



# A GEA Success Story

## Stiff competition in Phoenix, Arizona

### Backstory

Phoenix, Arizona is the fifth largest city in the United States. To cater to its 1.6 million residents, Phoenix has two municipal wastewater treatment plants (WWTP) — the 23rd Avenue and 91st Avenue WWTP. 91st Avenue opened in 1958 and originally had a capacity of 5 million gallons per day (MGD), but it has since expanded to treat over 200 MGD.

In 1997, 91st Avenue installed GEA Westfalia Separator CA 755 decanter centrifuges for both thickening primary sludge and dewatering digested sludge. Ever since, GEA has maintained these centrifuges via a service contract and has kept them running well for 25+ years. In 2021, the municipality wanted to update their dewatering technology. Research identified GEA Westfalia Separator and four other manufacturers as viable alternatives. Each competed to win a contract with the city.



### Stage 1

In January 2021, the municipality coordinated with the five manufacturers to set up simultaneous trials. During week one, each manufacturer set up equipment at the wastewater plant and conducted their own trials allowing them to “dial in” their equipment. On week two, testing was completely blind. Every day, the engineering consultant, Arcadis, gave a different set of operating parameters to each competitor. Only Arcadis knew how each manufacturer performed. After testing, Arcadis reported everyone’s results, except for one who withdrew from the competition. GEA clearly won this round with the driest cake and best recovery. (Table 1).

**Table 1: Testing wastewater parameters between four competitors and existing centrifuge**

	Manufacturer A	Manufacturer B	Manufacturer C	Manufacturer D	Existing centrifuges
Flow (gpm)	66.3	80	55	60.8	Not applicable
Polymer (lbs per dry ton)	17.9	18.3	18.1	18.9	19.4
Cake (% solids)	20.93%	21.37%	21.09%	20.74%	17.60%
Recovery (%)	96.00%	99.70%	99.70%	98.90%	99.50%

### Stage 2

By April 2021, the four remaining companies would move on to the next stage, which required a presentation and interview. GEA sales staff presented in person while also being live streamed. Seven reviewers scored each competitor, and the average was calculated. GEA, the highest-rated company, beat the nearest competitor by 23 points (Table 2).

**Table 2: Interview scores for four competitors**

	GEA	Manufacturer A	Manufacturer B	Manufacturer C
Reviewer 1	930	825	810	600
Reviewer 2	890	820	945	770
Reviewer 3	925	795	980*	845
Reviewer 4	960*	895*	855	770
Reviewer 5	875*	725*	890	600
Reviewer 6	925	860	980	950*
Reviewer 7	925	815	665*	445*
Average	919	823	896	717

\*High and low scores were discarded

### Stage 3

Between October and November 2021, only three competitors were asked to provide a detailed technical proposal. GEA sent a 163-page document and later added an addendum to the original document to respond to the customer’s revisions and terms.

**Table 3: Final evaluation of three competitors**

	GEA	Manufacturer A	Manufacturer B
Lifecycle cost	1000	977	698
Interview	919	823	896
Average	976	931	757

### Final evaluation

After nearly a year in testing and review, during December 2021, GEA and the remaining two competitors were evaluated on lifecycle costs (e.g., bid price, installation costs and operating costs) and interview scores from stage 2. **Based on the committee’s appraisal, GEA scored best in both areas. (Table 3). Subsequently, GEA was awarded the contract for five prime CF 8000 decanter centrifuges.** The replacement process has commenced.

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