

Alchatek

CASE STUDY
SLAB LIFTING

12,000 SQUARE FOOT CEMENT MANUFACTURING PLANT REPURPOSED AS AN AGRICULTURAL SEED SORTING FACILITY SASKATOON, SASKATCHEWAN

Floors Sinking in Seed Sorting Plant with *Harvest Deadline Fast Approaching*

OF SUNKEN SLAB LIFTED
900,000 *lbs*

PRODUCT
AP Lift 440

I · THE PROBLEM

CASE STUDY · 01

12,000 SQUARE FOOT CEMENT MANUFACTURING PLANT REPURPOSED AS AN AGRICULTURAL SEED SORTING FACILITY SASKATOON, SASKATCHEWAN

01 What made this job *difficult.*

Built in the 1960s, the plant's 10" thick, double rebar, 8000 psi concrete floors had settled. An undetected broken water main on an adjoining property had been pumping thousands of gallons into the soil for years causing the floors to become independent of the footings which had sunk as much as 7 inches. The new owner's plan to demo the slabs, including some as large as 52 feet by 25 feet, and replace them came to a screeching halt when they proved to be too tough for even a track hoe mounted jackhammer. All of the high tech seed sorting equipment was still sitting on pallets and couldn't be installed until the floor problem was resolved. With harvest season fast approaching, a mudjacker was hired to lift the slabs with cement grout. This effort proved unsuccessful in that the final levels were not accurate enough, leaving the property owner in dire circumstances.

THE CONSTRAINT

7 *in*

SETTLEMENT

Floors had sunk as much as 7 inches due to years of water infiltration from a broken water main.

KEY CONDITION

10" thick, double rebar, 8000 psi concrete floors had become independent of their footings and settled as much as 7 inches due to prolonged water infiltration from an undetected broken water main.

02 What was specified, *and how it went in.*

AP LIFT 440

Among the most dependable products for leveling concrete slabs, AP Lift 440 provides an exceptional DOT grade solution for these types of situations. This 4 lb. density, high-strength, hydro-insensitive structural polyurethane foam is perfect for lifting and supporting heavy concrete floors that have settled due to water infiltration.

THE MATERIAL

AP Lift 440

AP LIFT 440 - PHYSICAL PROPERTIES (CURED)

Compressive Strength (ASTM D-1621): 80 p.s.i. or 11,520 p.s.f. Tensile Strength (ASTM D-638): 88 p.s.i. Expansion (Unconfined): 17-19 times. Density (ASTM-D 1622): 3.75 to 4.25 lb/ft3. Shrinkage (ASTM D-1042/D-756): Negligible. Properties will vary depending on application conditions.

THE METHOD

01
Lifted
An Alchatek certified contractor lifted 5 slabs that had settled.

02
Fine-tuned
Fine-tuned 3 other slabs that mudjackers had unsuccessfully attempted with cement grout.

03 What the result was, *and what confirmed it.*

SLABS ADDRESSED

Polymer foam gave a precision the mudjackers could not match, letting the seed sorting equipment move onto stable floors in time for harvest. The floors remain level today.

SLABS ADDRESSED

8slabs

5 slabs lifted and 3 slabs fine-tuned in less than a week.

START THE CONVERSATION

Send us the job.
We will send back an approach.

Send your soil report or failure photos for a written approach from Technical Services within two business days.

TECH SUPPORT

404 · 618 · 0438

WWW.ALCHATEK.COM

Alchatek manufactures polyurethane resins, chemical grouts, and injection equipment for infrastructure repair. Headquartered in Tucker, Georgia, with a warehouse in Reno, Nevada.

Information in this document is believed accurate at the date of publication. Product performance depends on site conditions and application; consult the current Technical Data Sheet, which is the controlling document.

ALC-CS-XX-015
DRAFT V0.3 · SEPT 2026