

COUNCIL ACTION FORM

SUBJECT: SPECIALIZED CLEANING SERVICES, INCLUDING GRIT BLASTING, HYDRO BLASTING, DETONATION BLASTING, AND VAC TRUCK SERVICES, FOR POWER PLANT BOILERS

BACKGROUND:

The City of Ames Electric Utility has two coal-fired boiler, high-pressure steam generation units within the City of Ames Power Plant. These units are referred to as Units No. 7 and Unit No. 8. These units require regular professional maintenance and repair. This consists of emergency service, as well as regularly scheduled planned repairs and services during scheduled outages. The repair of the boilers on these generation units requires professional trade crafts such as boilermakers; steam/pipe fitters; and millwrights, to list a few. The boiler units operate under environmental conditions with high heat and high pressure. Due to the operational conditions and fuel burned, the internal surfaces of the boilers are often covered with hardened ash, molten glass, and other substances, which coat the internal boiler tubes, and boiler walls. Prior to the professional crafts entering the boilers to carryout inspections and repairs, the surfaces must be cleaned of this debris. This cleaning process requires high-pressure water washing, grit blasting, or explosives to loosen and remove the materials. After loosening or breaking up these substances they are removed from the boiler using the sluice system or by large industrial vacuums.

Because of the conditions resulting from burning the RDF (reducing atmosphere and the presence of chlorides which come from burning plastics) parts of the boiler units will fail due to tube wasting. Examples include superheat tube, boiler wall tube, and boiler grate failures. When this occurs the City contracts with private firms who have expert staff on hand to perform the emergency repairs needed to bring the unit(s) back into operation. At other times the City schedules outages in order to make routine repairs and to conduct maintenance services to the generation units. In either case, the City must have the internal surfaces professionally cleaned by outside specialized firms.

On November 14, 2006, City Council awarded a contract to a service provider for specialized cleaning services, including grit blasting, hydro blasting, detonation blasting, and vac truck services to be furnished as requested through June 30, 2007. The contract contained two optional twelve-month renewal periods. It was the intent of the contract to identify qualified professional firms who could handle the needs of the Power Plant, respond to emergencies in a four-hour time frame, and deliver the services at the lowest possible cost to the City. One of the goals of a long-term contract was to reduce costs by securing rates for labor, travel, equipment, and materials. Another goal was to make optimal use of staff time in securing these services. The Electric Utility staff

believes these goals have been achieved through this contract over the last three years.

Prior to November 14, 2006, the City's emergency repair procedure was to call in contractors to perform the needed cleaning services on any day at any hour. This often left the City exposed to market forces regarding prices and availability for labor, travel, and supplies. In preparation for a scheduled outage, Power Plant staff would seek quotes for these specific tasks. The extent of work required though was not known until the boiler was shut down and inspected. As a result, a great deal of time was expended by staff to contract for these services.

The 2006 contract was awarded prior to the new Iowa Bid Law which became effective January 1, 2007, and requires that repair and maintenance of public improvements be bid according to those provisions. The proposed contract would meet the intent of that law while continuing procurement of these services through a contract which would remedy the problems associated with purchasing on an as-needed basis. It would establish rates for service and provide for guaranteed availability, thereby setting in place known rates for service and guaranteed availability and thereby controlling costs.

The approved FY 2009/10 operating budget for Electric Production includes \$231,000 for boiler cleaning services to be performed under this contract.

Even though a number of the tubes in Unit no. 8 will soon be replaced, these services will still be very critical for both the emergency repairs to Unit No. 7 and the proper maintenance of the new tubes in Unit No. 8.

ALTERNATIVES:

1. Approve preliminary plans and specifications for the specialized cleaning services contract, including grit blasting, hydro blasting, detonation blasting, vac truck services contract, and set May 27, 2009, as the bid due date and June 9, 2009, as the date of hearing and award of contract.
2. Purchase specialized boiler cleaning services on an as-needed basis.

MANAGER'S RECOMMENDED ACTION:

This work is necessary to properly maintain Unit No. 7 and Unit No. 8, and to carry out emergency and scheduled repairs resulting from equipment failures.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving the preliminary plans and specifications for the specialized cleaning services contract, including grit blasting, hydro blasting, detonation blasting, vac truck services contract, and setting May 27, 2009, as the bid due date and June 9, 2009, as the date of public hearing.