

Merger Creates Opportunity

MERGER PROVIDES LARSEN COOP WITH RESOURCES TO UPGRADE TWO TERMINALS

CHS Larsen Cooperative
New London, WI • 800-924-6677

Founded: 1919
Storage capacity: 7.1 million bushels at four locations
Number of employees: 75
Number of members: 3,000
Crops handled: Corn, soybeans, soft red winter wheat, oats
Services: Grain handling, merchandising, fertilizer, feed, seed, retail

Key personnel at Readfield:

- Steve LaChey, grain division manager
- Adam Raisler, operations manager
- Helen Nemitz, grain originator
- Kelsey Luke, ag associate

Key personnel at Center Valley:

- Andy Van Dyke, location manager
- Mary Kay Cleven, assistant merchandiser

Supplier List

- Aeration fans**..... Caldwell, GSI
- Bearing sensors**..... CMC Industrial Electronics
- Bin sweeps** GSI
- Bucket elevators** GSI, Schlagel Inc.
- Bulk weigh scale**.... C&A Scales, Inc.
- Catwalks** Tri-Co Fabrication, Warrior Mfg. LLC
- Control system**..... Rockwell Automation
- Contractors/millwrights** Buresh Building Systems, Inc.; Wisconsin Feed Mill Builders
- Conveyors (belt)** Hi Roller
- Conveyors (drag)**..... GSI, Schlagel Inc.
- Consulting engineers**.... McMahon Group; VAA, LLC
- Design/construction manager** ... CHS Construction Dept.
- Distributor**..... Schlagel Inc.
- Electrical contractors**...Beez Electric; Jake's Electric, LLC
- Elevator buckets** Maxi-Lift, Tapco Inc.
- Grain temperature system**.... Tri-States Grain Conditioning Inc.
- Grain dryers**..... Zimmerman Grain Dryers
- Hazard monitoring system**.... CMC Industrial Electronics



CHS Larsen Cooperative's Readfield, WI rail terminal in the summer of 2015 added new safety measures and increased its grain storage and drying capacity. Aerial photo by Timothy Hughes Photographics, Madison, WI.

When Larsen Cooperative merged in September 2012 with CHS Inc. to create CHS Larsen Cooperative, it meant access to CHS finances and design resources for Larsen's four central Wisconsin grain elevators to make much-needed improvements.

"Our Readfield and Center Valley rail terminals were in need of additional storage, drying, and receiving capacities," says CHS Larsen General Manager Todd Reif.



Reif, who joined CHS Larsen in 2014, says planning for projects at Readfield and Center Valley began soon after the 2012 merger.

Safety also was an important focus during the planning phase, says Jim Gales, who heads the CHS Construction Department.

"We're all about safety. After

Grain Division Manager Steve LaChey (left) with General Manager Todd Reif. Ground-level photos by Tucker Scharfenberg.

- Motion sensors** CMC Industrial Electronics
- Screeners**..... InterSystems
- Speed reducers** Dodge
- Steel storage**..... GSI
- Steel tank erection**.... ABC Bin Company; U.S. Grain Storage Systems, Inc.
- Surge tank**..... Meridian Mfg. Inc.
- Tower support systems** Tri-Co Fabrication, Warrior Mfg. LLC
- Truck probe** Gamet Mfg. Inc.
- Truck scale automation**..... Kennedy Scales, Inc.
- Truck scales**..... Fairbanks Scales





One of two new Zimmerman 4,750-bph tower dryers at Readfield. A third, identical dryer was added at Center Valley.

the merger, we got to work to get Larsen up to CHS' safety standards."

After extensive project planning led by CHS Construction, Buresh Building Systems, Inc., Hampton, IA (641-456-5242), was hired as general contractor for the Readfield project, and Wisconsin Feed Mill Builders, Freedom, WI (920-499-8666), was hired as general contractor for the Center Valley project.

"Buresh and Wisconsin Feed Mill Builders both presented favorable bids – they made it clear they could meet our design and safety criteria," says Gales.

Both projects broke ground in June 2015 and were finished before the fall harvest.

"We had a very tight timeline for both jobs, and Buresh and Wisconsin Feed Mill Builders came through for us," says Reif.

Readfield

At Readfield, a pair of 80-foot Fairbanks Scales above-ground, platform truck scales were added for inbound and outbound traffic. A Kennedy Scales RFID system allows truck drivers to dump grain and exit the facility in two minutes without getting out of the truck.

Incoming trucks are weighed, sampled with a Gamet Apollo truck probe, then directed automatically to one of four dump pits, two of which are new and measure 8 feet wide and 26 feet deep.

Grain from the new pits feed two GSI 20,000-bph receiving legs equipped with a single row of Maxi-Lift

20x8 Tiger-Tuff buckets mounted on a 22-inch Goodyear Pathfinder belt.

The legs feed a Schlager 6-duct, electric, triple swing-type distributor that can route grain to storage, dryers, two InterSystems 25,000-bph gravity screeners, or directly to rail loadout.

ABC Bin Company, Kerkhoven, MN (320-413-0310), erected two GSI 104,000-bushel flat-bottom wet tanks measuring 42 feet in diameter, 86 feet at the eaves, and 97 feet at the peak. The tanks each are equipped with two GSI 20-hp centrifugal fans to provide 1/7 cfm per bushel of in-floor aeration, one 2-hp roof exhauster, a TSCG 14-cable grain temperature monitoring system, and a GSI X-Series 12-inch bin sweep.

Grain Division Manager Steve LaChey says the wet tanks were designed to withstand a 110-mph wind load. "You won't be seeing us in *Grain Journal* for a tank failure; that's for sure," he adds.

Also added were two Zimmerman natural-gas-fired grain dryers rated at 4,750 bph at five points of moisture removal. The foundations and concrete substructures for the dryers were sized for a 10,000 bph model to simplify a potential expansion in the future.

Center Valley

At Center Valley, located approximately 30 miles northeast of Readfield, two new 1,000-bushel dump pits were added.

The pits feed two Schlager 15,000-bph legs equipped with Tapco CC-HD 18x8 buckets on a 19-inch Goodyear Pathfinder belt. The legs, which are encased in a 16-foot-x-16-foot-x-175-foot Warrior tower with switch-back stairs, direct grain to an existing distributor.

U.S. Grain Storage Systems, Inc., Dike, IA (800-901-5560), erected a GSI 120,000-bushel wet tank measuring 49 feet in diameter, 75 feet at the eave, and 90 feet at the peak. The tank is equipped with two GSI 7.5-hp fans, one 2-hp roof exhauster, and a GSI X-Series 12-inch bin sweep.

A GSI 650,000-bushel flat-bottom tank built for dry commodity storage



Center Valley added a GSI 105,000-bushel wet bin (left) and a GSI 618,000-bushel dry storage bin, two Schlager legs in a 174-foot tall Warrior support tower.

measures 105 feet in diameter, 78 feet tall at the eaves, and 108 feet tall at the peak. The tank has four GSI 40-hp fans, six 2-hp roof exhausters, and a 24-cable TSGC grain temperature monitoring system.

Grain is carried to the tank via a 15,000-bph Schlager overhead drag conveyor in a 10-foot Warrior box bridge.

Also added at Center Valley was a 4,750-bph Zimmerman dryer identical to the models at Readfield, as well as a C&A Scales 20,000-bph bulk weigh scale for loading 25-car trains on the Canadian National Railway.

Safety Measures

Gales says that extensive safety upgrades were performed at both Readfield and Center Valley, including safer access and egress of platforms, replacing unsafe catwalks, improving maintenance platforms, and improving access to equipment for maintenance.

LaChey comments that a CMC Industrial Electronics hazard monitoring system was added at Readfield. "It's the Cadillac package," he says. "There isn't a bearing, sprocket, chain, or belt in this facility that doesn't have a sensor on it."

In addition, a Rock-n-Rescue knot-passing pulley system for tank rescue was installed inside each of the new tanks at both sites.

Gales hopes in the near future to make these safety upgrades at CHS



*Center Valley added a C&A Scales
20,000-bph bulk weigh scale for
rail loadout.*

Larsen's other two facilities at Amherst
and Seymour, WI.

Tucker Scharfenberg, associate editor

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Supplier List
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