



# New Wales Phase III Gypstack Extension

## May 2021 / Frequently Asked Questions

### **What is phosphogypsum, and why do you need to stack it?**

The New Wales manufacturing facility produces phosphate fertilizers. Phosphogypsum, or calcium sulfate, is a by-product of fertilizer manufacturing that is created when phosphate rock is combined with sulfuric acid to form phosphoric acid, a feedstock for phosphate fertilizer. The phosphogypsum must be stacked in engineered structures (known as gypstacks) to meet U.S. EPA regulations. In addition to storing phosphogypsum, gypstacks are designed to collect rainfall and store process water, both of which are recycled throughout the fertilizer manufacturing process.

### **What is an extension permit? What will it allow you to do?**

The permit is the authorization from the Florida Department of Environmental Protection (FDEP) to construct and operate additional gypstack capacity. The permit will extend the active gypstack south onto previously mined land. Phase III will cover a total of 230 acres and consists of two cells (east and west). The permit is for the entire Phase III area, but plans are to construct the east cell first. In May, we received a draft permit from FDEP. Polk County is also in the process of their geotechnical review and required approvals. The permit now moves to a public comment period. Each of these steps demonstrates the thorough, multi-stakeholder evaluation involved in the process.

### **Why do you need to extend the current gypstack? How long will it stay active?**

The current stack became operational in 1992 and was last expanded in 2003 during Phase II. We expect it to reach capacity in mid-2022. The life of a stack depends on many factors, including production rates and there is a permitted elevation that the stack can reach. Generally, we expect Phase III to accommodate around nine years of production with just over four years for the first east cell.

### **How did you decide where to extend the gypstack? How do you know the area is safe?**

We conducted wide-ranging field geotechnical and geophysical explorations to evaluate the proposed area. FDEP's siting regulations provide detailed standards; however, we did even more to confirm the area selected was suitable. Once the extension is constructed, we will continue to do more, including using state-of-the-art instrumentation to monitor microseismic activity below the stack. This monitoring will complement the extensive groundwater monitoring system we now have around the stack system.

### **Is the proposed extension area near the section of the gypstack that previously experienced a water loss event? What is the status of that area?**

The 2016 water loss incident occurred in the west cell of Phase II. Phase III will be located to the south of Phase II. We repaired the area causing the water loss and continue to monitor it. We also operate a recovery well system to capture impacted water.



### **How do you monitor the gypstack structure and groundwater in the area?**

Employees inspect active gypstacks twice daily and supervisors complete weekly inspection. Operating supervisors add another monthly review and annually, a third-party engineer inspects the stack. The third-party inspection report is submitted to the FDEP which includes any recommended adjustments. The FDEP will inspect the stack to ensure the recommendations have been implemented and can also do their own inspections at any time.

In the past five years, Mosaic made significant additional investments in our gypstack management and monitoring at New Wales, including adding a network of state-of-the-art geophones, which monitor microseismic energy that can alert us to potential changes under a gypstack. The sub-surface monitoring currently installed at New Wales will be expanded to the Phase III area to monitor what is happening below the stack at various levels, up to 300 feet deep. This system complements the data we collect from our extensive groundwater monitoring network that includes around 90 wells at various distances and depths.

### **What happens to the gypstack when it reaches capacity?**

Subject to FDEP's approval and oversight, Mosaic will close each stack and then provide long-term care for up to 50 years after closure. Those commitments are backstopped by financial assurance which the company has provided in the form of cash that is managed by a third party.

### **What are some of the new and notable permit requirements?**

The permit includes new liner inspection requirements, expansion of sub-surface monitoring, continuing and broad engagement with the State Geologist, and increased testing and sampling requirements. It also entails financial assurance to support implementation of our gypstack contingency plan. This type of financial assurance is new and unprecedented—the total amount of financial guarantee behind Mosaic's commitment to manage the stack system is unparalleled.