August 20, 2019

ADDENDUM NO. 1 TO SPECIFICATION NO. 1376W
Well 59 Wellhead Treatment Facility

This addendum to the specifications is for the purpose of adding, clarifying, or deleting certain information to the construction drawings and project specifications as follows:

**BIDDING SHEETS**

DELETE Bidding Sheets in its entirety and replace with attached.

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**THE BIDDING SHEETS HAVE BEEN UPDATED AND ARE INCLUDED IN THE REVISED PROPOSAL PACKAGED MADE A PART OF THIS ADDENDUM. FAILURE TO SUBMIT THE REVISED PROPOSAL PACKAGE “MAY” DEEM YOUR BID NON-RESPONSIVE**

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**SPECIAL CONDITIONS**

**SC-15. Project Sign**

REVISE SC-15 as follows:

EMWD’s Mission Statement has been revised. Please use the following mission statement for the project sign: “To deliver value to our diverse customers and the communities we serve by providing safe, reliable, economical and environmentally sustainable water, wastewater and recycled water services.”

**SC-26. Maintenance Bond for Pumping Equipment**

DELETE SC-26 in its entirety and replace with the following:

The contractor or his supplier shall provide a maintenance bond (EMWD standard form C-14 or C-14.1) from a bonding company acceptable to the District equal to 100% of the pumping equipment value (including motors, pumps and pump assemblies) for a two (2) year term starting when the District has accepted the contracted work. Equipment and/or components failing within this period due to deficiency in installation, workmanship or material shall be removed, replaced, and reinstalled at no cost to the District, and said replacement shall be guaranteed for two years continuous service. The maintenance bond shall be submitted to the District prior to the performance test of the pump(s).
Warranty. All pumping equipment shall carry an extended warranty for a two year period from the date of installation. All warranties shall be turned into the District prior to project completion.

SC-33. Reduced Pressure Backflow Prevention Devices (RPBPD)

REVISE the first paragraph in SC-33 as follows:

Contractor shall provide low-lead lead free reduced pressure backflow prevention devices in accordance with the District’s Approved Materials List, District Standard Drawings and Detailed Provisions, and as shown on the Drawings.

SC-65. Emergency Eyewash/Shower Units

ADD SC-65 as follows:

Contractor shall furnish and install a new emergency eyewash/shower at the location shown on the revised Drawing D-57760 (Sheet M-01), per EMWD Std. Dwg. A-540 and Specification Section 15430. Contractor shall include connection and revisions to the water supply line and all fixtures and appurtenances shown; including signal alarm conduit and wiring to the PLC panel. Contractor shall update record drawings to show the revisions to the civil, mechanical, electrical, and instrumentation drawings necessary to provide a fully functional emergency eyewash/shower unit complete and in place.

SECTION P – CONTRACT DRAWINGS

P-01. Standard Drawings.

ADD the following Standard Drawing:

A-540 Emergency Shower & Eyewash

P-02. Construction Drawings.

REPLACE the following Drawings in their entirety:

Drawing D-57749 (Sheet C-01)
Drawing D-57760 (Sheet M-01)
Drawing D-57761 (Sheet M-02)

REVISE the following Drawings as described below:

Drawing D-57746 (Sheet G-03)
1. Pipe Identification Schedule – Pipe Material for TW pipe less than 4-inches in diameter shall be CPVC
**Drawing D-57754 (Sheet C-06)**
1. Detail 1 – Linked seals shall be grouted on both sides

**Drawing D-57762 (Sheet M-03)**
1. Note 6 – Valve Cap and Riser shall be per EMWD Standard Detail B-668

**Drawing D-57766 (Sheet E-02)**
1. Typical Trench Section – A separate concrete cap is not necessary over duct banks. Duct banks shall be encased in red concrete as shown.

**SPECIFICATIONS - DETAILED PROVISIONS**

DELETE the following Detailed Provisions in their entirety:

- Section 02572 Industrial Roll Gate (Custom)
- Section 09811 Chemical Resistant Coatings
- Section 11241 Chlorination System

REPLACE the following Detailed Provision in its entirety:

- Section 02525 Well Rehabilitation Rev1 (Custom)

ADD the following Detailed Provision:

- Section 11937.1 Vertical Turbine Pumps (Custom)
- Section 15430 Emergency Eyewash/Shower Units

REVISE the first sentence of 11357/2.04/A as follows:

The Pre-Negotiated GAC supplier shall furnish the granular activated carbon media.

**APPENDIX E – EMWD INDIAN AVENUE WELL #59 RECORD DRAWINGS**

ADD the following attached Record Drawings to Appendix E:

- Well Drilling and Casing As-Builts

**MANDATORY PRE BID WALK THROUGH**

A mandatory pre-bid walk-through meeting was conducted July 31, 2019 at 8:00 A.M.

NOTE: Refer to EMWDs website to obtain the Pre Bid Walk-Through Sign-In Sheet.
QUESTIONS & ANSWERS

Environmental Construction, Inc.

Q1. Please confirm that, per specs Section 09873 – 7, “The Contractor shall provide with his bid, a schedule of shop activities, including hours of work per day, days of work per week and total hours required for accomplishment of all shop cleaning and priming operations.” Can this schedule be provided after the bid by the successful bidder as part of the submittal process?

A1. This schedule can be provided by the successful bidder as part of the submittal process.

Pyramid Building & Engineering, Inc.

Q1. I noticed that a C-16 and or C-17 is the licensing requirement but I believe based on the amount of Civil work involved in this project this should be a minimum of an “A” License. We are requesting that you make the minimum license classification an “A” license which would encapsulate all facets of this project.

A1. The Prime Contractor’s license classification shall be Class A as shown in Specification Section 00027 Bidders Experience Record and Resume’s.

Q2. Please confirm there are no DBE, SBE, WBE, DVBE, or any other small business goal and/or advertisement requirements on this project.

A2. There are no DBE, SBE, WBE, DVBE, or any other small business goal and/or advertisement requirements on this project.

BC2 Environmental

Q1. Under contractor classification it states you need a Classification A. If we are rehabilitating a well, don’t you need to have a C-57 license?

A1. The sub-contractor performing the well rehabilitation work shall have a C-57 license.
Southwest Valve & Equipment

Q1. I’m looking to quote but would like some clarification in regards to the specification. Upon reviewing it, you reference AWWA C507 Ball valves but most of your description (ex. Seat options, brands listed, ball material) matches more of an industrial type valve. I have access to both but there is a substantial difference between an AWWA C507 ball valve (ex. Henry Pratt Co.) versus an industrial spec ball valve.

A1. AWWA standards, when referenced, must govern over all other industrial alternatives.

Schuler Constructors, Inc.

Q1. Contract calls for bids to be held for 75 days, due to tariff issues it is difficult getting suppliers to hold their quotes for more than 30days. Will the district consider price increases if it takes more than 30days to award?

A1. The District will not entertain an escalation clause for this contract. However, it is the District’s intent is to issue the notice to proceed for this contract on September 30, 2019 depending upon the bid results.

Q2. Does spec section 11241 apply to this project?

A2. No, this section has been removed from the specification.

Q3. SC-26 states we are to recondition the existing deep well pump and reinstall. It also states we are responsible for deficiency in design. How can we be responsible for design? Please clarify.

A3. The revised SC-26 has been included with this addendum.

Q4. SC-56 does not state that this will be done at additional cost to the district we cannot estimate the cost prior to bid time unless a quality is disclosed.

A4. The Contractor is to assume there is no ACP removal required for this project. SC-56 will apply only if ACP is encountered.

Q5. SC-57 are power monitors required to be installed on existing mcc for existing deep well pump and new backwash pumps.

A5. Power monitors shall be installed in the existing MCC for the deep well pump.
Q6. SC-11 we want to confirm that we are only to use power engineering services Inc. for the coordination study per 16040.

A6. The contractor shall follow what is stated in SSC-11 of Section 00110 Supplemental Special Conditions.

Q7. Will the district be providing all of the water sampling for bac-t testing for the project?

A7. Bac-T sample testing will be done by EMWD.

Q8. Will the district be providing compaction testing for the project?

A8. Yes, the District will provide compaction testing for the project.

Q9. Per section 01185 1.7 D c it states if the district cannot provide water for testing it is the contractor’s responsibility to provide. Please confirm the district will provide all water required for the project.

A9. Construction water will be provided as outlined in SC-07 of section 00100 Special Conditions.

Q10. Per section 01185 3.1 A and 3.3 it states the facility must remain in service. We were told at the pre-bid walk the well site was shutdown for out of compliance. Please confirm that no temporary facilities are required for well 59 during construction to keep it operating including water system.

A10. The facility will remain out of service during construction. No temporary facilities are anticipated, except as outlined in SC-07.

Q11. Per section 01190 1.08 4A will 3rd party tension testing be required for this project and will the district be providing special inspection.

A11. The District will be providing special inspection.

Q12. Please confirm spec section 02572 is not required.

A12. No, this section has been removed from the specification.

Q13. Per section 02718 3.06 will this be required for this project.

A13. Yes, specification section 02718, 3.06 is a District standard and is required for the project.
Q14. Per section 02734 does this apply to this project. Please clarify.

A14. This specification applies for the portions that are related to this project’s scope, including the well rehabilitation work.

Q15. Per section 09811 does this apply to this project. Please clarify.

A15. No, this section has been removed from the specification.

Q16. Per section 11241 does this apply to this project. Please clarify.

A16. No, this section has been removed from the specification.

Q17. Per section 11937 does this apply to the rehabilitation on the existing deep well pump work. Please clarify.

A17. Specification section 11937 is required in relation to the well rehabilitation and pump installation work clarified in the revised spec sections 02525 and 11937.1.

Q18. Please provide information on the existing mcc for the bucket replacement.

A18. Existing MCC is GE Evolution Series E9000. New equipment installations shall preserve the UL listing of the assembly.

Q19. Will the owner/engineer accept a city of Los Angeles certified fabrication shop for the steel work in lieu of or as an equal to the AISC quality cert. for fabricator.

A19. No, a City of Los Angeles certified fabrication shop for the steel work in lieu of or as an equal to the AISC quality certification for the fabricator will not be accepted.

Layne, A Granite Company

Q1. Can you provide an as-built for the existing pumping equipment currently installed in the Well 59? I looked for Appendices E but could not find the Well 59 drawing.

A1. The Well Rehabilitation work description is further clarified in the revised bidding sheets. Additional well drilling and casing as-builts have been added to Appendix E.

Q2. Can you provide asbuilt for well 59?

A2. Additional well drilling and casing as-builts have been added to Appendix E.
Q3. There are no pump replacement parts called out for this Bid Item. Are we to assume a Change Order will be issued for the pump materials that cannot be re-used after the removal and inspection has been performed?

A3. The Contractor shall bid for a new pump, as clarified in the revised spec sections 11937.1 and 02525.

Q4. Can you provide the setting depth, pump design, and flow for the test pump application?

A4. The Well Rehabilitation work description is further clarified in the revised spec section 02525, including setting depth, pump design, and flow requirements.

Q5. Please provide a detailed description of the chemical development including chemical quantities.

A5. The chemical development work description is further clarified in the revised spec section 02525.

Q6. Clarify the requested piping for the GAC contactor system piping? We prefer to provide epoxy coated carbon steel piping. The drawings suggest coated steel but the written specifications are unclear and there is reference to CLDI piping.

A6. Per the pipe schedule, drawings, and specifications, welded steel pipe will be used where indicated with the appropriate specified coating(s).

Q7. Verify/Clarify that the City or GC is pre-purchasing the GAC media independent of the GAC contactor system. The bid documents have a line item for the GAC media already but the specifications outline that the GAC contactor equipment supplier is providing the GAC media.

A7. The Pre-Negotiated GAC supplier is providing the GAC media as outlined in Bid item 6 and in Special Condition SC-51. Specification Section 11357/2.04/A has been revised in this addendum.

Q8. Confirm that alternative underdrains will be accepted aside from the external header. Layne believes that our underdrain plate with ~55 2” dia. holes will provide a more uniform backwashing profile.

A8. No, GAC contactors are to be provided with the external ring header described in specification section 11357, 2.02 B with no exceptions taken.
Q1. EMWD currently has (3) Microclor® systems at locations within the District. Per the instructions to submit questions on this project, please review our question regarding Specification 11241:
   - Will the Microclor® Onsite Sodium Hypochlorite Generator be accepted on this project?

A1. Section 11241 has been removed from the specifications (there is already an existing chlorine generation system onsite).

Aqueousvets

Q1. Section 11357 GAC Contractors Part 2 – PRODUCTS 2.01 GAC CONTRACTORS Calgon Model 10 Systems are an internal cone / false bottom underdrain design. In order to achieve a less than 8 psi head loss across the system an external header septa design must be provided. Also as listed in Item F. the external header septa design is required. Please confirm Calgon Model 10 Systems with an internal cone / false bottom underdrain are not accepted.

A1. Correct, Calgon Model 10 Systems with an internal cone / false bottom underdrain will not be accepted.

Q2. The Bidding Sheets and Special Conditions indicate that the GAC media purchase has been pre-negotiated. Specification Section 11357, 2.04A states that the GAC contactor manufacturer shall furnish the media. Please confirm that the equipment manufacturer does not have to supply the GAC media.

A2. The Pre-Negotiated GAC supplier is providing the GAC media as outlined in Bid item 6 and in Special Condition SC-51. Specification Section 11357/2.04/A has been revised in this addendum.

Q3. The GAC Contactor P&ID shows a total of 14 butterfly valves per GAC system. AV’s standard 4-tier manifold utilizes 11 valves. The extra valves shown in the P&ID will not offer any additional functionality to the GAC systems. Please see the attached P&ID for the proposal 11 butterfly valve 4-tier manifold. Please confirm if this is acceptable.

A3. The 11 butterfly valve 4-tier manifold is not acceptable. The extra valves are required to allow for forward flushing to the backwash tank.
Q4. Four (4) expansion joints per system are indicated in the P&ID, but aren’t referenced anywhere in the project documents. AV’s system are shop fit, meaning that we provide final fit up of all system piping and vessels in a shop environment to ensure field fit up is seamless and without the use of expansion joints. Please see the attached image of the Golden State Water project and the City of Tulare Project where the GC installed these systems in 4 hours without the use expansion joints. Please confirm this is acceptable.

A4. The expansion joints shown on the drawings are required, and shall be provided by the vessel manufacturer. Provide NSF/ANSI 61 approved Proco model 232 expansion joints, or approved equal.

Q5. Section 09900 Painting & Protective Coatings requires a Carboline System of Carbocrylic 3358/3359 MC. External coating systems for GAC contactors and associated above-ground piping are typically Carboguard 60 primer with a Carbothane 134LV topcoat. This coating system provides excellent corrosion and UV resistance. Please see attached specification sheets. Please confirm this is an acceptable substitute.

A5. Approved coating systems are outlined in section 09900. Any acceptable or-equal substitutions will be considered during the submittal stage of the project.

Canyon Springs Enterprises

Q1. BWS, BWW, RW, TW lines all have paint on above ground exposed pipe and BWW is also Epoxy Lined, 09900 2.01 pg 13 says “all paint to be delivered to jobsite unopened”. We are planning on our supplier sending CML & CMC where specified but on the paint, should they be sending the pipe Bare for painting in the field?

A1. No. Paint brought to the site for field coating purposes should arrive unopened. This does not mean that all painting and coating should be done in the field.
Eastern Municipal Water District

Paul D. Jones II, P.E.
General Manager

PE: [Signature]
PM: [Signature]
DFE: [Signature]
DE: [Signature]

PDJ:DC:bp:ae:jrm

ATTACHMENTS:
- Revised Proposal Package
- Drawing A-540 Emergency Shower & Eyewash
- Drawing D-57749 Rev1
- Drawing D-57760 Rev1
- Drawing D-57761 Rev1
- Section 02525 Well Rehabilitation Rev1
- Section 11937.1 Vertical Turbine Pumps (Custom)
- Section 15430 Emergency Eyewash/Shower Units
- Well Drilling and Casing As-Builts
NOTES: 1. INSTALL DIELECTRIC UNION BETWEEN DISSIMILAR METALS. FOR MFR. MATERIALS, MODEL SEE SPEC., SECTION E15430.
2. INSULATE EMERGENCY SHOWER & EYEWASH UNITS LOCATED OUTSIDE PER SPEC.
3. SUPPORT PIPING FROM ADJACENT WALL OR PROVIDE APPROVED FREE-STANDING PIPE SUPPORTS.
NOTES:

1. SEE SHEET E-03 FOR LOCATION OF TRAFFIC LOOPS.
2. LOOPS TO BE SAW CUT INTO PAVING AND RE-SURFACED WITH JOINT SEALANT PER SPEC.
3. MICROWAVE TOWER AND FOOTING BY CONTRACTOR. CONTRACTOR TO PROVIDE STRUCTURAL CALCULATIONS FOR FOOTING OF MICROWAVE TOWER. CONTRACTOR TO SUBMIT CALCULATIONS TO THE ENGINEER OF RECORD FOR VERIFICATION BEFORE CONSTRUCTION OF MICROWAVE TOWER AND FOOTING.

TRAFFIC LOOP *(TYP. OF 6)*

CONCRETE PAD FOR MICROWAVE TOWER

LAY DOWN LENGTH 40'
SECTION 02525
WATER WELL REHABILITATION

PART 1 - GENERAL

1.01 SUMMARY
A. Section includes:
   1. The furnishing of all labor, supervision, material, transportation, tools, supplies, plant, equipment and appurtenances necessary for the complete and satisfactory rehabilitation, development and testing of Well 59 production (water supply) well and pump located as shown and described in these Specifications.

1.02 SCOPE OF WORK
A. Production Well:
   1. The Work includes the complete rehabilitation of one (1) production water supply well. The Work includes:
      a. Pump Replacement including, but not limited to:
         1) Pulling Existing Pump.
         2) Furnish and Install New Pump.
         3) Start-up and Field Testing of New Pump.
      b. Develop well including, but not limited to:
         1) Initial Video Log of Well and Casing.
         2) Mechanical Well Development.
         3) Video Log after Mechanical Well Development.
         4) Chemical Treatment of Well.
         5) Dual Swab Airlift.
      c. Test pump well including, but not limited to:
         1) Furnish and install Test Pump.
         2) Operate Test Pump.
         3) Remove Test Pump.
      d. Video inspect well with a camera with side scan capabilities.
      e. Disinfect well and test for bacterial contamination.
      f. Properly dispose of all surplus materials and restore site.
      g. Perform all specified operations incidental to well rehabilitation such as permits, logs, filing of records, temporary capping, and cleanup.

1.03 REFERENCES
A. State of California, Department of Water Resources Bulletin No. 74-81 and 74-90 (Bulletin No. 74).
B. AWWA Standard A100.
C. Riverside County Well Permit.

1.04 SUBMITTALS

A. Submit for approval of all products specified in accordance with these Specifications.

B. Product Data: Fully describe every product proposed for use for well rehabilitation and well pump replacement.

C. Plan of Operations: Contractor shall submit a Plan of Operation to the District prior to starting rehabilitation of the Production Well and pump. The Plan of Operation shall include identification of any subcontractors, a description of the firm, a copy of all required permits, and a description of the procedures and outputs from the procedure.

D. Rehabilitation Log: The Contractor shall keep an accurate log of the material found during the rehabilitation of the well and show the elevations at which the material was encountered. A complete report of the log shall be submitted to the District via e-mail at the end of each day’s rehabilitation operation. All records shall be available to the District at all times at the job site. Five (5) copies (each) of all records shall be typed and submitted to the District on 8 ½” paper or as necessary to convey information adequately. During rehabilitation, the Rehabilitation Log shall include the following:
   1. Reference point for all depth measurements.
   2. All construction entities and information necessary to complete a State and Riverside County Driller’s Log. (Log will be reviewed and approved by the District prior to submittals).
   3. Swabbing and surging/air lift pumping records.
   4. Development pumping records.
   5. Site Test pumping records including specific capacities, drawdowns, pumping rates.
   7. Constant pumping rate, drawdown, times, and specific capacity.
   8. A digital recording on DVD or thumb drive of the color video log of the well casing/screen. NOTE: Only one (1) copy of each video log at the designated review stages is required to be submitted to the District.

E. Mechanical Development Records: including time, sequence and duration of swabbing, jetting and mechanical development. This shall include record of solids production and estimated drawdown. Reports shall be provided twice daily during development and a complete record submitted within 5-days of completion of development.
F. Surging and Pumping Development Records: including time, sequence and duration of surging and pumping rates for this phase of development. This shall include record of sand production, estimated drawdown and plot of specific capacity and monitoring of turbidity. Reports shall be provided twice daily during development and a complete record submitted within 5-days of completion of development.

G. Aquifer Testing Records: Static water level, pumping rate, pumping water level and well recovery shall be recorded and submitted.

H. Records Required: The Contractor shall keep development and aquifer test records maintained on a continuous basis, showing production rate, static water level, pumping water level, drawdown, sand production, turbidity and all other pertinent information concerning method of development and aquifer testing.

I. Video Survey of completed well, per paragraph 3.04, this section.

J. Report Required: The Contractor shall file with the State of California, Riverside County, and other required Agencies, such reports and logs which may be required, including Notice of Intent to Engage in Rehabilitation of a Well, Well Completion Report, and supplemental reports as may be required. Submit two (2) copies of the Well Completion Report to the District within ten (10) days of completion of the well. The final rehabilitated well shall have water quality and bacteriological analysis as required by Department of Drinking Water and as specified herein.

K. Material Submittal: Submit data to show that all materials to be used in rehabilitation of the well and pump conform to the Specifications.

L. Samples: Furnish, without additional cost to the District, such quantities of construction materials as may be required by the District for test purposes. The Contractor shall cooperate with the District and furnish necessary facilities for sampling and testing of all materials and workmanship. All materials furnished and all work performed shall be subject to rigid inspection, and no material shall be used in the construction work until it has been submitted and favorably reviewed by the District.

1.05 QUALITY ASSURANCE

A. Well Rehabilitation:
   1. The Contractor shall have been engaged in the business of test pumping, constructing test holes, and well drilling and/or equipping wells of diameter, depth, and anticipated production equivalent to the proposed production wells for a period of at least five (5) years.
   2. The Contractor shall submit a list of the last three (3) municipal well owners other than the District for whom the Contractor has rehabilitated equivalent municipal-domestic wells. The list shall include the owner’s name and
address, phone number, casing diameter, type, and depth, capacity, and general work performed.

3. The Contractor shall employ only competent workers for the execution of the work and the field superintendent shall have a minimum of five (5) years recent experience in this type of rehabilitation work.

4. The Contractor shall, at its own expense, procure all permits, certificates, and licenses required of the Contractor by law for the execution of this work. The Contractor shall comply with all federal, state and local laws, ordinances or rules and regulations relating to the performance of the work, including the requirements of the State of California Department of Water Resources Bulletin No. 74. The cost of all permits, certificates and licenses required by law for the completion of the described work shall be considered as included in the Production Well Completion and Testing bid price in the Bid Schedule.

1.06 NOTIFICATION

A. The Contractor shall be responsible to give notice to the District in writing prior to performance of specific operations as follows:
   1. At least five (5) working days advance notice of intent to move onsite, replacement of the rehabilitated pump, and startup and testing of the rehabilitated pump.
   2. At least seventy-two (72) hours advanced notice to remove and inspect the pump, motor, shaft, and column.
   3. At least three (3) working days notice of intent to move offsite.
   4. At least twenty-four (24) hours advance notice for the following operations:
      a. Collection of water quality samples.
      b. Conduct of test pumping.
      c. Conduct of disinfection.

B. The District will perform construction observation and inspection. The Contractor shall telephone the District daily with a report on the status of the work and the expected work to be accomplished in the next twenty-four (24) hours, which shall be followed up by the Contractor with a summary report of the discussion via email.

PART 2 - PRODUCTS

2.01 WATER

A. Water used in well construction and disinfection shall be potable water from a source approved by the District.
2.02 WELL PUMP
   A. Contractor shall pull existing pump and install a new well pump. See Section 11937.1 and Section 11937 for details on the new well pump.

2.03 CHEMICAL SOLUTION
   A. Chemical treatment: A solution of 10% Innova well cleaner shall be used for well chemical treatment. It is estimated that 800 gallons of Innova well cleaner blending with 1,200 gallons of potable water at minimum are needed.
   B. Contractor is responsible to provide the chemical or chemicals needed to neutralize the pH following chemical treatment.
   C. Disinfection: A pH adjusted chlorination at 250-ppm chlorine level with a targeted pH range of 6.5 to 7.0 shall be used for well disinfection. The disinfection solution shall include 27 gallons of 12% strength sodium hypochlorite, 27 gallons of Oximate chlorine enhancer and 12,800 gallons of potable water at minimum.

PART 3 - EXECUTION

3.01 EQUIPMENT AND OPERATING REQUIREMENTS
   A. Equipment: The Contractor shall provide equipment, which is in first class working order. Large engine driven and/or portable equipment greater than 50 HP shall be registered with the California Environmental Protection Agency Air Resource Board Portable Equipment Registration Program (PERP) and is authorized for operation within Riverside County. No unnecessary delays or work stoppages will be tolerated due to inadequate or faulty equipment. The Contractor shall be held responsible and payment may be withheld for damages to the well due to any cause of negligence or faulty operation.
   B. Hole Protection: The Contractor shall take all measures necessary to protect the well.
   C. All debris and unused materials from the site shall be disposed of by the Contractor at no additional cost to the District.

3.02 WELL REHABILITATION
   A. The intended operating capacity of the water extraction well is as follows:

<table>
<thead>
<tr>
<th>Well</th>
<th>Intended Capacity (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well 59</td>
<td>1,000</td>
</tr>
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</table>
B. It is expected that the water supply well will have to be rehabilitated to a depth of 685 feet, measured from the ground surface, in order to produce the desired yield. The record drawings (District Spec 992W) attached in the Appendix should provide additional well information to the Contractor, including but not limited to well depth, casing size and thickness, sounding and gravel tubes sizes and locations, pump intake setting, and approximate level of the groundwater. The well shall be rehabilitated as described in the Contract Documents.

3.03 PROTECTION OF THE SITE

A. Contractor access shall be limited to the area shown in the Contract Drawings and as directed by the District. Contractor shall protect and repair any damage to existing features and improvements to the satisfaction of the District.

B. The site layout shall be contained within the boundaries depicted as shown on the Contract Drawings. The Contractor shall be responsible for all temporary construction fencing, site security and protection.

C. Noise suppression shall be installed to minimize disturbance to persons living or working nearby and shall be as follows:

1. The measures to be used in effecting noise suppression shall include (but are not limited to) equipping all internal combustion engines with critical residential silencers (mufflers), shielding noise-producing equipment from nearest areas of human occupancy by locating in such positions as to direct the greatest noise emissions away from such areas, and conducting operations in the most effective manner to minimize noise generation consistent with the prosecution of the Contract in a timely and economic manner.

2. Noise levels shall be controlled in such a manner that they do not exceed eighty (80) decibels dB(A) at the property line of the nearest property owners between the hours of 7:00 am and 7:00 pm. Construction or rehabilitation work is prohibited between the hours of 7:00 pm and 7:00 am, and on Sundays, per the City of Perris noise Ordinance. It will be important for the Contractor to minimize such noises or disturbances created from construction activities during the day. If noise emanating from the site exceeds these levels then the Contractor will not be allowed to proceed with operations until the condition(s) causing the excessive noise has been corrected. The cost for delays due to the condition(s) will be the Contractor’s responsibility.

3. Noise barrier walls, if required shall be installed, maintained and removed by the Contractor.

4. In addition to the barrier walls, the Contractor shall provide adequate equipment noise control. Diesel engine acoustical enclosure of steel framed, fiberglass-filled panels shall be required for all drill rigs, compressors and pumps.
Design noise reduction shall be 20 dB(A) measured at equipment height. Where these engines are not properly isolated to prevent noise in the supporting structure, this secondary noise shall be treated, such as via the use of acoustic skirts for drill rig trailers. High performance mufflers shall be used on all diesel engines in regular use on the well site. Truck engines are excluded. The use of air impact wrenches or similar equipment used on drill pipe flange bolts shall not be allowed.

3.04 DEVELOPMENT

A. Mechanical Well Development: Contractor shall pull the existing pump and mechanically scrub the interior of the well casing and screen sections using a tight-fitting surge block or brush and bail the disrupted materials and any fill from the well. See Specification Section 02734, Paragraph 2.15.

B. Chemical Development: Contractor shall place a solution of 10% Innova well cleaner into the well screen sections through a tremie pipe, and aggressively swabbing or surging it into the well screen for 10 hours at minimum while maintaining a pH of 3 or less. Contractor shall then purge the well until visual turbidity is absent, and pH has returned to normal background levels, and the conductivity has returned to a normal, pre-treatment range. See Specification Section 02734, Paragraph 2.16.

C. Well Disinfection after Chemical Development: Contractor shall surge the disinfection solution per Paragraph 2.03 into the well for 6 hours at minimum and monitor the chlorine level during disinfection. Add additional sodium hypochlorite in increments of 0.1 gallons to maintain at least a 100-ppm chlorine level. Leave the solution in the well overnight and surge for 1 hour the following morning before pumping off and disposing of the spent chemical solution according to local regulations. See Specification Section 02734, Paragraph 2.24.

D. Mobilization and Demobilization of Test Pump and Appurtenances: See Specification Section 02734, Paragraph 2.17.

E. Pumping Development: See Specification Section 02734, Paragraph 2.18


G. Color Video Camera Survey: Contractor shall perform three video inspection of the well. The first video inspection shall be performed after pulling out the existing well pump and before the mechanical development. The second video inspection shall be performed after the mechanical well development and before the chemical treatment. The third video inspection shall serve as the final inspection of the completed well rehabilitation after the aquifer test. See Specification Section 02734, Paragraph 2.22.

H. New Well Pump Installation: Contractor shall install a new well pump. See Specification Section 11937.1 for details.

3.05 WATER DISPOSAL

A. The Contractor shall, as part of its pre-construction site inspection, determine the temporary disposal pipeline routes and the lengths of pipe required and prepare a Water Disposal Plan submittal. The Contractor shall provide all necessary temporary piping from the well to the point of disposal, the pump blow off piping as shown on the Contract Drawings.

B. For dechlorinated water disposal the chlorine concentration in the water shall be reduced to 0.01 mg/L. Portable water quality testing equipment shall be by Hach, Hanna, or equal system.

C. The Contractor shall dispose of all testing and development water without damage to any property, and in accordance with applicable regulations at no additional cost to the District.

3.06 CLEANUP

A. Upon completion of the new well, the Contractor shall remove all equipment from the site and restore the site to a condition similar to that existing prior to construction of the well. Cleanup shall include restoration of any area disturbed by disposal of water during development and test pumping.

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION

A. This section provides specific details regarding the replacement deep well vertical turbine pump at Well No. 59 and is to be utilized in conjunction with Specification Section 11937 Deep Well Vertical Pumps, and Section 02525 Water Well Rehabilitation. Data included herein, including specified materials, shall supersede data specified in Specification Section 11937.

B. Related Specification Sections

1. Section 02525 – Water Well Rehabilitation
2. Section 11937 – Deep Well Vertical Pumps
3. Section 16150 - Induction Motors
4. Special Conditions

1.02 PUMP REQUIREMENTS

A. The following criteria shall be used for final sizing and selection of the deep well vertical turbine pump:

1. Fluid Pumped: Well water
2. Specific Gravity: 1.0
3. Well Casing: 16" ID x 5/16" wall (Copper bearing steel)
4. Horsepower/Speed: 75 hp/1,780 rpm (brake horsepower, field, shall not exceed nameplate rating within entire operating range).
5. Static Water Level: Approximately 100 ft below ground surface; actual to be measured in the field
6. Drawdown: 48 ft (@ 1,000 gpm; specific capacity 21 gpm/ft); specific capacity to be confirmed through the proposed Step Tests and Constant Rate Test.

7. Pumping Water Level: 149 ft to 179 ft below ground surface

8. Pump Inlet Depth: 240 ft below ground surface

9. Number of Bowls: Minimum of 3, Maximum of 4 (for future adjustments to groundwater depth)

10. Line Shaft: Enclosed (water lubricated, solenoid controlled); 1-3/16" 416 Stainless Steel.

11. Impellers: Enclosed-type, polished bronze.


13. Pump Bowl Lateral Adjustment: 1.0" (minimum).

14. Column Piping: 10" nominal, 10.75" O.D., 0.308" wall, 34.24 lb/ft.

15. Strainer: 316 stainless steel. Strainer shall match suction pipe diameter. Provide 10 ft long standard weight column (diameter shall match column pipe diameter) between pump inlet and strainer.

16. Discharge Head: 12” flanged outlet; strainer shall match column pipe diameter; 10-foot long 10” standard weight column between pump inlet and strainer.

17. Driver: Vertical hollow shaft electric motor, Design B, high thrust, inverter duty rated, premium efficient, with Weather Protected Type I enclosure, angular contact ball bearings, space heater (120V), oversized conduit box, non-reversing mechanism, and winding thermal overload protection.

18. Furnish and install ductile iron, double bolted pump bowls to meet bowl pressure rating criteria set forth per Section 11937, Part 2 - Products, Item 2.01, F, Pump Bowls. Specifically, bowls shall be able to withstand a minimum of 150% of the maximum pump shut-off head (zero PGM) pressure or twice the pressure at rated capacity, whichever is greater.
19. Jointless Chlorination Tube: 1/2" diameter jointless dual-purpose airline/chlorination pipe of polyethylene flexible tubing shall be furnished of sufficient length to extend from the surface to the top of the bowl assembly. The tubing shall be attached to the column assembly with 1" wide stainless steel hose clamps spaced a maximum of 10' apart. Stub-up and cap-off tubing 12" minimum above the pump surface plate. Sealed, threaded tubing surface plate penetration shall be provided for chlorination pipe.

20. Jointless Airline Tube: 3/8" diameter jointless airline of polyethylene flexible tubing shall be furnished of sufficient length to extend from the surface to the top of the bowl assembly. The tube shall be attached to the column assembly with 1" wide stainless steel hose clamps spaced a maximum of 10' apart. Stub-up 12" minimum above the pump base plate. Sealed, threaded tubing surface plate penetration shall be provided for airline tube. Provide mounting bracket at pump discharge flange with Schrader valve and pressure gauge graduated to represent depth of water in well.

21. Design Points:

<table>
<thead>
<tr>
<th>Point No.</th>
<th>Q (gpm)</th>
<th>Total Head (ft)</th>
<th>Min. Pump Eff.</th>
<th>Max. Total B.H.P.</th>
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<tr>
<td>Shut-off Head</td>
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<td>271</td>
<td>---</td>
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</tr>
<tr>
<td>1</td>
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<td>5</td>
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<td>124</td>
<td>76%</td>
<td>50</td>
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</table>

* Denotes design point (Q and head firm)

B. Preliminary pump selections are as follows: Goulds 12CLC-3 with 3 bowls/stages, as manufactured by Goulds Pumps. Alternative pumps will be evaluated for acceptability based on the following list in the order of importance:

1. "Steepness" of the pump curve between 600 gpm and 1,100 gpm.

2. Horsepower requirements and efficiencies at the above list points. In no case shall total brake horsepower, inclusive of column, discharge head,
and thrust bearing losses exceed 60 hp over the entire operating range of the pump. Contractor shall verify required pumping unit horsepower including all losses (shaft, bearing, column, etc.) and confirm selected unit does not exceed rated horsepower of the electric motor furnished. The service factor of the electric motor shall not be used in determining the rating of the motor. Pump manufacturer shall trim pumping unit impellers, at no cost to the District, if proposed unit exceeds the rated horsepower of the electric motor. Contractor shall submit for District approval, all required data and calculations to determine horsepower requirements of the pumping unit and electric motor.

3. Number of stages/bowls.

C. Testing

1. Prior to final acceptance, the Contractor shall perform field pumping unit performance testing in the District’s presence.

2. Motor vibration shall be measured with and without pump shaft disconnected to verify motor vibration performance.

3. Pump manufacturer shall perform a two plane dynamic balance test on pump impellers prior to factory testing.

D. Lateral Design and Restraint

Reference is made to Technical Specification Section 11005, Part 3.11. All equipment, major components, anchorage parts, and bolts shall withstand stresses caused by ground movement (seismic forces) in accordance with California Building Code (CBC), latest edition, for Occupancy Category IV Facilities in any horizontal direction and vertical direction. Safety factor for overturning shall be 1.5:1.

Calculations and anchorage details shall be prepared by State of California licensed engineer (civil or structural) and submitted for Owner’s review for the deep well vertical turbine pumping unit. Contractor shall not place the foundations for above equipment until the calculations and anchorage details are approved by Owner. If foundations are placed without Owner approval, they shall be removed at the expense of the Contractor.

E. Lateral and Torsional Vibration Analysis
1. The pumping unit manufacturer shall perform lateral and torsional vibration analyses of all pumping unit system components, including, but not limited to, the following: electric motor driver, fabricated discharge head, pump column, line shaft, and pump assembly.

2. The analysis shall be performed by a specialist experienced in equipment lateral and torsional vibration analysis on pumping unit systems of comparable size and complexity. The specialist shall be approved by the District.

3. The vibration analysis shall be based on a finite element computer model of the pumping unit system. As a minimum, the analysis shall consist of: system natural frequencies and mode shapes, comparison of natural frequencies with excitation frequencies, assessment of potential resonances, steady-state forced response analysis, steady-state stresses and allowables, transient analysis due to shaft torque time history (including normal startup and shutdown, and emergency/fault shutdown), transient stresses and allowables, and fatigue life analysis. The lateral and torsional natural frequencies of the pumping unit system must be avoided by ±25% by any exciting frequency of the equipment, throughout the entire pumping unit operating speed range of 1,250 rpm to 1,800 rpm with the electric motor driver and variable frequency drive.

4. The pumping unit manufacturer shall coordinate with the electric motor and VFD manufacturers to obtain necessary analysis data and to mutually resolve any incompatibilities between equipment and drivers.

5. The fabricated steel discharge head shall be reinforced and stiffened as necessary for pumping unit system natural frequencies to avoid exciting frequencies by ±25% (minimum). External secondary support members will not be allowed for increasing pumping unit system frequency.

6. Pump manufacturer shall prepare a written report describing each portion of the lateral and torsional vibration analysis performed for the project, proposed strengthening and/or stiffening of pumping unit components, and results demonstrating compliance with analyses and criteria specified herein. Contractor shall submit the Lateral and Torsional Vibration Analysis Report with manufacturer submittal data for the pumping unit.
PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 INSTALLATION OF THREADED COLUMN PIPING AND COUPLINGS

Thread sealant shall be applied liberally during installation to completely cover all threads. Column and couplings shall be installed slowly to prevent wear between column threads and coupling threads. Contractor shall torque column piping per pipe fabricator's recommendations.

END OF SECTION
SPECIFICATIONS - DETAILED PROVISIONS

SECTION 15430
EMERGENCY EYEWASH/SHOWER UNITS

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</tbody>
</table>
PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Emergency shower and eyewash.

B. Inclusion of a specific manufacturer’s name in the Specifications does not mean that the specific manufacturer’s standard product will be acceptable. Specified manufacturer’s or other manufacturer’s standard product shall be modified as required to meet the specifications.

C. Related Sections/Standard Drawing:
   1. Section F - Labor and Construction.
   3. Section 13422C - Flow Field Instruments.
   4. Section 15050 - Basic Mechanical Materials and Methods.
   5. Section 16050 - Basic Electrical Materials and Methods.

1.02 REFERENCES

A. American National Standards Institute (ANSI):

B. NIOSH Schedule 13F.

1.03 SUBMITTALS

A. Shop Drawings.

B. Product Data:
   1. Submit manufacturer's product literature information for products specified.
   2. Manufacturer's Installation Instructions.

C. Operation and Maintenance Data.

D. Warranty.
1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Show evidence that the firm has been engaged in producing such materials and products for at least 5 years and that the product submitted has a satisfactory performance record of at least 5 years.

B. Installer Qualifications: Installer shall have 3 years experience in installing these materials for similar projects and shall be approved by the manufacturer prior to bidding of the project.

C. Regulatory Requirements:
   1. As applicable, equipment of this Section shall comply with requirements of public agencies of the state where the project is located including OSHA, Cal-OSHA, Underwriters Laboratories, NFPA, and ASME.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Deliver to the job site in manufacturer's original containers.

B. Delivery: After wet operations in building are completed.

C. Storage and Protection: Store materials in original, unopened containers in compliance with manufacturer's printed instructions.

D. Keep materials dry until ready for use. Keep packages of material off the ground, under cover, and away from sweating walls and other damp surfaces.

E. Protect finished surfaces from soiling and damage during handling and installation. Keep covered with a protective covering.

PART 2 PRODUCTS

2.01 EMERGENCY SHOWERS AND EYE WASHES

A. General Design Requirements:
   1. Combination Unit Emergency Shower with Eyewash or Eye/Face Wash:
      a. Floor mounted fixture consisting of pipe standard, shower head assembly, and eyewash assembly.
      b. Provide stanchion and floor flange, with interconnecting piping.
   2. Shower Head Flow: 20.0 GPM.
   3. Eyewash or Eye/Face Wash Flow: 1.2 GPM flow, minimum.
   4. Provide with manufacturer's standard corrosive resistive coating for steel pipe standards.
   5. Meet or exceed all requirements of ANSI Z358.1.
6. Provide ANSI compliant identification sign and markings.
7. Provide dielectric coupling/bushing between dissimilar metals.

B. Stainless Steel Combination Unit Emergency Shower and Eye/Face Wash:
   1. Manufacturers: One of the following, no equal:
      a. HAWS, Model No. 8330.
      c. Bradley, Model No. S19-310SSJP.
   2. Pipe Standard: 1-1/4 inch stainless steel pipe (304SS) and fittings, with stainless steel rod providing additional support overhead; 5 inch diameter floor flange.
   3. Shower Head:
      a. Material and Size: Stainless steel (304SS), 10 inch diameter, or greater.
      b. Valve and Actuator: Stay open Type 316 stainless steel ball valve actuated by rigid stainless steel pull rod.
   4. Eye/Face Wash:
      a. Valve and Actuator: Stay open Type 316 stainless steel ball valve with stainless steel ball operated by stainless steel push handle and foot treadle.
      b. Heads: Stainless steel (304SS) soft-flow eye/face wash type heads, with integral flip top protective dust covers releasing with water pressure.
   5. Receptor Bowl: Stainless steel (304SS).

C. Safety Shower Tester:
   1. Manufacturers: One of the following or equal:
      a. Haws, No. 9010.
   2. Kit includes: 5-gallon plastic bucket, 7-foot long watertight 12-gallon translucent vinyl plastic bag for attaching over drench shower head, and testing record card. Bag shall have drawstring at top and be hemmed at bottom.

D. Safety Shower Tepid Water Supply System:
   1. Manufacturers: One of the following or equal:
      a. Haws.
   2. General Requirements:
      a. Provide one Tepid Water System for each safety shower unit or group of safety shower units mounted within 100 feet of each other.
      b. Tepid Water System to provide 20 gpm of water for a period of at least 15 minutes at a delivery temperature of 80 to 85 degrees Fahrenheit.
Emergency Eyewash/Shower Units
Section 15430-4

E. Flow Switch:
   1. Provide N.O. contact for remote indication when eye wash station is in use as indicated on the Drawings.
   2. Switch shall be as specified in Section 13422C.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install products in accordance with manufacturers' recommendations.
B. Install fixed equipment in accordance with manufacturer's instructions.
C. Plumbing and mechanical work shall be in accordance with Section 15050.
D. Electrical connections and distribution shall be in accordance with Section 16050.

3.02 PROTECTION

A. Repair or replace defective equipment with new.
Addendum No. 1 - Appendix E

WELL COMPLETION REPORT

STATE OF CALIFORNIA

WELL OWNER
Eastern Municipal Water District

Mailing Address
P.O. Box 8300
Perris, CA 92572

ORIENTATION (X) 

X VERTICAL ___ HORIZONTAL ___ ANGLE (SPECIFY) 

DEEPER METHOD 
Reverse Rotary 

FLUID 
WATER 

DESIGNATION 

GEOLOGIC LOG 

Describe material, grain size, color, etc.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
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<tbody>
<tr>
<td>50</td>
<td>Silt</td>
</tr>
<tr>
<td>60</td>
<td>Silt and Clay</td>
</tr>
<tr>
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<td>Fine grain sand and silt</td>
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<td>Silty and Clay 65% Fine Sand</td>
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<td>360</td>
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<td>380</td>
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<td>500</td>
<td>Clay 100%</td>
</tr>
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TOTAL DEPTH OF BORING 698 (Feet)
TOTAL DEPTH OF COMPLETED WELL 685 (Feet)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 94 (FT) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 94 (FT) & DATE MEASURED 9-22-04
ESTIMATED YIELD 1000 (GPM) & TEST TYPE Pumping
TEST LENGTH 62 (FT) TOTAL DRAWDOWN 50 (FT)

* May not be representative of a well’s long-term yield.

DEPTH FROM SURFACE 0 50 260 340 350 375
BLANKET DIA (Inches) 42 34 34 34 28 26
TYPE / L 0 8 260 340 340 350
BLANKET DIA (Inches) 210 212 212 695
Casing Material SCH 40 MILD STEEL SCH 40 MILD STEEL SCH 40 MILD STEEL SCH 40 MILD STEEL SCH 40 MILD STEEL
INTERNAL DIAMETER (Inches) 36 16 16 16 16
GAUGE OR WALL THICKNESS 3/8 5/16 5/16 5/16 5/16
SLOT SIZE (Inches) 0.07 0.07

ANNULAR MATERIAL

DEPTH FROM SURFACE 0 210 212 212 695
Cement (Q) 0 210 212 212
 Bentonite (Q) X X X
 Fill (Q) 10 Sack Medium Sand
 Filter Pack (Type) TACNA 6X12

CERTIFICATION STATEMENT

1, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

LAYNE CHRISTENSEN COMPANY

NAME _______________________________

PERSON, FIRM OR CORPORATION (TYPE OR PRINTED)

ADDRESS: 11097 ETIWANDA AVE

FONTANA CA 92337

DATE 

STATE OF CALIFORNIA

WELL LOCATION
NW Corner of Indian/ Nance

CITY
Perris

STATE
CA

COUNTY
Riverside

APN Book 302 Page 020 Parcel 009-8

TOWNSHIP 4S RANGE 3W SECTION 6

LATITUDE

DEG MIN SEC

LONGITUDE

DEG MIN SEC

ACTIVITY (X)
NEW WELL MODIFICATION/REPAIR
DEEPEN
OTHER (SPECIFY)
DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (X)
WATER SUPPLY
DOMESTIC
IRRIGATION
POLLUTION

MONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT PUSH
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDY ONE - OTHER (SPECIFY)

ILLUSTRATE OR DESCRIBE DISTANCE OF WELl FROM ROADS, BUILDINGS, FENCES, RIVERS AND OTHER HAZARDS.

WELL USE:

FILE WITH DVR

Page 1 of 2

Owner's Well No. 8-19-04
End Date 8-19-04

Riverside County Dept. of Health
Permit No. 29306 Permit Date 8-19-04

Addendum No. 1 - Appendix E

Addendum No. 1 - Appendix E
**WELL COMPLETION REPORT**

**ORIGINIAL**
File with DWR

**Addendum No. 1 - Appendix E**

**State of California**

**WELL LOCATION**
City: Perris
State: CA
ZIP: 92572

**WELL OWNER**
Eastern Municipal Water District
Mailing Address: P.O. Box 8300

**WELL DATA**
Depth of Static Water Level: 94 (ft) below surface
Water level: 94 (ft) & date measured: 9-22-04
Estimated yield: 1000 (gpm) & test type: Pumping

**GEOLOGIC LOG**

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<thead>
<tr>
<th>Depth (ft)</th>
<th>Material</th>
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<tbody>
<tr>
<td>500 - 520</td>
<td>Sand</td>
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<tr>
<td>520 - 600</td>
<td>Clay</td>
</tr>
<tr>
<td>600 - 620</td>
<td>Sandy clay</td>
</tr>
</tbody>
</table>

**TOTAL DEPTH OF BORING:** 598 (Feet)
**TOTAL DEPTH OF COMPLETED WELL:** 685 (Feet)

**CERTIFICATION STATEMENT**

1. The undersigned certify that this report is complete and accurate to the best of my knowledge and belief.

**LAYNE CHRISTENSEN COMPANY**

**ADDRESS:**
11201 Etiwanda Ave, Fontana, CA 92337

**FAX NO:** 909 390 6097