

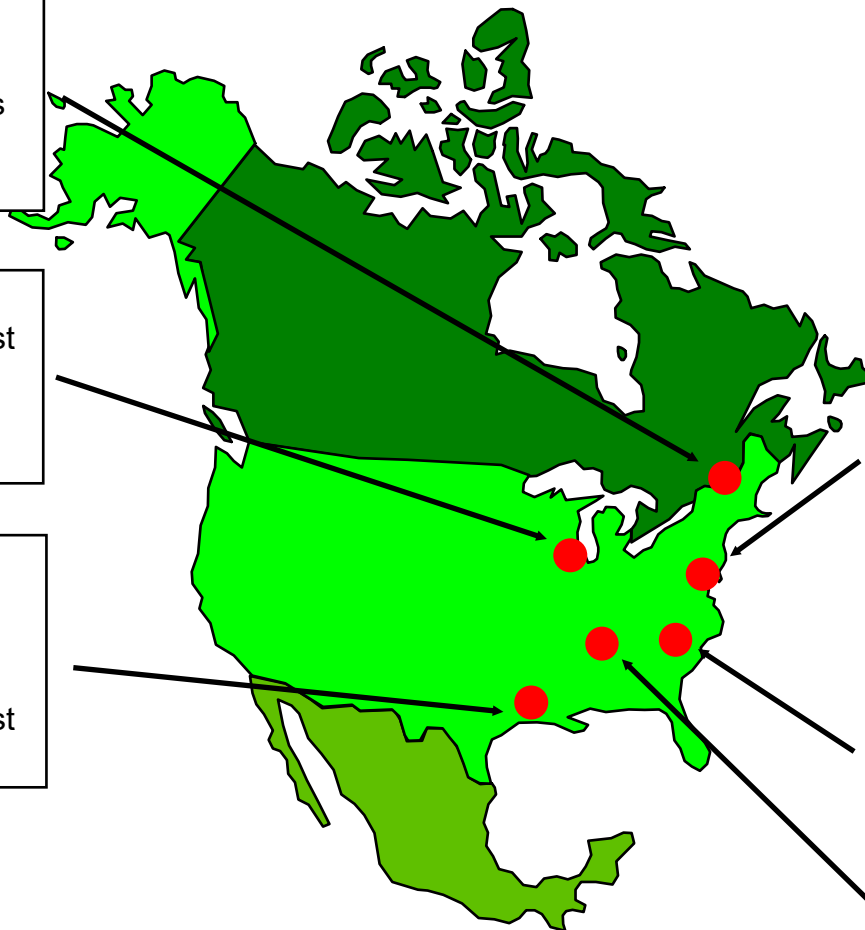
Grace – Lake Charles

Site Overview

Valleyfield, Quebec
Ultrastable Zeolites
Additives/Vanadium Traps
Production Laboratory
FCC Catalysts

Chicago, Illinois
Hydro Processing Catalyst
Hydro Treating Catalyst
R&D Facilities
Production Laboratory

Lake Charles, Louisiana
Ultrastable Zeolites
Alumina Sol Catalysts
MIDAS Catalysts
Hydro Processing Catalyst
Production Laboratory

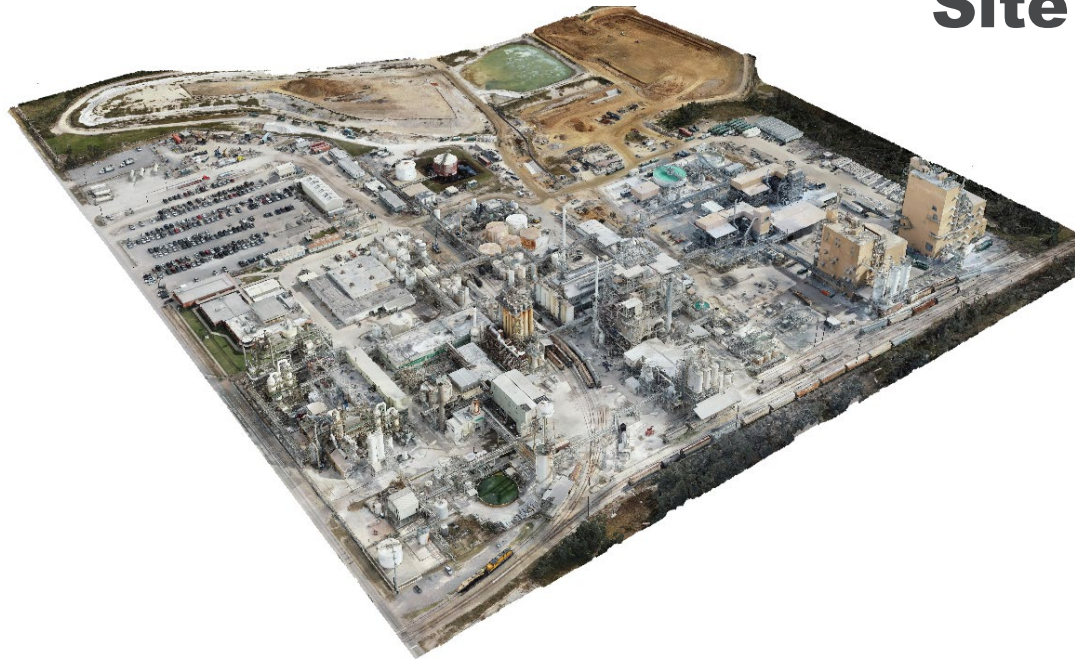


Worms Germany
Ultrastable Zeolites
Alumina Sol Catalysts
Additives
Production Laboratory
ECAT Laboratory

Curtis Bay, Maryland
Ultrastable Zeolites
Alumina Sol Catalysts
Additives/Vanadium Traps
Hydro Processing Catalyst
Analytical Service Center
(main laboratory)
ECAT Laboratory
R&D labs and pilot plant

Aiken, South Carolina
Kaolin Clay
Production Laboratory

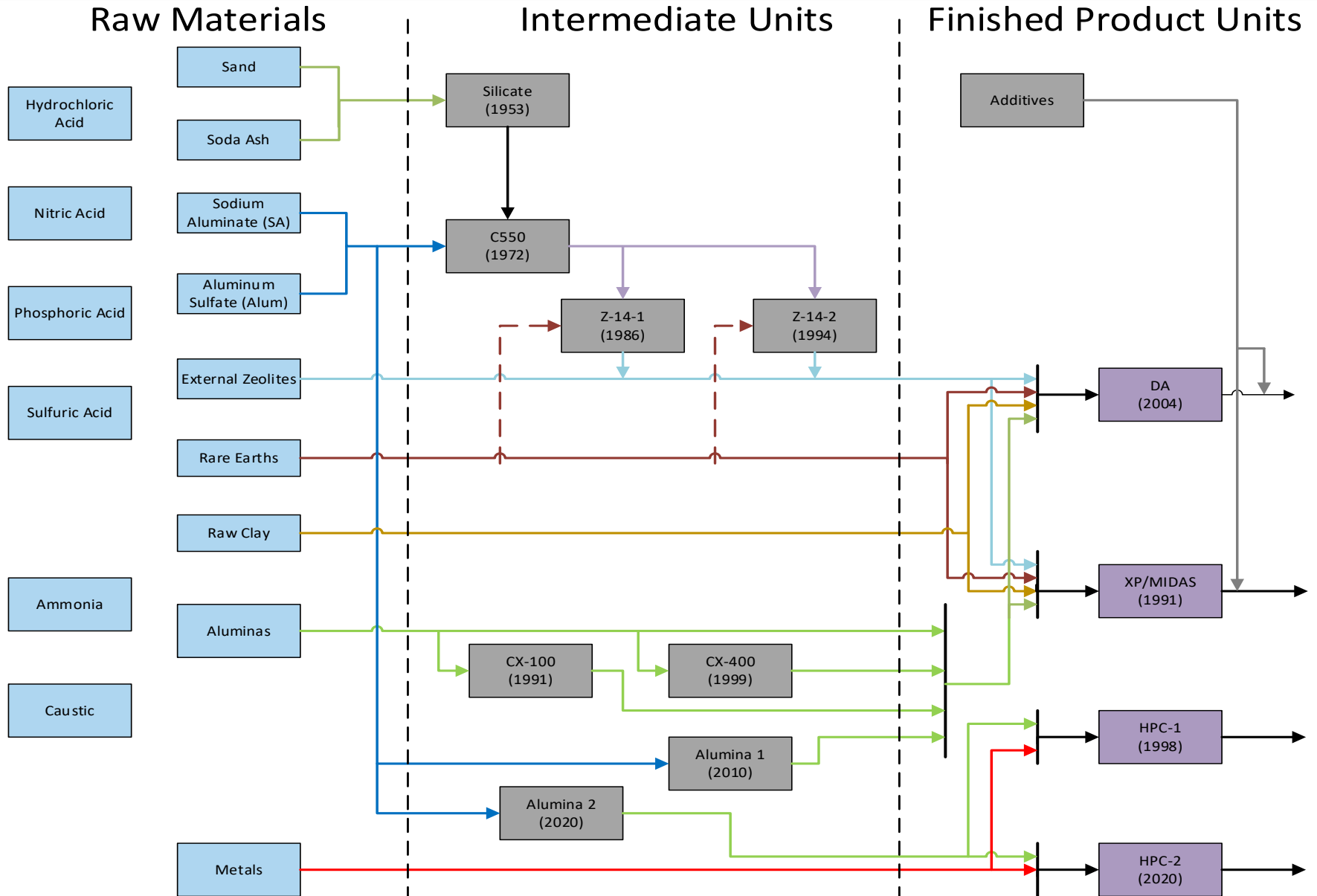
Chattanooga, Tennessee
Rare Earth
Production Laboratory



Site Facts

- Began Operations in 1953
- 365 Employees
- World's largest catalyst manufacturing plant.
- Represents approximately half of Grace's catalysts capacity
- Serves a significant portion of the world's catalyst market.
- Earned membership in the prestigious "Star" Voluntary Protection Program of OSHA for exemplary occupational safety and health
- Community stewards through participation in Lake Area Industry Alliance (LAIA), Responsible Care program, and our "Amazin' Grace" volunteer team.







Facility operates 24/7 with 12 hour shifts

Raw Materials Receipt

- A. Rail
- B. Barge
- C. Truck
- D. Pipeline

Intermediate Product Units

- A. Sodium Silicate Process
- B. Zeolite Manufacture
- C. Precipitated Alumina Unit

Finished Product Production Units

- A. DA Catalyst Unit (FCC)
- B. XP Catalyst Unit (FCC)
- C. Hydro-processing Catalyst Unit (HPC)

Services / Utilities

- A. Steam / Compressed Air / Process Water
- B. Rail access (Raw materials, Finished Product)
- C. Barge Access (Caustic and Sulfuric unloading)
- D. Waste Water Treatment (pH adjustment and Solids Settling)

Environmental, Health & Safety

- Not PSM regulated facility, but have implemented elements of PSM
- Regulated under USCG Part 105 – MARSEC
- Dock facility – unload caustic and sulfuric acid
- Volunteer ERT: 63 members
- RCMS certification
- Haz Waste Small Quantity Generator (SQG)
- One Title V air permit
- Water permitted outfalls: 001 (plant effluent), 002 (stormwater), 003 (future stormwater), 004 (future stormwater), 101 (sanitary), 500 (hydrostatic test water)
- All plant effluent goes through our WWTP before discharging to 001
- Lagoon closure underway
- 2 USTs – gasoline and diesel