

## OMNI-Manure case study

OMNI-Manure works with the Manure Level Sensors to measure the manure level in your tanks, pits, or lagoons. This document describes the OMNI-Manure system and three possible cases of how a site can use the system.

If you have any questions or want more information about the OMNI-Manure system, contact Phason. We will be happy to provide you with more information and answer any questions.

### Phason Inc.

2 Terracon Place

Winnipeg, Manitoba, Canada  
R3P 2H7

Phone: 204-233-1400  
Fax: 204-233-3252

E-mail: support@phason.ca  
Web site: www.phason.ca

### Manure Level Sensor

The Manure Level Sensor uses an ultrasonic transducer to sense (measure) manure levels. The sensor emits ultrasonic pulses that are reflected by the manure. The sensor measures the time the pulses take to reflect back to the sensor and then sends the data to the OMNI-Manure software.

A Manure Level Sensor can monitor aboveground tanks (cement or concrete), under-slat storage pits, or earthen lagoons. Additional mounting hardware is required for earthen lagoon monitoring.

A Manure Level Sensors requires 10 to 14 volts of DC power. Phason's Regulated Power Supply (RPS) supplies 13.6 VDC and can power up to eight Manure Level Sensors.

### OMNI-Manure

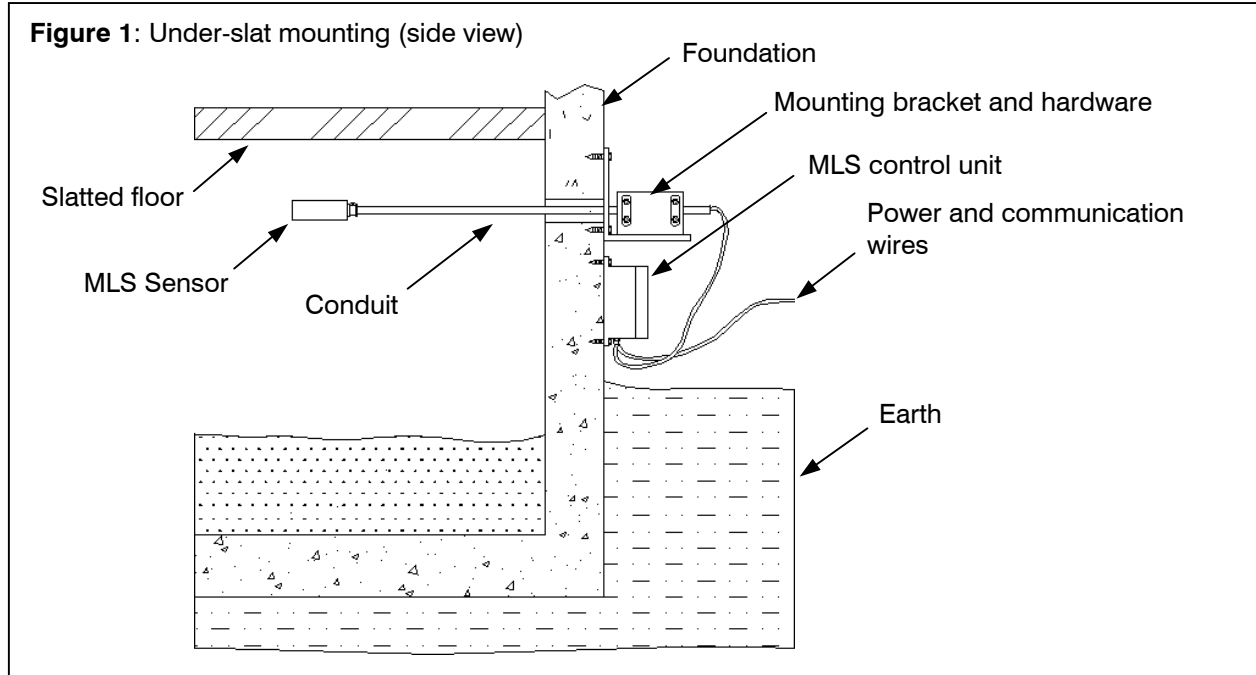
OMNI-Manure analyzes the data it receives from the Manure Level Sensors and then converts it to reliable measurements of manure levels. OMNI-Manure determines the amount of manure accumulating over time by measuring the manure levels at different times of the day and then calculating the change.

OMNI-Manure has a chart, a report, and a viewer to display manure data, as well as configurable alarms. The alarms display in the main screen, the viewer, and the alarm log.

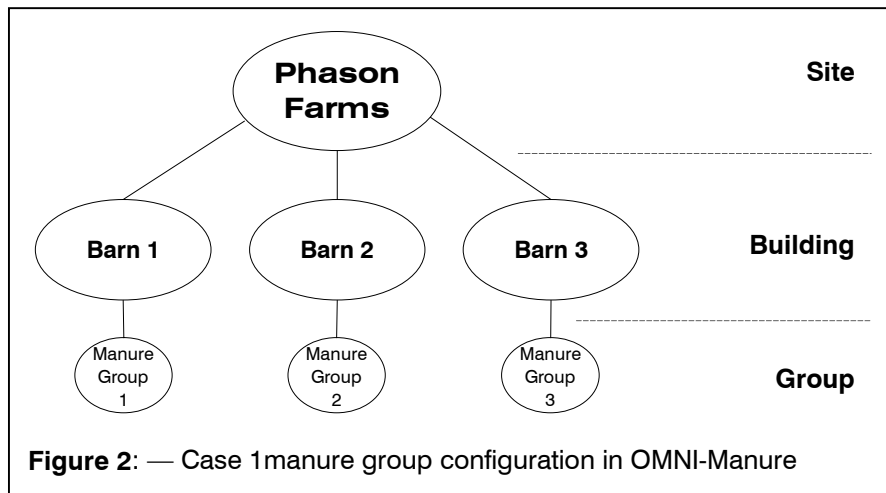
OMNI-Manure charts and reports can provide early warning of leaks or high manure-level conditions and proof of past manure levels. OMNI-Manure's information can also help you plan and schedule manure spreading.

### Case 1—under-slat storage pits

Case 1 has one deep under-slat storage pit per barn with three barns at the site. All mounting hardware is provided and a typical mounting arrangement is shown below.

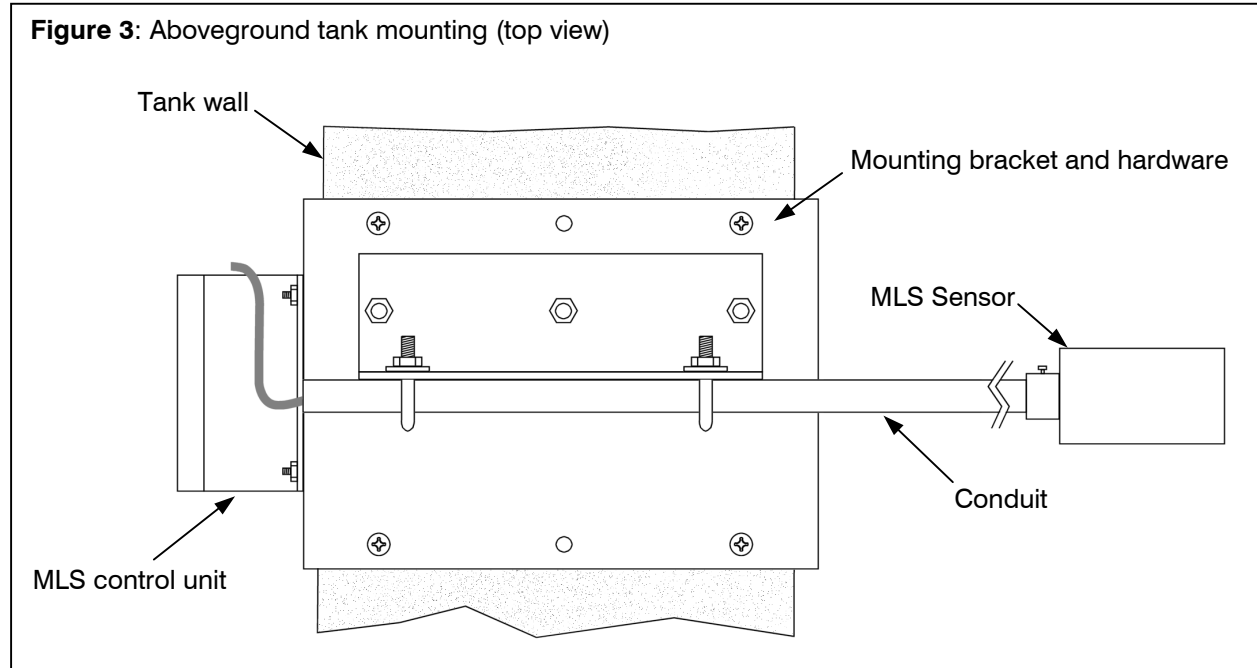


In the OMNI-Manure software, you would create one manure group for each building as shown below.



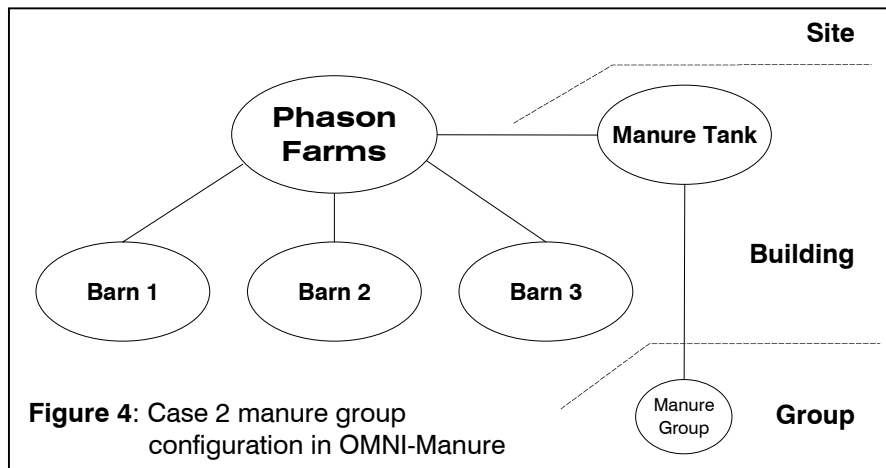
### Case 2—aboveground concrete tank

Case 2 has shallow under-slat storage pits in each barn and pumps them into an aboveground concrete storage tank. The Manure Level Sensor monitors the level in the aboveground tank. All mounting hardware is provided and a typical mounting arrangement is shown below.



In the OMNI-Manure software, you would:

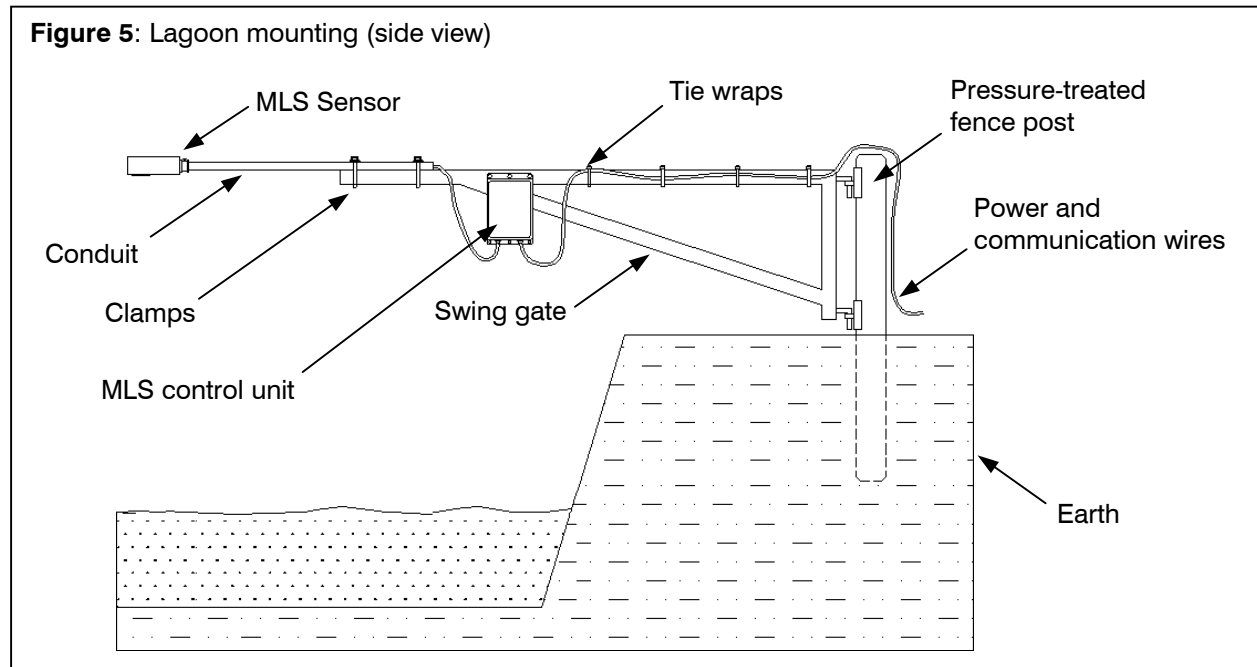
1. Create an 'imaginary' building and name it 'manure tank'.
2. Create a manure group for the manure tank building.



### Case 3—earthen lagoon

Case 3 has shallow under-slat storage pits in each barn and pumps them into an earthen lagoon. The Manure Level Sensor monitors the level in the lagoon. The following additional mounting hardware is required:

- Pressure-treated fence post
- Tie wraps
- Single-arm swing gate
- Muffler clamps or stainless steel hose clamps (2)



In the OMNI-Manure software, you would:

1. Create an 'imaginary' building and name it 'manure lagoon'.
2. Create a manure group for the manure lagoon building.

