CARUS
WATER



CARUS™ 8650 Blended Phosphate Solves Lead Issue

CARUS™ 8650 BLENDED PHOSPHATE

CASE STUDY

BACKGROUND

A city located in the United States had lead levels of 50 ppb at some homes in the distribution system and lead levels of 23 ppb which is over the action level of 15 ppb recommended for human consumption by the U.S. EPA (United States Environmental Protection Agency). Based on the high number of lead service lines in the distribution system, the city was looking for a way to effectively reduce the lead levels throughout the distribution system.

The water system consisted of 5 ground water wells blended together with iron removal followed by filtration and chlorination before the water was sent to the distribution system. The city treated an average 4,542 m^3/day.

Water Quality Data:

Iron: 0.04 – 0.10 mg/L
Hardness: 290 – 320 mg/L
pH: 7.3 – 7.5
Manganese: <0.05mg/L
TDS: 338 mg/L
Alkalinity: 250 mg/L

FIGURE 1: Lead Service Line

EVALUATION

Carus evaluated the water quality and considered the lead leaching as they evaluated the proper product selection for this municipality. Carus along with the engineering firm recommended using CARUS™ 8650 blended phosphate at 1.0 mg/L as orthophosphate or 6.5 kg per 4542 m3/day.

CONCLUSIONS AND OBSERVATIONS

After treatment, first draw lead samples at the tap were taken. CARUS 8650 provided:

- The highest lead levels dropped from 50 ppb to 18 ppb in 1 year and finally to 12 ppb after 2 years. This was a 76% reduction in highest lead levels.
- The lead levels dropped from 23 ppb to 2 ppb in 1 year and stayed at that level after 2 years. This was a 90% reduction in lead at these sites.
- The city was able to go to reduced monitoring for lead in the system based on these results.

	YEAR	HIGHEST	90%
No Phosphate Treatment	0	50 ppb	23 ppb
Post Phosphate Treatment	1	18 ppb	2 ppb
	2	12 ppb	2 ppb

CORPORATE HEADQUARTERS | 315 Fifth Street, Peru IL 61354 | Tel +1.815.223.1500 / 1-800-435-6856 | Fax +1.815.224.6697 | Web: www.caruscorporation.com | E-mail: salesmkt@caruscorporation.com
CARUS EUROPE | Calle Rosal 4, 1-B | Oviedo, Spain 33009 | Tel +34.985.785.513 / Fax +34.985.785.510

rev. 02/20
form PH 15300

CARUS®