



SOUTH FEATHER WATER & POWER AGENCY

TO: Board of Directors

FROM: Kathy Petersen, Power Division Manager

DATE: January 20, 2009

**RE: Forbestown Diversion Sediment Removal Project
Agenda Item for 1/27/09 Board of Directors Meeting**

Work began last year to install a trash rake at the Forbestown Tunnel Intake. Because debris had clogged up the lower portion of the intake structure over time, a sediment pile of approximately 2,600 cubic yards accumulated in front of the intake structure. Before the trash rake can be operated to clear the accumulated debris, the sediment pile needs to be removed to prevent it from moving through the tunnel and damaging the turbine.

Permits for the debris-removal work were received from the Regional Water Quality Control Board, U.S. Forest Service and Army Corps of Engineers in 2007. The Department of Fish and Game waived the requirement for a Lakebed Alteration Agreement. The work must be completed by March 31, 2009 in order to comply with the permit requirements. Bid packages were distributed in early December to fifteen firms.

Two firms submitted bids by the deadline of January 6, 2009 – Gilbertson Draglines, Inc. and PG&E's Civil Construction Department. PG&E's bid was \$10,000 lower than that of Gilbertson Draglines, and PG&E claimed it could complete the work in 9 fewer days. After reviewing the bids with John Davis and Scott Alcantara, it is our recommendation that PG&E be awarded the job. Their proposal is attached.

If you approve, an agreement with PG&E, in the form of a purchase order, will be prepared with assistance for attorney Jeff Meith that will include language affirming that prevailing wages will be paid for the work.

The recommended form of action is:

"I move acceptance of the proposal submitted by Pacific Gas and Electric Company for the Forbestown Diversion Sediment Removal Project, and authorize the General Manager to execute an agreement for said project, subject to legal counsel's approval."

Forbestown Diversion Sediment Removal

It is proposed to remove approximately 2600 cubic yards of sediment that has accumulated at and around the tunnel intake structure at Forbestown diversion. Removal process will be by a barge mounted long reach Caterpillar 325 hydraulic excavator. Excavated sediment will be placed on a 15' X 30' barge and mechanically winched to and from the shore where the sediment will be removed by a Caterpillar 320 excavator and loaded into SFW&P trucks where the sediment will then be trucked offsite.

The barge mounted Caterpillar 325 excavator will be anchored in place by a spud/spudwell anchor system by flexifloat and /or cabling to stationary features in and around the excavation area.

Hazardous Material & Handling

Hazardous material will consist of diesel fuel, lubricating oils and grease. No hazardous material will be stored onsite. Waste such as spent grease cartridges, empty oil containers, oily rags, etc. will be transported offsite and properly disposed of daily.

Fueling of barge mounted excavator will be by a self contained 100 gal tank ferried out on the spoils barge at the beginning of each shift. Equipment lubrication will be achieved by hand held grease guns with disposable cartridges. The self contained fuel tank will be filled by a stationary truck mounted tank in a PG&E service vehicle. Fueling and lubrication of the Caterpillar 320 excavator will be done in the turnout on the P.H road across from the reservoir access ramp. All other portable equipment will be fueled away from the waterway and within a portable containment.

Absorbent booms will be strategically placed as a precautionary measure around all equipment within the waterway. Any spills or drips of fuel and or lubrication material will be immediately cleaned up. Emergency spill response kits will be onsite for the duration of the project.

Items Performed by Others

All agency and regulatory permits by SFW&P.

All WQ sampling and documentation by SFW&P.

All clearances, switching and operations by SFW&P

Spoils trucking will be performed by SFW&P

Bypass water equipment by SFW&P with installation and removal assistance from PG&E.

Schedule

Mobilize/Equipment Set up--3 days

Sediment Removal-----10 days

Clean up-----1.5 days

Demobilize-----1.5 day

Equipment

Caterpillar 325 Excavator with Long Reach Boom

Caterpillar 320 Excavator with Thumb

385 CFM Compressor

8--7.5' X 30' Flexi-Float Modular Barges

1- 10 wheel AWD 10 yd Dump Truck

1-4WD Case Backhoe



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Modular pontoons	Series H-50	Series S-50	Series S-70	Modular Configuraton	Modular Attachments
				Locking System	



SERIES H-50 MODULAR PONTOONS

Designed for use in assemblies requiring 5 to 100-ton operational load capacities, Series H-50 equipment offers maximum portability and is suitable for applications requiring frequent changes in location. Units are dimensioned to allow highway transport of multiple units day or night without restriction. H-50 equipment is often utilized for flotation and bridging in pipeline construction, core drilling, and seismic exploration. It is also used as service and support assemblies in applications which require the larger [Series S-50](#) or [S-70](#) units for primary work platforms.

[View demonstration of Flexifloat Locking System](#)

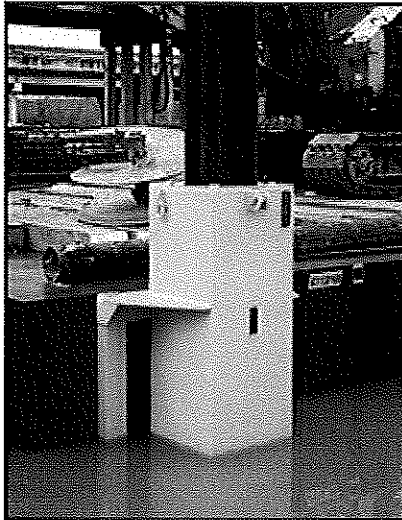
Series H-50 Modules					
Specifications		Quadrafloat	DuoFloat	End Rake	Loading Ramp
Effective Length	Feet	30	15	7.5	15
Effective Width	Feet	7.5	7.5	7.5	7.5
Effective Depth	Feet	3.8	3.8	3.8	3.8
Unit Weight	Tons	7.75	4.20	1.65	2.65
Buoyant Capacity @ 65% Draft	Tons	10.50	5.25	0.75	0.87
Deck Bearing Capacity	Psf	3,500	3,500	3,500	3,500
Bottom Bearing Capacity	Psf	2,500	2,500	2,500	2,500
Horizontal Lock Spacing	In.	45	45	45	45
Vertical Lock Spacing	In.	40	40	40	40
Lock Capacity @ 65% Yield (Tension or Shear)	Tons	45	45	45	45
Shipping Dimensions					
Overall Length	Feet	30.4	15.4	7.8	15.5
Overall Width	Feet	7.9	7.9	7.4	7.4
Overall Depth	Feet	3.9	3.9	3.9	3.9
Cubage	Cu.Ft.	943	478	229	450

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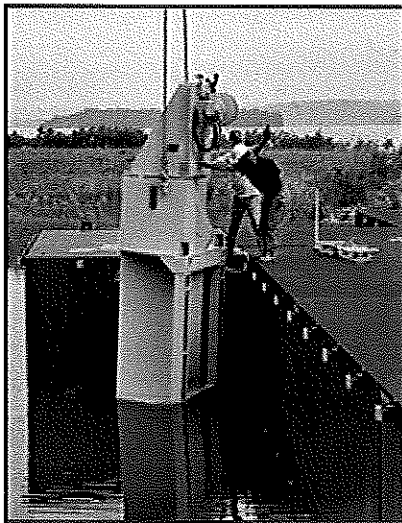
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SPUD & SPUDWELL ATTACHMENTS

Holding Spud and Spudwell Attachments are available in several sizes and capacities. Used in multiples, they serve to position and securely anchor floating assemblies against lateral forces resulting from current, wind and on-deck machinery.

Spudwells, which function as vertical guide sleeves for Spud columns, connect to the perimeter of Flexifloat assemblies by means of the integral lock system. Spuds may be raised either by the on-deck machine or by a mechanical or hydraulic winch and a two-part line system. Holding Spuds depend on gravity drop and bottom penetration for horizontal holding.



Series	Attachment	Specifications				
		Weight Lbs.	Length Ft.	Width Ft.	Depth Ft.	Cubage Cu. Ft.
H-50	Spudwell, 12" diameter w/o winch	1,700	8.3	4.3	2.4	85.6
	Spud, 12" diameter w/ line sheave	3,100	40.0	1.3	1.3	67.6
	Spudwell, 20" diameter w/o winch	2,700	8.3	4.4	3.3	120.5
	Spud, 20" diameter w/ line sheave	4,800	40.4	2.2	2.2	195.5
S-50	Spudwell, 20" diameter w/o winch	3,000	10.2	5.7	3.3	191.9
	Spud, 20" diameter w/ line sheave	4,800	40.4	2.2	2.2	195.5
S-70	Spudwell, 24" diameter w/o winch	3,890	10.2	5.8	4.2	248.5
	Spud, 24" diameter w/ line sheave	6,100	40.4	2.5	2.5	252.5
	Spudwell, 24" square w/o winch	4,350	10.0	5.8	4.5	261.0
	Spud, 24" square w/ line sheave	12,300	40.4	2.2	2.2	195.5
	Spudwell winch mount bracket	540	4.0	3.1	3.1	38.4

