

DEPARTMENT OF TRANSPORTATION

ESC/OE MS #43
1727 30TH Street, 2ND Floor
SACRAMENTO, CA 95816



May 17, 2000

09-Iny-5716
09-265204

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in INYO COUNTY IN SHOSHONE AT THE SHOSHONE MAINTENANCE STATION AT JUNCTION OF ROUTES 127 AND 178.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on June 6, 2000.

This addendum is being issued to revise the Notice to Contractors and Special Provisions.

In the Special Provisions, Section 12-4.01, "CONCRETE MASONRY UNITS," on page 101, the first paragraph is revised as follows:

Unit Strength.--Provide masonry units that develop the following installed compressive strengths (f'_m) at 28 days:

Based on net area $f'_m = 13.8$ MPa.

In the Special Provisions, Section 12-11.05, "RECYCLE PROCESS UNIT SYSTEM," is added as attached.

To Proposal and Contract book holders:

INDICATE RECEIPT OF THIS ADDENDUM BY FILLING IN THE NUMBER OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE SIGNATURE PAGE OF THE PROPOSAL.

SUBMIT BIDS IN THE PROPOSAL AND CONTRACT BOOK YOU NOW POSSESS. HOLDERS WHO HAVE ALREADY MAILED THEIR BOOK WILL BE CONTACTED TO ARRANGE FOR THE RETURN OF THEIR BOOK.

INFORM SUBCONTRACTORS AND SUPPLIERS AS NECESSARY.

This office is sending this addendum by confirmed facsimile to all book holders to ensure that each receives it.

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

NICK YAMBAO, Chief
Office of Plans, Specifications & Estimates
Division of Office Engineer

Attachment

12-11.05°°RECYCLE PROCESS UNIT SYSTEM

PART 1.-GENERAL

SUMMARY

Scope.--This work shall consist of furnishing and installing a wash water recycle process unit system and appurtenances in accordance with the details shown on the plans and these special provisions.

Recycle process unit system and appurtenances shall include products and other fittings and appurtenances, not mentioned, which are required for the complete installation and proper operation of the system.

Earthwork for installation of pipes, manholes, cleanouts and other appurtenances shall be as specified under "Earthwork for Building Work," in this Section 12-2 of these special provisions.

Concrete and reinforcement shall conform to the requirements specified under "Cast-in-place Concrete," in Section 12-3, "Concrete and Reinforcement," of these special provisions.

Recycle Wash Water System shall conform to the requirements specified under "Recycle Wash Water System," in this Section 12-2 of these special provisions.

SUBMITTALS.--

Working drawings and seismic design.--Working drawing and seismic design calculations for the RPU system and the water storage tank shall be submitted for approval. Working drawings for the storage tank shall include location and type of penetration fittings installed by the tank manufacturer. The drawing and calculations shall be stamped and signed by an Engineer who is registered as a Civil or Structural engineer in the State of California.

Product data.--Materials list for the recycle process unit and all components materials to be used shall be submitted for approval and shall include the name of the manufacturer and the source, model number, description, and standard of manufacture.

The required data and catalog cuts shall be submitted for the following:

Recycle Process Unit and Components

OPERATION AND MAINTENANCE MANUALS.--

Operation and maintenance manuals.--Prior to the completion of the contract, 3 identical copies of the operation and maintenance instructions with parts lists for the equipment specified herein shall be delivered to the Engineer at the jobsite. The instruction and parts lists shall be indexed and bound in a manual form and shall be complete and adequate for the equipment installed. Inadequate or incomplete material shall be returned. The Contractor shall resubmit adequate and complete manuals at no expense to the State.

WARRANTIES AND GUARANTEES.--

Warranties and Guarantees.--Manufacturer's warranties and guarantees for materials or equipment used in the work shall be delivered to the Engineer at the jobsite prior to acceptance of the contract. Manufacturer's warranties and guarantees shall be a minimum of one year from start up and shall be in a bound manual form.

QUALITY ASSURANCE.--

Codes and standards.--Work shall conform to the applicable portions of the current approved Uniform Plumbing Code as amended by the applicable portions of current approved Title 24 California Building Standards Code, pertaining to the selection and installation of recycle process unit system materials and products.

Certificates of Compliance.--Certificates of compliance shall be furnished for process unit in accordance with the requirements specified in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

PART 2.- PRODUCTS

Recycle Process Unit, (RPU)

The RPU shall be a preassembled, skid mounted, packaged system. The RPU shall be closed-loop, zero discharge, recycle system and process wash water at a minimum rate of 57 liters per minute on a continuous basis.

The RPU shall remove: free floating oils, not chemically emulsified; dissolved and settleable solids from oil water mixtures; free oil droplets, 10 microns and greater; and total petroleum hydrocarbons-diesel (TPH-D) down to an effluent concentration not to exceed 0.5 milligrams per liter, when tested in accordance with EPA Test Method TPH-D with inlet conditions of: 57 liters per minute TPH-D concentration of greater than or equal to 10.0 milligrams per liter.

The RPU's oil water separating, coalescing, settling and filter bag tanks shall be constructed of Type 316 stainless steel or thermo welded polypropylene (minimum 12 mm thickness) with stainless steel hinges, nuts, bolts, and fasteners. Interior and exterior steel surfaces, including frame assembly, shall be sandblasted prior to application of one coat epoxy primer and two topcoats of epoxy coating.

The RPU shall operate on an automatic basis, including processing wash water, backflushing filters, fresh water make-up, low water shut off and pressurization of the recycled water for use at the outlets and pressure washer.

The RPU shall include:

1) Submersible lift station pump with piping and components. The lift station pump shall be constructed of 316 stainless steel and a 316 stainless steel shaft, with vitron o-rings and mechanical seal and polyamide impeller. Pump shall be capable of pumping 40-mm solids. The oil-filled motor shall have built in thermal protection. All piping and accessories shall be included as shown on the plans. Pump shall meet class 1, Division 1 requirements.

2) Oil-water-solids separation chamber. Chamber shall be a V-bottom tank area with a minimum of three cells operating by gravity flow. Oil separation chamber shall contain a minimum of 74 square meters (equivalent surface area) of non-corrosive removable, oleophilic, incline plate coalescer packs or oil coalescing biospheres and an adjustable height oil skimmer. Each cell and oil skimmer shall have a drain ball valve discharging through separate bag filters as shown on the plans. One set of replacement bag filters shall be supplied.

3) Filtration system. The filtration system shall consist of a multimedia filter and an ion charged filter. Filter housings shall be manufactured of polyglass with a pressure rating of 1035 kPa at 49 degrees Celsius. Size shall be as shown on the plans.

Multimedia material shall consist of four layers of filtration material, one of gravel bed material and three layers of garnet of different mesh size.

Ion material shall consist of a mixture of active absorbent material and anthracite media.

Both filters shall be controlled by separate flow controllers, specially designed for commercial applications and shall allow flow rates of up to 100 liters per minute. An adjustable 24-hour timer shall automatically initiate the backflush cycle.

Transfer pump shall be a close-coupled bronze fitted, single stage horizontal centrifugal pump with mechanical seal and all or roller bearings. Pump case shall be close-grained, high strength, cast iron with bronze wear rings. Pump shaft shall be stainless steel. Impellers shall be bronze.

A flow regulator shall be installed to restrict flows through the filters to 57 liters per minute.

Pump shall be capable of pumping water as required by the RPU system and shall not load motor beyond the nameplate rating. Kilowatt rating, voltage, phase and RPM shall be as shown on the electrical plans.

4) Storage tank. Storage tank shall be constructed of polyethylene with a fiberglass casing. Size to be as shown on the plans. Tank shall be equipped with the following: seismic tie down anchors; removable lid; clear PVC site gauge, connected to the tank with unions and ball valves; and two float switches (SPDT) as shown on the plans.

5) Ozone system. The ozone system shall include an ozone generator, ozone pump and adjustable timer. The ozone generator shall produce a minimum of one (1) gram of ozone per hour. Ozone pump shall be similar to "Transfer Pump" specified in "Filtration System" above. Timer shall be a 24-hour adjustable (15-minute minimum incremental) timer.

Ozone system shall circulate water between the storage tank and the first cell of the oil-water-separation chamber.

6) Pressurization system. Pressurization system shall include a booster pump, pressure tank and pressure switch. Booster pump shall be similar to "Transfer Pump" specified in "Filtration System" above. The pressure tank shall be a minimum 53-liter pre-charged bladder tank. The pressure switch shall be preset to energize the booster pump when the pressure reaches 210 kPa and deenergize the pump when the a pressure of 345 kPa is reached.

7) Control panel. The control panel shall contain all appropriate disconnects, breakers, hand/auto switches for all RPU components, run light and hour meter for each pump and shall be housed in a NEMA 12 enclosure. All wiring shall be properly labeled and numbered. All work shall comply with the specifications for "Electrical Work" in Division 16 of these special provisions.

8) Make up water and low level cutoff systems. Make up water system shall include the float switch as specified under "Electrical" and a 120 volt, AC, solenoid valve. The make-up water system shall be designed to maintain the water level in the storage tank at the levels shown on the plans. The low-level cutoff system shall be able to shut off the booster pump and ozone pump when the water level in the tank drops to the level shown on the plans. In addition, an alarm light on the exterior of the building shall be energized only when the cutoff system is engaged.

9) Miscellaneous equipment. The following miscellaneous equipment shall be furnished and installed with the RPU: all valve seals shall be Viton material; all solenoid valves shall be continuous duty cycle rated; all piping shall be PVC Sch. 80 conforming to ASTM Designation D1785; all pressure gauges shall be glycerin filled with a 63.5°mm dial face and rated from 0 to 690 kPa; and all equipment and components shall be identified with names plates.

Storage tank.--

The storage tank shall be centrifugally cast 1.2-meter diameter vertical polyethylene 3000 liter storage tank. The seismic restraint system shall be bonded to the tank wall and secured with bolts as recommended by the manufacturer.

Sight gage tubing and fittings

Sight gage tubing and fittings shall be transparent in color polyvinyl chloride (PVC), superior resistance to fuel, oils and solvents and pressure rated to 515-kPa. Site gauge tubing and fittings shall be supplied watertight from the manufacturer.

Nameplates.--

All components including electrical control devices shall be marked and identified with nameplates. Nameplates shall be phenolic, plastic, or similar material, black background; with white lettering, letter height shall be 9-°mm minimum. Other Color and lettering style shall be submitted to the Engineer for approval.

PART 3.- EXECUTION

INSTALLATION OF RECYCLE PROCESS UNIT.--

General.--Manufactured recycle process unit system and appurtenances shall be installed in accordance with the plans, these specifications, codes and standards and the manufacturer's recommendations where applicable, as approved by the Engineer. Piping from recycle process unit and appurtenances shall be installed watertight.

INSTALLATION OF WASH WATER STORAGE TANK.--

General.--The wash water storage tank shall be installed in accordance with the plans, the manufacturer's recommendations where applicable and the most recent Uniform Building Code. Penetrations of the water tank for connection of piping or fittings shall be watertight.

INSTALLATION OF SIGHT GAGE TUBING AND FITTINGS.--

General.--The sight gage shall be installed on the wash water storage tank in accordance with the plans, these specifications, the tank manufacturer's recommendation and sight gage manufacturer's recommendations where applicable. The connections to the wash water storage tank and the sight gage tubing and fittings shall be watertight.