, *Step 8*, paragraph 2, states that the Central Valley Water Board may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from certain monitoring requirements. In this General Order, Tier 1A discharges are not required to conduct Acute or Chronic Toxicity monitoring.

2. **Tier 1 Exemption from Acute Toxicity Monitoring.** The Central Valley Water Board has determined that Tier 1 discharges are clean or relatively pollutant-free wastewaters that pose little or no threat to water quality. Therefore, Acute Toxicity monitoring is not necessary for Tier 1 discharges.
3. **Acute Toxicity.** Because Tier 1 discharges authorized by this General Order are low threat, they are not expected to contribute to acute toxicity. Therefore, acute WET testing is not required for Tier 1 discharges in this General Order. The 96-hour bioassay testing is required for Tier 3 Dischargers, to demonstrate compliance with the effluent limitation for acute toxicity. The frequency of testing shall be every six months or as specified in the Notice of Applicability from the Executive Officer.
4. **Chronic Toxicity.** Because Tier 1A discharges authorized by this General Order are low volume and/or short-term in nature and are not expected to contribute to chronic toxicity, chronic WET testing is not required for Tier 1A discharges in this General Order. In order to demonstrate compliance with the Basin Plan's narrative toxicity objective, chronic WET testing may be specified in the NOA for Tier 1B, Tier 2, and Tier 3 waste discharges. The chronic WET testing shall be conducted per the Monitoring and Reporting Program (Attachment C, section V).

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream. Applicable receiving water monitoring will be specified in the Notice of Applicability considering the site-specific conditions of the discharge.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements – Not Applicable

X. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDR's that will serve as an NPDES permit for limited threat discharges to waters of the United States. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDR's and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley Water Board notified the Dischargers enrolled under the existing Limited Threat General Permit and interested agencies and persons of its intent to prescribe general WDR's for limited threat discharges and provided an opportunity to submit written comments and recommendations. Notification was provided through specific mailings and through publication in major newspapers for the following communities: Fresno, Redding and Sacramento.

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website at:
http://www.waterboards.ca.gov/centralvalley/board_info/meetings/

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDR's as provided through the notification process. Comments were due either in person or by mail to the Executive Officer at the Central Valley Water Board at the address on the cover page of this Order , or via email to RB5S-NPDES-Comments@waterboards.ca.gov.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due by 5:00 p.m. on **26 September 2016**.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDR's during its regular Board meeting on the following date and time and at the following location:

Date: 14 October 2016
Time: 8:30 a.m.
Location: Redding City Hall
777 Cypress Avenue
Redding, CA 96001

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDR's, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Central Valley Water Board regarding the final WDR's. The petition must be received by the State Water Board at the following address within 30 calendar days of the Central Valley Water Board's action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The supporting documents and comments received are on file and may be inspected at the Regional Water Quality Control Board address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the general WDR's and NPDES permit should contact the Central Valley Water Board, reference the general WDR's and NPDES permit, and provide a name, address, and phone number.

G. Additional Information

All Notices of Applicability may be accessed through our website at:

http://www.waterboards.ca.gov/centralvalley/board_info/

For additional information or for questions regarding this General Order, please find the appropriate contact for your county from the list under "NPDES Permitting Contacts". You will find the contact list on the Central Valley Water Board's website by searching alphabetically for "Surface Water Discharges (NPDES)" at the following web address:

http://www.waterboards.ca.gov/centralvalley/about_us/phone_list

ATTACHMENT E
REQUEST FOR TERMINATION OF COVERAGE

PROJECT NAME _____

PROJECT COUNTY _____

GENERAL ORDER NUMBER R5-2016-0076 _____ - _____

WDID NUMBER _____

CIWQS NUMBER _____

DISCHARGE STOP DATE _____

TOTAL VOLUME OF DISCHARGE _____

TOTAL ELAPSED TIME OF DISCHARGE _____

CERTIFICATION

"I certify under penalty of law that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. The project named above is terminated. There is no longer a discharge to surface water. The treatment system (if applicable) has been dismantled. I request a Notice of Termination from the Executive Officer. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment."

A. Printed Name: _____

B. Signature: _____

C. Date: _____

D. Title: _____

E. Company Name: _____

F. Company Address: _____

Please complete this form and email to the following web email address:

centralvalleysacramento@waterboards.ca.gov

Please address the form to the attention of the NPDES Section.

Attachment F – (*RESERVED*)

ATTACHMENT G -- POLLUTION PREVENTION AND MONITORING AND REPORTING PLAN

Water suppliers that have or propose to have multiple discharge points covered by this General Order are required in section II.A.2.b of this Order to develop a site specific Pollution Prevention and Monitoring and Reporting Plan (PPMRP) and submit the document with the Notice of Intent. The following information must be included in the PPMRP:

I. Pollution Prevention Plan

- A. Distribution System.** Provide a description and a map of the distribution system including the boundaries of the geographical area where discharges may occur (e.g., service area).
- B. Potential Discharge Locations.** Identify actual or approximate locations of fire hydrants, supply wells, pump stations, and pressure relief valves. Include a table and/or map of potential discharge locations.
- C. Pollutant Types.** Identify the pollutants that could potentially be discharged (e.g., total suspended solids, settleable solids, chlorine, etc.).
- D. Flow Rate.** Identify the range of expected instantaneous discharge flow rates and/or total daily flow volume.
- E. Receiving Waters.** Identify the receiving water (e.g., drainage canal, creek, or river) the discharges could directly enter and the nearest named receiving water.
- F. Treatment Systems.** Identify treatment systems, equipment, or procedures used to remove chlorine and solids from discharges and to control pH.
- G. Spill Contingency Plans.** Address unintentional releases/discharges of water (whether chlorinated or dechlorinated) such as water discharges from breaks in the system (including, but not limited to: fire hydrant, back-flow preventers, and pumps). A discharge from a water main pressure relief valve that is beyond the typical volume discharged from a well-maintained pressure relief valve is considered a spill. In addition, include plans for the capture and containment of the released volume, dechlorination of released volume, temporary procedures to stop the unintentional discharge until a permanent repair, and permanent repair of water system components that fail.
- H. Operation and Maintenance (O&M) Procedures.** Include procedures that would prevent unintentional releases, such as pressure relief valve maintenance, planned water main replacement, water main corrosion prevention, and pump station maintenance, power supply maintenance. O&M procedures also include those procedures to prevent discharges of other pollutants (such as chlorine and dechlorinating agents) during an intentional or unintentional release of water and in the course of water system construction, repair and maintenance.
- I. Inspections.** Include a plan for regularly scheduled inspections to check the integrity of water supply system components (pumps, pressure relief valves, water pipes and connections, etc.) to prevent unintentional and accidental discharges of water (chlorinated or dechlorinated).
- J. Equipment/Supplies.** Identify equipment and supplies that are needed to 1) properly operate and maintain a water supply system to prevent unintentional discharges; 2) dechlorinate, contain and control intentional discharges; 3) prevent discharge of other pollutants (chlorine, dechlorinating agents, sediment, etc.) during intentional and unintentional discharges and during water supply system construction, repair and maintenance; and 4) quickly and effectively respond to dechlorinate, contain and control unintentional discharges.

- K. Training.** Identify training activities to 1) ensure staff are adequately prepared to properly operate and maintain a water supply system to prevent unintentional discharges; 2) dechlorinate, contain and control intentional discharges; 3) prevent discharge of other pollutants (chlorine, dechlorinating agents, sediment, etc.) during intentional and unintentional discharges and during water supply system construction, repair and maintenance; and 4) quickly and effectively respond to dechlorinate, contain and control unintentional discharges.
- L. Erosion Control.** Identify equipment and supplies that are needed to control and contain intentional and unintentional discharges of water to prevent erosion of soil and sediment which can be transported with the discharge.

II. Monitoring and Reporting Program

Develop a representative sampling and analysis program. Dischargers are not required to sample all discharges if reasonable assurance is provided that the discharges will comply with requirements. Provide rationale for selection of the effluent and receiving water monitoring plan. The sampling and analysis program shall include the following:

- A. Sampling Methods.** Include a description of how effluent and receiving water samples will be collected (e.g., grab, composite, continuous, metered, totalizer) and preserved/delivered within the holding time to the analytical laboratory.
- B. Sampling Locations.** Identify effluent sampling locations (e.g., at each well or fire hydrant, or at a subset of well or fire hydrant locations) and where samples will be taken (e.g., from fire hydrant, 10 feet from source, at effluent of settling basin).

In addition, identify all receiving water locations where samples can be taken and describe where at those locations samples will be taken (e.g., 10 feet upstream and downstream of storm drain outfall into the drainage channel).
- C. Sampling Frequency.** Identify the frequency that effluent and receiving water samples will be taken (e.g., during each discharge, every fourth discharge, each well discharge). In addition, specify when during a discharge the receiving water samples will be collected (consider time within the storm drain system).
- D. Analysis Methods.** Identify the constituents/parameters that will be monitored and/or analyzed and the method of analysis (e.g., meter EPA method, instrument, laboratory). In addition, identify Quality Assurance/Quality Control procedures, including instrument calibration.
- E. Inspection Plans and Visual Observations.** Describe how receiving waters will be inspected to obtain and record visual observations for discoloration, stream bottom deposits, etc.
- F. Rationale.** Explain the reason for the effluent and receiving water sampling methods, locations, and frequencies that were chosen and why these will provide representative samples. For example, if a sample will not be taken at the identified locations during each discharge, describe criteria for deciding when a sample will be taken at that location.

The sampling and analysis program must be developed and implemented in accordance with the General Monitoring Provisions, Other Monitoring Requirements, and Reporting Requirements contained in sections I, IX, and X, respectively, of the Monitoring and Reporting Program (Attachment C).

Attachment H - Application for Intake Water Credit for Individual Pollutant

1. Is the primary source of water for the facility operation the same as the water body that receives the facility's effluent discharge?	☐ No ☐ Yes	You do not need to complete the remainder of this section; the facility is not eligible for an intake water credit. EXIT Continue to question 2 below.															
2. Does the facility effluent discharge water exceed applicable numeric water quality criteria?	☐ No ☐ Yes	You do not need to complete the remainder of this section; treatment is not required before discharge. EXIT You must choose one of the following Circle option a or b: a. Treatment will be implemented. You do not need to complete the remainder of this section. EXIT b. Apply for intake water credit for the following pollutant and continue to question 3:															
3. Does the facility use multiple water supplies?	☐ No ☐ Yes	Continue directly to question 4 below You must complete the following sections a and b before moving on to question 4: a. Describe the conditions that trigger the use of the supplemental water supply and the frequency and duration that the supplemental water supply is used. b. Complete the following table: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 65%;">Intake Water Source Name/Description</th> <th style="width: 15%;">Max. Flow (specify units)</th> <th style="width: 20%;">Min. Flow (specify units)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> </tr> <tr> <td>3.</td> <td></td> <td></td> </tr> <tr> <td>Receiving Water Name</td> <td colspan="2" style="background-color: black;"></td> </tr> </tbody> </table>	Intake Water Source Name/Description	Max. Flow (specify units)	Min. Flow (specify units)	1.			2.			3.			Receiving Water Name		
Intake Water Source Name/Description	Max. Flow (specify units)	Min. Flow (specify units)															
1.																	
2.																	
3.																	
Receiving Water Name																	
4. Does the facility alter the pollutant for which you are seeking an intake water credit chemically or physically?	☐ No ☐ Yes	Continue directly to question 5 below. Describe how the facility alters the pollutant and continue to question 5 below.															
5. Would the pollutant for which you are seeking an intake water credit have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effects had it not been diverted to your facility?		Explain and continue to question 6 below.															
6. Does the timing or location of your discharge cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body?		Explain															

Attachment I – Screening Requirements for Limited Threat Discharges

I. Screening Requirements for All Limited Threat Discharges

All dischargers seeking authorization to discharge under this General Order shall sample and analyze a representative sample of the wastewater, for the constituents contained in the appropriate column in Table I-1. The analytical results shall be compared to the screening levels in Sections II and III of this Attachment. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants in order to evaluate compliance with the screening levels. All analytical results and screening determinations shall be submitted in the NOI.

Table I-1. Selection of Monitoring for Submittal with NOI

Constituents and Parameters	Limited Threat Wastewater to be Discharged ²						
	Tier 1			Tier 2			Tier 3
	Drinking Water Supply ¹	All Other Tier 1 Wastewaters		Potable or Other Chlorinated Wastewaters	Groundwater (Not Related to Mines)	All Other Tier 2 Wastewaters	Liquid Mine Waste
		Discharge Volume < 0.25 MGD	Discharge Volume ≥ 0.25 MGD				
Biochemical Oxygen Demand (BOD) Total Suspended Solids (TSS)	No	Yes	Yes	No	Yes	Yes	No
Dissolved Oxygen (DO) Hardness pH Temperature	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electrical Conductivity (EC) Total Dissolved Solids (TDS)	Yes	Yes	Yes	No	Yes	Yes	Yes
Turbidity	No	No	No	No	Yes	Yes	Yes
Known Wastewater Contaminants ³	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unionized Ammonia Nitrogen, Total (as N)	No	Yes ⁵	Yes ⁵	No	Yes ⁵	Yes ⁵	No
Chlorine, Total Residual	Yes	Yes	Yes	Yes	No	No	No
Aluminum, Total Recoverable Iron, Total Recoverable ⁶ Manganese, Total Recoverable ⁶	No	No	No	No	Yes	Yes	Yes
CTR Priority Pollutants (see Table I-3 below)	No	Yes	Yes	Yes	Yes	Yes	Yes
Standard Minerals ⁴	No	No	No	No	Yes	No	Yes
VOC Remediation Project Constituents (Table I-5)	No	No	No	No	No	Yes ⁷	No

LIMITED THREAT DISCHARGES
TO SURFACE WATER

ORDER R5-2016-0076-01
NPDES NO. CAG995002

Constituents and Parameters	Limited Threat Wastewater to be Discharged ²						
	Tier 1			Tier 2			Tier 3
	Drinking Water Supply ¹	All Other Tier 1 Wastewaters		Potable or Other Chlorinated Wastewaters	Groundwater (Not Related to Mines)	All Other Tier 2 Wastewaters	Liquid Mine Waste
		Discharge Volume < 0.25 MGD	Discharge Volume ≥ 0.25 MGD				
Petroleum Fuel Pollution Constituents (Table I-6)	No	No	No	No	No	Yes ⁸	No
Acute Toxicity	No	No	No	No	No	No	Yes

¹ SIP, Section 5.3.2, categorical exception to priority pollutant monitoring requirement for drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code.

² Monitoring shall be conducted on a representative sample of the wastewater prior to any treatment..

³ Known contaminants are those contaminants known to be present in the wastewater, but are not listed in Table C-1.

⁴ Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

⁵ Only applicable for discharges within the Tulare Lake Basin.

⁶ Results as total recoverable or dissolved metals may be used to evaluate compliance with the screening levels for iron and manganese. Sampling only required if discharge will last more than 1-year.

⁷ Only required for discharges from groundwater VOC remediation projects.

⁸ Only required for discharges from petroleum fuel pollution groundwater remediation projects.

II. Screening Levels

A. Screening Levels for non-Priority Pollutant Constituents and Parameters of Concern.

Dischargers required to sample and analyze any or all of the constituents contained in Table I-2 shall compare the results to the corresponding applicable screening level (MUN or non-MUN) and shall submit the results as part of the application (Notice of Intent or NOI, see Attachment J). Any exceedance of a screening level in Table I-2 may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer.

Table I-2. Screening Levels for non-Priority Pollutant Constituents and Parameters of Concern

Constituent/Parameter ¹	Units	Screening Level (Based on MUN ²)	Screening Level (Based on No MUN ²)
Aluminum, Total Recoverable	µg/L	200 ³	750
Un-ionized Ammonia (as N)	mg/L	0.025 ⁵	0.025 ⁵
Iron, Dissolved	µg/L	300 ³	--
Manganese, Dissolved	µg/L	50 ³	--
Nitrate plus Nitrite (total as N)	mg/L	10	--
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	10
pH	std units	6.5 – 8.5 ⁴	6.5 – 8.5 ⁴
Settleable Solids	mL/L	0.1	0.1
Specific Conductance (EC)	µmhos/cm	900	--
Total Suspended Solids	mg/L	10	--
Turbidity	NTU	5	5

¹ Constituents/Parameters shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

² MUN = Municipal and Domestic Supply Beneficial Use.

³ Based on Secondary Maximum Contaminant Levels for taste and odor. Screening levels only applicable for discharges lasting more than 1-year.

⁴ For the Sacramento San Joaquin Basin. However, pH screening for Goose Lake is 7.5 to 9.5 and the Tulare Lake Basin is 6.5 to 8.3.

⁵ Only applicable for discharges within the Tulare Lake Basin.

⁶ Results as total recoverable or dissolved metals may be used to evaluate compliance with the screening levels for iron and manganese.

B. Screening Levels for Priority Pollutants¹. Dischargers required to sample and analyze the effluent for the constituents contained in Table I-3 shall compare the corresponding applicable screening level (MUN or non-MUN) and submit the results as part of the application (Notice of Intent or NOI, see Attachment J). Any exceedance of a screening level in Table I-3 may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer.

Table I-3. Screening Levels for Priority Pollutants

CTR #	Parameter ¹	Units	Screening Level (Based on MUN ²)	Screening Level (Based on No MUN ²)
1	Antimony, Total Recoverable	µg/L	6	4300
2	Arsenic, Total Recoverable	µg/L	10	150
3	Beryllium, Total Recoverable	µg/L	4	--
4	Cadmium, Total Recoverable	µg/L	³	³
5a	Chromium (III) ⁵	µg/L	³	³

¹ Not applicable for discharges from water supply systems eligible for a categorical exception for meeting the priority pollutant criteria/objectives as authorized by section 5.3 of the SIP.

CTR #	Parameter ¹	Units	Screening Level (Based on MUN ²)	Screening Level (Based on No MUN ²)
5b	Chromium (VI) ⁵	µg/L	10	11
6	Copper, Total Recoverable	µg/L	₃	₃
7	Lead, Total Recoverable	µg/L	₃	₃
8	Mercury, Total Recoverable	µg/L	0.05	0.051
9	Nickel, Total Recoverable	µg/L	₃	₃
10	Selenium, Total Recoverable	µg/L	5.0	5.0
11	Silver, Total Recoverable	µg/L	₃	₃
12	Thallium, Total Recoverable	µg/L	1.7	6.3
13	Zinc, Total Recoverable	µg/L	₃	₃
14	Cyanide, Total (as CN)	µg/L	5.2	5.2
15	Asbestos	MFL	7	--
16	2,3,7,8-TCDD (Dioxin)	µg/L	1.3E-08	--
17	Acrolein	µg/L	320	--
18	Acrylonitrile	µg/L	0.059	0.66
19	Benzene	µg/L	1	71
20	Bromoform	µg/L	4.3	360
21	Carbon Tetrachloride	µg/L	0.25	4.4
22	Chlorobenzene	µg/L	70	--
23	Chlorodibromomethane	µg/L	0.41	34
24	Chloroethane	µg/L	--	--
25	2-Chloroethylvinyl Ether	µg/L	--	--
26	Chloroform	µg/L	80	1240
27	Dichlorobromomethane	µg/L	0.56	46
28	1,1-Dichloroethane	µg/L	5	--
29	1,2-Dichloroethane	µg/L	0.38	99
30	1,1-Dichloroethylene	µg/L	0.057	--
31	1,2-Dichloropropane	µg/L	0.52	39
32	1,3-Dichloropropylene	µg/L	10	1700
33	Ethylbenzene	µg/L	300	29000
34	Methyl Bromide	µg/L	48	4000
35	Methyl Chloride	µg/L	--	--
36	Methylene Chloride	µg/L	4.7	1600
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	--
38	Tetrachloroethylene	µg/L	0.8	--
39	Toluene	µg/L	150	--
40	1,2-Trans-Dichloroethylene	µg/L	10	--
41	1,1,1-Trichloroethane	µg/L	200	--
42	1,1,2-Trichloroethane	µg/L	0.60	--
43	Trichloroethylene	µg/L	2.7	--
44	Vinyl Chloride	µg/L	0.5	--
45	2-Chlorophenol	µg/L	120	--
46	2,4-Dichlorophenol	µg/L	93	2300
47	2,4-Dimethylphenol	µg/L	540	--
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	230
49	2,4-Dinitrophenol	µg/L	70	230
50	2-Nitrophenol	µg/L	--	--
51	4-Nitrophenol	µg/L	60	--
52	3-Methyl-4-Chlorophenol	µg/L	30	30
53	Pentachlorophenol	µg/L	0.28	8.2
54	Phenol	µg/L	21000	--

CTR #	Parameter ¹	Units	Screening Level (Based on MUN ²)	Screening Level (Based on No MUN ²)
55	2,4,6-Trichlorophenol	µg/L	2.1	6.5
56	Acenaphthene	µg/L	1200	--
57	Acenaphthylene	µg/L	--	--
58	Anthracene	µg/L	9600	110000
59	Benzidine	µg/L	0.00012	0.00054
60	Benzo(a)Anthracene	µg/L	0.0044	0.049
61	Benzo(a)Pyrene	µg/L	0.0044	0.049
62	Benzo(b)Fluoranthene	µg/L	0.0044	0.049
63	Benzo(ghi)Perylene	µg/L	--	--
64	Benzo(k)Fluoranthene	µg/L	0.0044	0.049
65	Bis(2-Chloroethoxy)Methane	µg/L	--	--
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	1.4
67	Bis(2-Chloroisopropyl)Ether	µg/L	1400	170000
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	5.9
69	4-Bromophenyl Phenyl Ether	µg/L	--	--
70	Butylbenzyl Phthalate	µg/L	3000	5200
71	2-Chloronaphthalene	µg/L	1700	4300
72	4-Chlorophenyl Phenyl Ether	µg/L	--	--
73	Chrysene	µg/L	0.0044	0.049
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	0.049
75	1,2-Dichlorobenzene	µg/L	600	--
76	1,3-Dichlorobenzene	µg/L	400	--
77	1,4-Dichlorobenzene	µg/L	5	--
78	3,3-Dichlorobenzidine	µg/L	0.04	0.077
79	Diethyl Phthalate	µg/L	23000	120000
80	Dimethyl Phthalate	µg/L	313000	2900000
81	Di-n-Butyl Phthalate	µg/L	2700	12000
82	2,4-Dinitrotoluene	µg/L	0.11	9.1
83	2,6-Dinitrotoluene	µg/L	0.05	--
84	Di-n-Octyl Phthalate	µg/L	--	--
85	1,2-Diphenylhydrazine	µg/L	0.040	0.54
86	Fluoranthene	µg/L	300	370
87	Fluorene	µg/L	1300	14000
88	Hexachlorobenzene	µg/L	0.00075	0.00077
89	Hexachlorobutadiene	µg/L	0.44	9.3
90	Hexachlorocyclopentadiene	µg/L	50	--
91	Hexachloroethane	µg/L	1.9	8.9
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	0.049
93	Isophorone	µg/L	8.4	600
94	Naphthalene	µg/L	--	--
95	Nitrobenzene	µg/L	17	1900
96	N-Nitrosodimethylamine	µg/L	0.00069	8.1
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	1.4
98	N-Nitrosodiphenylamine	µg/L	5.0	16
99	Phenanthrene	µg/L	--	--
100	Pyrene	µg/L	960	11000
101	1,2,4-Trichlorobenzene	µg/L	5	50
102	Aldrin	µg/L	0.00013	0.00014
103	alpha-BHC	µg/L	0.0039	0.013
104	beta-BHC	µg/L	0.014	0.046

CTR #	Parameter ¹	Units	Screening Level (Based on MUN ²)	Screening Level (Based on No MUN ²)
105	gamma-BHC (Lindane)	µg/L	0.019	0.063
106	delta-BHC	µg/L	--	--
107	Chlordane	µg/L	0.00057	0.00059
108	4,4-DDT	µg/L	0.00059	--
109	4,4-DDE	µg/L	0.00059	--
110	4,4-DDD	µg/L	0.00083	--
111	Dieldrin	µg/L	0.00014	--
112	alpha-Endosulfan	µg/L	0.056	0.56
113	beta-Endosulfan	µg/L	0.056	0.56
114	Endosulfan Sulfate	µg/L	110	--
115	Endrin	µg/L	0.036	0.036
116	Endrin Aldehyde	µg/L	0.76	0.81
117	Heptachlor	µg/L	0.00021	--
118	Heptchlor Epoxide	µg/L	0.00010	--
119-125	PCBs sum ⁴	µg/L	0.00017	--
126	Toxaphene	µg/L	0.0002	0.0002

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

² MUN = Municipal and Domestic Supply Beneficial Use.

³ See Tables I-4A, I-4B, and I-4C below.

⁴ This screening level applies to the sum of PCB Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

⁵ Total Chromium may be sampled as a substitute for Chromium (III) and Chromium (VI) for the purpose of evaluating compliance with the screening levels.

C. Screening Levels for Hardness-Dependent Metals. Dischargers required to sample and analyze the effluent for the constituents contained in Table I-4A, I-4B, and I-4C shall compare the corresponding applicable screening level and submit the results as part of the application (Notice of Intent or NOI, see Attachment J). The screening levels contained in Tables I-4A, I-4B, and I-4C are based on hardness¹. For waters with hardness concentrations less than 100 mg/L, screening levels have been segmented into 10 mg/L increments. For each segment the midpoint between the lower and upper bounds was used to determine the corresponding screening level. For waters with hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, screening levels shall be based on a hardness value of 150 mg/L. For waters with lowest observed hardness concentrations greater than or equal to 200 mg/L, screening levels shall be based on a hardness value of 200 mg/L. Any exceedance of a screening level in Tables I-4A, I-4B, or Table I-4C may result in required treatment and effluent limitations as specified in the NOA from the Executive Officer.

Table I-4A. Screening Levels for Hardness-Dependent Metals – Hardness 0 to <40 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		H <10	10≤ H <20	20≤ H <30	30≤ H <40
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	µg/L	0.23	0.56	0.83	1.1
Chromium (III)	µg/L	18	44	67	88
Copper, Total Recoverable	µg/L	0.72	1.8	2.9	3.8
Lead, Total Recoverable	µg/L	0.07	0.28	0.54	0.84
Nickel, Total Recoverable	µg/L	4.1	10	16	21
Silver, Total Recoverable	µg/L	0.023	0.16	0.37	0.67
Zinc, Total Recoverable	µg/L	9.5	24	37	49

¹ All hardness values are in mg/L as CaCO₃

Table I-4B. Screening Levels for Hardness-Dependent Metals – Hardness 40 to <80 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		40 ≤ H < 50	50 ≤ H < 60	60 ≤ H < 70	70 ≤ H < 80
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	µg/L	1.3	1.5	1.8	2.0
Chromium (III)	µg/L	110	130	150	160
Copper, Total Recoverable	µg/L	4.7	5.6	6.5	7.3
Lead, Total Recoverable	µg/L	1.2	1.5	1.8	2.2
Nickel, Total Recoverable	µg/L	27	31	36	41
Silver, Total Recoverable	µg/L	1.0	1.5	1.9	2.5
Zinc, Total Recoverable	µg/L	61	72	83	94

Table I-4C. Screening Levels for Hardness-Dependent Metals – Hardness ≥80 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		80 ≤ H < 90	90 ≤ H < 100	100 ≤ H < 200	H ≥ 200
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	µg/L	2.2	2.4	3.4	4.2
Chromium (III)	µg/L	180	200	290	370
Copper, Total Recoverable	µg/L	8.1	8.9	13	17
Lead, Total Recoverable	µg/L	2.6	3.0	5.3	7.7
Nickel, Total Recoverable	µg/L	45	50	74	94
Silver, Total Recoverable	µg/L	3.1	3.7	8.2	13
Zinc, Total Recoverable	µg/L	100	120	170	220

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

- D. Screening Levels for VOC Remediation Projects.** All dischargers seeking authorization to discharge wastewater from VOC remediation projects under this General Order shall sample and analyze the wastewater for the constituents contained in Table I-5. The results of the analyses shall be compared to the corresponding applicable screening level and shall be submitted as part of the application (Notice of Intent or NOI, see Attachment J). VOC remediation projects are required to meet the technology-based screening levels in Table I-5. Any exceedance of a screening level in Table I-5 may result in additional treatment if the Discharger cannot demonstrate the current treatment system is capable of meeting the screening levels. Table I-5 contains a partial list of VOC's and is not intended to limit the Executive Officer from identifying additional VOC's for inclusion under this General Order and as specified in the NOA.

Table I-5. Screening Levels for VOC Remediation Projects

Parameter	Units	Screening Level
1,1-Dichloroethane	µg/L	0.5
1,1-Dichloroethene	µg/L	0.5
1,1,1-Trichloroethane	µg/L	0.5
1,1,2-Trichloroethane	µg/L	0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5
1,2-Dichlorobenzene	µg/L	0.5
1,2-Dichloroethane	µg/L	0.5 ¹
1,2-dichloroethene (cis and trans)	µg/L	0.5
1,2-Dichloropropane	µg/L	0.5
1,2-Dibromo-3-Chloropropane	µg/L	0.5
1,2,3-Trichloropropane	µg/L	0.5

Parameter	Units	Screening Level
1,3-Butadiene	µg/L	0.5
1,3-Dichlorobenzene	µg/L	0.5
1,3-Dichloropropene (cis and trans)	µg/L	0.5
1,4-Dichlorobenzene	µg/L	0.5
2-Butanone	µg/L	0.5
2-Chloroethylvinyl ether	µg/L	0.5
2-Hexanone	µg/L	0.5
Acetone	µg/L	0.5
Acrolein	µg/L	0.5
Benzene	µg/L	0.5
Bromoform	µg/L	0.5
Bromomethane	µg/L	0.5
Carbon Disulfide	µg/L	0.5
Carbon Tetrachloride	µg/L	0.5 ¹
Chlorobenzene	µg/L	0.5
Chlorodibromomethane	µg/L	0.5 ¹
Chloroethane	µg/L	0.5
Chloroform	µg/L	0.5
Chloromethane	µg/L	0.5
Methylene Chloride	µg/L	0.5
Dichlorobromomethane	µg/L	0.5
Ethylbenzene	µg/L	0.5
Ethylene dibromide (EDB)	µg/L	0.05 ²
MTBE (Methyl tertiary butyl ether)	µg/L	0.5
Stoddard Solvent	µg/L	0.5
Tetrachloroethylene	µg/L	0.5
Toluene	µg/L	0.5
Trichloroethylene	µg/L	0.5
Trichlorofluoromethane	µg/L	0.5
Vinyl Chloride	µg/L	0.5
Xylenes	µg/L	0.5

¹ More stringent water quality-based screening levels may be applicable in Table I-3

² For non-MUN designated water bodies the screening level is 0.5 µg/L.

E. Screening Levels for Groundwater Petroleum Fuel Pollution Cleanup Projects.

All dischargers seeking authorization to discharge wastewater from Groundwater Petroleum Fuel Pollution Cleanup projects under this General Order shall sample and analyze the wastewater for the constituents contained in Table I-6. The results of the analyses shall be compared to the corresponding applicable screening level and shall be submitted as part of the application (Notice of Intent or NOI, see Attachment J). Groundwater Petroleum Fuel Pollution Cleanup projects are required to meet the screening levels in Table I-6. Any exceedance of a screening level in Table I-6 may result in additional treatment if the Discharger cannot demonstrate the current treatment system is capable of meeting the screening levels.

Table I-6. Screening Levels for Groundwater Petroleum Fuel Pollution Cleanup Projects

Parameter	Units	Screening Level
Benzene	µg/L	0.5
Ethylbenzene	µg/L	0.5 ³
1,2-Dichloroethane	µg/L	0.5 ³
Naphthalene	µg/L	5.0
Toluene	µg/L	0.5
Di-isopropyl Ether	µg/L	5
Ethylene Dibromide	µg/L	0.05 ⁴
Ethyl Tertiary Butyl Ether	µg/L	5
Methanol	µg/L	20
Methyl Tertiary Butyl Ether	µg/L	1.0
Carcinogenic PAHs ¹	µg/L	0.0044
Tertiary Amyl Methyl Ether	µg/L	1.0
Tertiary Butyl Alcohol	µg/L	10
Total Petroleum Hydrocarbons (Gasoline Range)	µg/L	50
Total Petroleum Hydrocarbons (Diesel Range)	µg/L	50
Xylene ²	µg/L	0.5

¹ Applies to the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, dibenz[a,h]anthracene, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-cd]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene, and chrysene.

² Applies to the sum of o-xylene, m-xylene, and p-xylene.

³ More stringent water quality-based screening levels may be applicable in Table I-3

⁴ For non-MUN designated water bodies the screening level is 0.5 µg/L.

III. Screening Requirements for Discharges to Specific Waterbodies

- A. Screening Levels for Discharges to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, Folsom Lake, and the Sacramento-San Joaquin Delta.** In addition to the analyses required in Attachment I, dischargers seeking authorization to discharge under this General Order to the Sacramento River from Keswick Dam to the I Street Bridge at the City of Sacramento, American River from Folsom Dam to the Sacramento River, Folsom Lake, or the Sacramento-San Joaquin Delta shall sample and analyze the effluent for the constituents contained in Table I-6. The screening levels contained in Table I-6 for arsenic, copper, silver, and zinc supersede those contained in Attachment I.II, above, for the same parameters. The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the application.

Table I-7. Screening Levels for Discharges to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, Folsom Lake, and the Sacramento-San Joaquin Delta

Parameter ¹	Units	Screening Level
Arsenic, Total Recoverable	µg/L	10
Copper, Total Recoverable	µg/L	10 ²
Silver, Total Recoverable	µg/L	10
Zinc, Total Recoverable	µg/L	100 ²

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

² Does not apply to Sacramento River above the State Highway 32 Bridge at Hamilton City.

- B. Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City.** In addition to the analyses required in Attachment I.I, dischargers seeking authorization to discharge under this General Order to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City shall sample and analyze the effluent for the constituents contained in Tables I-7A, I-7B, and I-7C. The screening levels contained in Tables I-7A, I-7B, and I-7C for copper, zinc, and cadmium supersede those contained in Attachment I.II for the same parameters. The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the application. The screening levels contained in Tables I-7A, I-7B, and I-7C are based on hardness. For waters with hardness concentrations less than 100 mg/L, screening levels have been segmented into 10 mg/L increments. For each segment the central value between the lower and upper bounds was used to determine the corresponding effluent limit. For waters with lowest observed hardness concentrations greater than or equal to 100 mg/L but less than 200 mg/L, screening levels shall be based on a hardness value of 150 mg/L. For waters with lowest observed hardness concentrations greater than or equal to 200 mg/L, screening levels shall be based on a hardness value of 200 mg/L.

Table I-7A. Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness 0 to <40 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		H <10	10 ≤ H <20	20 ≤ H <30	30 ≤ H <40
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	µg/L	0.02	0.07	0.13	0.19
Copper, Total Recoverable	µg/L	0.86	2.3	3.7	5.0
Zinc, Total Recoverable	µg/L	2.8	7.1	11	14

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

Table I-7B. Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness 40 to <80 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		40 ≤ H <50	50 ≤ H <60	60 ≤ H <70	70 ≤ H <80
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	µg/L	0.26	0.32	0.39	0.46
Copper, Total Recoverable	µg/L	6.3	7.5	8.7	9.9
Zinc, Total Recoverable	µg/L	18	21	24	27

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

Table I-7C. Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Hardness ≥ 80 mg/L

Parameter ¹	Units	Hardness in mg/L (H)			
		80 $\leq$ H <90	90 $\leq$ H <100	100 $\leq$ H <200	H $\geq$ 200
		Screening Level	Screening Level	Screening Level	Screening Level
Cadmium, Total Recoverable	$\mu\text{g/L}$	0.54	0.61	1.0	1.4
Copper, Total Recoverable	$\mu\text{g/L}$	11	12	19	24
Zinc, Total Recoverable	$\mu\text{g/L}$	30	33	48	61

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

- C. Screening Levels for Discharges Within the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin.** In addition to the analyses required in Attachment I.I, dischargers seeking authorization to discharge under this General Order within the Sacramento and San Joaquin River Basins and waters designated COLD in the Tulare Lake Basin shall sample and analyze the effluent for the constituents contained in Table I-8. The screening level contained in Table I-8 for persistent chlorinated hydrocarbon pesticides supersedes those contained in Attachment I.II for the same parameters. The results of the analyses shall be compared to the corresponding screening level and shall be submitted as part of the application.

Table I-8. Screening Levels for Discharges Within the Sacramento and San Joaquin River Basins and Waters Designated as COLD in the Tulare Lake Basin

Parameter ¹	Units	Screening Level
Persistent Chlorinate Hydrocarbon Pesticides	$\mu\text{g/L}$	ND ²

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 and in accordance with the General Monitoring Provisions contained in section I of the Monitoring and Reporting Program (Attachment C).

² The non-detectable (ND) screening level applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.5 $\mu\text{g/L}$. Persistent chlorinated hydrocarbon pesticides include aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

ATTACHMENT J
NOTICE OF INTENT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF
GENERAL ORDER R5-2016-0076
NPDES NO. CAG995002
FOR
LIMITED THREAT DISCHARGES TO SURFACE WATERS

To obtain coverage under this General Order, which also serves as the National Pollutant Discharge Elimination System (NPDES) Permit, the Discharger must submit a complete Notice of Intent including the following requirements. Additional information may be requested by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for a specific project.

1. Form (To be submitted by all Dischargers.)

- ☐ State Water Board Form 200 – Report of Waste Discharge Form

2. Project Description (To be submitted by all Dischargers.)

- ☐ A full description on official letterhead, of the proposed project, treatment processes (if applicable), and discharge. Include the following:

 - ☐ Discharge Type/Description;
 - ☐ Discharge location (County, City, street, nearest cross street, Township/Range/Section, GPS coordinates);
 - ☐ Maximum daily discharge in gallons per day (GPD);
 - ☐ Average daily discharge in GPD;
 - ☐ Total volume of discharge
 - ☐ Approximate start-up date;
 - ☐ Projected discharge duration;
 - ☐ If discharge flows are intermittent, the discharge frequency and volume per discharge;
 - ☐ Name of receiving water body;
 - ☐ Name of major downstream water body;
 - ☐ A narrative description of any additives and their composition;
 - ☐ A narrative description of the proposed or existing treatment system or reasons why a treatment system is not necessary;
 - ☐ If a professional engineer has evaluated the existing or proposed discharge for compliance with this General Order, identify; name, mailing address, phone number, certificate number, date.

☐ A site map showing the location of the proposed project, treatment system (if applicable), discharge points, the receiving water, groundwater wells and residences within 1,500 feet.

3. Fee Requirement (To be submitted by New Dischargers.)

- ☐ Provide the applicable fee. Information concerning the applicable fee can be found at <http://www.waterboards.ca.gov/resources/fees/>. Checks must be made payable to the State Water Resources Control Board. For existing dischargers, the annual permitting fee satisfies this fee requirement when requesting continued coverage under this General Order.

4. Discharge Type (To be submitted by all Dischargers. Check all that apply.)

☐ Well Development Water	☐ Aggregate Mine
☐ Construction Dewatering	☐ Groundwater Extraction and/or Cleanup Project
☐ Pump/Well Testing	☐ Superchlorination
☐ Water Supply System	☐ Equipment Decontamination
☐ Pipeline/Tank Pressure Testing	☐ Wastewater from Cleanup Site
☐ Pipeline/Tank Flushing or Dewatering	☐ Liquid Mine Waste from Hard Rock Mine
☐ Condensate	☐ Other/Describe _____
☐ Filter Backwash	

5. Evaluation of Disposal/Reclamation Options (To be submitted by new Dischargers.)

Provide an evaluation of disposal/reclamation options and justification for selecting a surface water disposal alternative. If no alternative disposal options are viable, explain why (attach additional sheets as necessary). If alternative disposal options are feasible, contact the Central Valley Water Board. If the answer to any of the following questions is "Yes", then surface water disposal is not an option. THIS ORDER DOES NOT APPLY IF THERE IS NO DISCHARGE TO SURFACE WATERS.

Is discharge to the local municipal wastewater treatment plant a viable option?	☐ Yes ☐ No	Provide proof that discharge to the local municipal wastewater treatment plant is not viable or explain why it is infeasible to connect to the wastewater treatment plant. The Discharger may submit any denial or restrictive flow letter from the wastewater treatment plant as proof that this is not a viable option.
Is land disposal a viable option?	☐ Yes ☐ No	Provide an explanation why ponds, infiltration basins, spray disposal areas, and/or subsurface infiltration are not viable options.
Is underground injection a viable option?	☐ Yes ☐ No	Provide an explanation

6. Wastewater Sampling and Analysis Requirements (To be submitted by all Dischargers.)

- ☐ Provide the results of analysis of the wastewater for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged
- ☐ Provide the analytical data from the laboratory.
- ☐ Provide a summary of the screening results after comparison of the analytical results to the screening levels in Attachment I.

7. Additional Requirements for Discharges to Impaired Water Bodies (To be submitted if proposed discharge is to impaired water bodies pursuant to CWA section 303(d).)

- ☐ Provide the results of analysis of the wastewater for pollutants causing impairment under the current CWA 303(d) List, if proposing to discharge to an impaired surface water. The list of impaired surface waters can be found under the CWA section 303(d) List at the following web site:
http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/.

8. Additional Requirements for Discharges from Drinking Water Supply Systems (To be submitted for drinking water supply system discharges only, for application for Categorical Exception to Priority Pollutant monitoring requirements.)

If the discharge is necessary to implement control measures regarding drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code, then the Discharger shall submit the following for the approval of the Executive Officer of the Central Valley Water Board:

- ☐ A detailed description of the proposed action, including the proposed method of completing the action.
- ☐ A time schedule.
- ☐ A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality control procedures).
- ☐ CEQA documentation.
- ☐ Contingency plans.
- ☐ Identification of alternate water supply (if needed).
- ☐ Residual waste disposal plans.

Water suppliers with more than one discharge point shall submit:

- ☐ A Pollution Prevention and Monitoring and Reporting Program Plan which contains all of the elements in Attachment G.

9. Additional Requirements for Application for Intake Water Credits. (To be submitted by Tier 2 Dischargers where treatment is required to reduce pollutants to levels that will comply with effluent limitations prior to discharging to surface waters **and** where the primary source of water for the Discharger is the same as the water body that receives the effluent discharge.)

- ☐ Provide a written request for an intake water credit on a pollutant-by-pollutant basis;
- ☐ Provide a completed Attachment H;
- ☐ Provide the Analytical results of sampling of the intake water for the pollutants for which intake water credits are requested.

10. Additional Requirements for Wastewater Requiring Treatment Prior to Discharge (To be submitted by Tier 2 and Tier 3 Dischargers where treatment is required to reduce pollutants to levels that will comply with effluent limitations prior to discharging to surface waters.)

- ☐ A narrative description of the existing or proposed treatment system, including the technology that will result in the discharge of wastewater that complies with effluent limitations.
- ☐ Schematics and blueprints of the existing or proposed treatment system signed by a registered engineer.
- ☐ Analytical results of sampling of the treated effluent for the applicable pollutants specified in Table I-1 of Attachment I for the type of wastewater to be discharged.

11. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment."

A. Printed Name: _____

B. Signature: _____

C. Date: _____

D. Title: _____