Talking Points for Stock Island Landfill ("Mount Trashmore")

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General Observations

- Rough estimates of volume of landfill are about 1 million cubic yards or ~600,000 tons over about 15 acres
- Landfill is still generating methane, indicating organic waste materials are still present, although waste is old (40 years to perhaps 90 years)
- The lower portions of the landfill appear to be in direct contact with groundwater
- The landfill has an engineered cover and passive gas venting system, but no bottom liner
- Slopes are approximately 4 (horizontal) to 1 (vertical), typical for closed landfills
- There is an elementary school directly adjacent to the landfill and a medical facility and community college close by

Typical Options for Land Use of Comparable Closed Landfill Areas in U.S. and Globally

1. Complete removal and disposal in another landfill, unlimited land use thereafter
2. Complete removal and processing waste to separate soils and waste, disposal of waste and reuse of soils, unlimited land use thereafter
3. Partial removal as necessary (with or without processing waste) continued gas removal (with potential upgrade to active system) and utilization of reconfigured landfill for open space, parks, BMX tracks, etc.
4. Very limited waste removal and use of the site for limited use open space with continued gas removal (with potential upgrade to active system)

There are numerous other options that generally fall into these categories, but these have been formulated to provide a basis of understanding for the trade-offs involved.

Discussion of Options

Options 1 and 2

Options 1 and 2 are going to be costly, particularly given the long-haul distance to another landfill on the mainland and the high cost to remove (and process waste for Option 2) waste. Crude estimates of cost to remove and dispose of the waste extrapolating from recent experience in other parts of the country, either with or without waste processing, would be expected to be more than $100 per ton and maybe quite a bit more than this figure.

These options will have to be carefully conducted and closely monitored for air emissions during removal and/or processing, because of potential asbestos, odors, hydrogen sulfide and VOCs. This could impact works' health and safety and nearby sensitive populations such as the school, college and medical center.

Both Options 1 and 2 will likely require the placement of grade fill and careful foundation design for any structures that may be placed there in future, factors that will further add to costs. For Option 2, some of the grade fill could presumably come from separation from waste during removal, an advantage for this option.

The primary advantage of these two alternatives (1&2) is the unlimited use of the land for development after waste removal, which has enormous value. These two options would also provide a significant reduction in the potential for future liability associated with the landfill, but this would be offset by greater potential for liability during the removal process.

Option 3

Option 3 could take on many forms. Regardless, it is likely to be substantially less costly than Options 1&2. There are numerous similar projects occurring in urban areas across the world where some or all the waste is left on-site and the

site is reconfigured for open space, parks, etc. The key to those projects being successful lies in finding land uses compatible with leaving the waste on-site. This has two major components:

1. The land use must be able to accommodate settlement as the underlying waste will continue to settle with time; and
2. Measures must be taken to make the landfill safe given that landfill gas will continue to be generated and must be managed to mitigate potential exposure and explosion risks.

This option often rules out or extremely limits the building of structures that cannot withstand the settlement and/or can trap and accumulate landfill gas causing explosion risks. This is the reason open space, parks, etc. are good land uses to consider for old landfill areas.

Option 3 would not provide for a significant reduction in future liability associated with the landfill but would not have as much short-term liability during construction as Options 1&2. An active landfill gas system could be implemented to further control landfill gas as a part of this option. We have seen many projects where an active gas system is used in conjunction with open space, parks, etc. and can be protected from the public and run safely.

Option 4

Option 4 would provide the most limited land use option as many uses would not be compatible with the steep slopes of the landfill and like Option 3, the settlement and potential landfill gas issues that could occur with construction of many structures. Option 4 will be the least costly, present little short-term risk but do little to reduce long-term potential risks.