

Special Waste Handling Procedures

Matlock Bend Landfill

Santek Environmental Inc.

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This document was prepared to describe the site- and material-specific handling procedures for the Special Waste at the Matlock Bend Landfill. Upon approval by the Tennessee Department of Environment and Conservation (TDEC), this document will be maintained at the scale house and the procedures identified in the document will be followed by Santek.

Step 1. (Actions taken as trucks enter the facility) The scale operator confirms that the specific Special Waste is permitted for acceptance at the facility and will enter the date, waste generator, and quantity into the Waste Acceptance Log maintained at the scale house. The scale operator has access to a lookout tower above the scales to inspect the all loads coming into the site. If the load looks suspicious, or does not appear to be stable the scale operator has the authority to reject the load. The scale operator immediately calls the Landfill Manager if a load is rejected. The Landfill Manager determines if the load is stable and or will pass the Paint Filter Liquids Test, which can be performed at this point. The Landfill Manager also determines if the load should be sent back to the waste generator.

Step 2. (Actions taken in case unstable load is received at working face) In the event that an unstable load inadvertently gets past the scales, a Santek operator can determine if the load is unstable once the truck arrives at the active area. When the truck backs into the active area of the landfill and the tailgate is opened (i.e., before the load is to be dumped on the ground), an operator can immediately stop the driver from dumping the load onto the ground. The operator will then immediately notify the Landfill Manager. The Landfill Manager at that point performs a paint filter test. If the Landfill Manager determines that the material fails the paint filter test, the load is sent back to the waste generator. This process is documented and all paint filter tests and any other Special Waste procedures are recorded on daily random inspection forms and spread sheets that are maintained at the scale house.

Step 3. (Actions taken to manage and mix Special Waste in the active area) If the Special Waste passes the paint filter test it is then dumped at the active area of the landfill and the truck exits the site. The Special Waste is then handled and mixed following defined protocols using the on-site heavy equipment, including a Caterpillar 963 C tracked front-end loader (loader), Caterpillar D6 dozer (dozer), Komatsu D65 dozer (dozer), Caterpillar 816 garbage compactor (compactor), or similar performing equipment. For Special Waste that includes Kimberly-Clark residual fiber derivative (RFD) and/or Auto Fluff, no special mixing and blending requirements are needed, as the materials can be compacted and placed in essentially any proportion with MSW to result in a stable waste mass. However, the Tate & Lyle WT-13 corn waste (T&L

Sludge) needs to be pre-blended before it is mixed with MSW. Field testing has shown that the RFD and Auto Fluff are ideal blending agents. Based on the results of the field trials, Geosyntec recommends that the following procedures be adopted for handling and disposing the T&L Sludge at Matlock Bend.

- Stage 1 Blending and Stockpiling: Upon receipt at Matlock Bend, the T&L Sludge should be mixed in approximate equal proportions with the RFD and Auto Fluff currently permitted for disposal at Matlock Bend. Mixing should be accomplished by raking and blending using multiple passes of the loader to produce a consistent blended material stable blended Special Waste (BSW) that is stockpiled for subsequent mixing with the daily intake of MSW.
- Stage 2 Blending and Compacting: BSW from the on-site stockpile should be mixed in an approximately 50/50 ratio with received MSW to produce a relatively consistent mixture of BSW and MSW. When this mixed material is compacted, the resulting blended waste mass should be stable with no indication of oozing and segregation of the T&L Sludge. It is anticipated that this will result in a net T&L Sludge content in the landfill of approximately 17 percent. Should segregation be observed, additional Special Waste and/or MSW should be added to result in a stable compacted waste mass.
- Contingency Strategy: Given anticipated daily fluctuations of Special Waste and MSW, it is possible that on a given day, the quantity of materials may be insufficient to strictly comply with these recommendations. In this case, Geosyntec recommends the following:
 - When MSW and other Special Wastes are not available, the T&L Sludge should be temporarily diverted from Matlock Bend.
 - When the volume of RFD and/or Auto Fluff is insufficient to allow relatively equal proportions of the Special Waste, the T&L Sludge should be thoroughly mixed using alternative proportions of RFD, Auto Fluff, other Special Waste, and/or soil to produce a BSW that is demonstrated to be stable after Stage 1 blending and stockpiling.
 - When the volume of MSW is insufficient to allow a 50/50 blending of BSW and MSW, the BSW from the stable stockpile be placed in a single relatively thin (i.e., 6- to 8-inch thick) uniform layer across the working face to disperse the BSW prior to the subsequent placement of an unblended MSW layer on top of this surface.
- TDEC Notification: Geosyntec recommends that Santek provide a weekly summary of the waste receipts at Matlock Bend to TDEC to demonstrate that the recommended volumes of waste are being received at the facility. In the event that any of the “Contingency Strategies” are invoked on a given day, Geosyntec recommends that a record be maintained of the specific procedures used by Santek from blending, mixing,

and compacting. If alternative Special Waste streams are identified that can be used to produce the BSW, a field assessment study similar to the one described in this Report should be performed by Santek and results provided to TDEC.

Step 4. (Actions taken to compact Special Waste at working face) If the Special Waste is mixed with MSW, the blended material is placed at the working face and compacted using normal operating protocols using the compactor. If only BSW is to be placed at the working face, the materials are placed in 6- to 8-inch thick layers and compacted. After this process is complete, the top surface of the BSW should be scarified and a layer of as-received MSW and or ash should be placed in 2-ft thick increments over the Special Waste and then compacted. For cases in which Special Waste is disposed at the facility, placement should terminate a minimum of 50 ft from any permanent outboard slope of the landfill. This is done on a daily basis; building lifts of waste daily until a final grade is accomplished at the landfill. Then it is to be covered with a final layer of soil. For all slopes that are not final at the landfill, the slopes should be constructed with a bench and or terrace every 20 to 30 vertical feet to help provide stabilization and facilitate final vegetation. The benches shall be constructed 10- to 12-ft wide

Step 5. (Actions to be taken on a daily basis by the Landfill Manager) On a daily basis, the Landfill Manager observes the active area of the site and determines if there is a potential problem with excessive quantities of Special Wastes to handle in accordance with this procedure. The Landfill Manager should check the Special Waste receipts twice a day, once at approximately 10:00 a.m. and once at approximately 1:00 p.m. at the office's computer system. If the Special Waste volumes for the day are under 30%, the Landfill Manager does not need to take any actions. In an event where Special Waste daily receipts may potentially lead to a problem for the day, the Landfill Manager considers and or performs actions necessary for corrections. This may or may not include mixing the Special Waste with soils at the site for further stabilization or may require diverting the Special Waste to another Santek facility to help alleviate any problems.

Step 6. (Actions required for maintaining records at the site on a daily and weekly basis) The Landfill Manager will keep records at the site (preferably at the scale house) for all Special Wastes. These documents will include daily Special Waste quantities and percentages, paint filter test results, random inspection manifest forms, and any other documentation for Special Waste. Santek will also maintain spreadsheet documentation of this information as part of the daily log. A spreadsheet summary of the Special Waste receipts will be provided to TDEC by Santek on a weekly basis. All information regarding Special Waste can be reviewed by Santek Management personnel and TDEC representatives at any time.