Landfill odors generally result from the trace-level gases produced during decomposition of the landfilled waste. Methane and carbon dioxide, which together comprise over 99% of landfill gas, are odorless. With the dry waste stream and semi-arid climate, the rate of organic decomposition and gas generation is very slow. Occasionally an incoming load of waste may exhibit a unique odor based on its content. The immediate application of daily cover is generally adequate to control these occasional odorous loads. Materials that have a known tendency to generate odors are restricted from SCLF.

Several other features incorporated into the SCLF design assist in the mitigation and control of odors. These include:

- Leachate collection that prevents liquid accumulation within the waste
- Routine methane monitoring along the perimeter of the facility
- Setbacks of the active area from structures in excess of 500 ft
- Extensive roadway rights of way on three (3) sides
- Landfill sequencing of the working face with consideration for wind direction and odor dispersion

5.13 Excavation of Closed Cells

It is not anticipated that closed cells will be excavated, except as necessary to comply with New Source Performance Standards (NSPS) requirements for active LFG control (requiring intrusion into the waste). If installation of an active LFG collection and control system is required, the area that received final cover and was certified as closed will not be excavated without Department approval. Some limited cap disruption may be necessary for erosion control or adjustment of drainage structures or roadways. Differential settlement of completed areas will be corrected with the addition of soil fill.

5.14 Daily Cover

A minimum thickness of six (6) inches of on-site soil is applied to each daily fill face. This soil is applied throughout the working day in order to minimize the area of exposed refuse. Daily cover is sloped to promote run-off and to prevent ponding. SCLF currently utilizes a tarping system as alternative daily cover (ADC) as described in Section 5.14.1. In addition, SCLF is seeking approval to use three additional ADCs, tire shreds (Section 5.14.2), spray-applied coating (Section 5.14.3), and wood chips (Section 5.14.4). Usage of ADCs will be in

compliance with NMED's Guidance Document (**Attachment II.2.E**). ADC may be temporarily or permanently stored in any area with a slope of 5% or less suitable for its disposition. ADC will be utilized only on areas requiring 6 in. of daily cover and will not be used on areas requiring 12 inches of intermediate cover. NMED's ADC Guidelines are summarized on **Table II.2.13**; and the most recent NMED Solid Waste Bureau Guidance Document for ADC is provided as **Attachment II.2.E**.

TABLE II.2.13
NMED ADC Guidelines
Sandoval County Landfill

1. The long-term stockpiling of ADC materials should be avoided in order to prevent the appearance of materials not being properly disposed or causing a potential health and safety problem. The maximum acceptable storage time depends upon the type of ADC materials to be stored;
2. Areas designated for the short-term stockpiling of ADC shall be clearly identified in the landfill's operations plans. This will allow obvious discernment between ADC materials, recyclable storage area(s) and solid wastes;
3. ADC materials that will be mixed prior to application shall be mixed in a manner that minimizes dust generation and windblown litter. The Landfills' operating plans shall be revised to specify the proportions of each ADC component when utilizing mixed ADC materials; and
4. ADC materials that are special wastes or otherwise require analytical testing shall be sampled, analyzed and fully documented in each of the landfill's operating records prior to use as ADC. The landfills' operating plans shall identify which ADC materials require analysis and indicate the required parameters and test methods.

5.14.1 Tarping System

SCLF has had success using a mechanical tarping system (Tarpomatic MFG, previously approved), saving significant volumes of daily cover soil. At the end of the working day, tarp panels are placed over the exposed refuse using landfill equipment and personnel, and are anchored along the edges and across the center. The tarp is removed the following morning (or within 72 hours) in the same manner and stored away from the active face. The exposed waste is either covered with new waste or with approved cover materials.

Securing the Synthetic Tarp. The tarp is secured with soil, sandbags, tires, or other heavy items, which have no sharp edges. Depending on wind conditions and performance, tires, sandbags, or other similar items may be placed in a grid pattern over each panel and along the

overlap between panels to prevent movement or uplifting. Walking over the material will be minimized to limit potential damage to the tarps. Once the tarp is secure, the area is inspected to make sure that refuse is completely covered. Soil is used for any areas requiring cover beyond the limits of the tarp.

Removal of the Synthetic Tarp. At the start of each operating day, the tarps are inspected for any damage that may have occurred during the night. Any damage or excessive wear is reported to the Landfill Manager, and appropriate repairs are made in accordance with the manufacturer's specifications and procedures. Tires, sandbags, and/or other items used to secure the material are removed and stored nearby for later use at the end of the day. If soil is used to secure the edges, it is carefully removed to prevent damage to the cover. When the synthetic tarp shows extreme wear or is damaged beyond repair, it will be disposed of at the landfill, and a new stock of material will be used. The panels made of synthetic woven fiber are designed to last at least six months with proper care and usage.

5.14.2 Shredded Tires

The County proposes to use shredded tires as ADC at SCLF. Per the requirements of Category I ADCs (**Attachment II.2.E**), the tire shreds used for ADC will be at least 2 inches in size, but no greater than 12 inches. Tires are currently accepted at the Recycling Facility and stored in a roll-off; and tires may also be accepted at the Convenience Center in the near future. The roll-off (or other tire storage containers) will be hauled by SCLF personnel to the tire shredding area, anticipated to be located adjacent to the active fill face such that tire shredding operations are out of the way of daily fill face operations, but close enough that shredded tires are easily accessible for use as ADC.

Tires will be shredded on-site using a BCA Industries PD1000TIF series portable tire shredder (**Table II.2.3**). The PD1000TIF shreds tires into approximately 2-inch by 2-inch shreds at a rate of approximately 1-4 tons per hour (dependent upon material and screen size). Tire Shredding activities are anticipated to take place at a minimum weekly frequency. Tire shred stockpiles will also be maintained in proximity to the working face for temporary short-term storage, readily available for daily use. Prior to use as daily cover, tire shreds may be mixed with either stockpiled mulch or soil (approximately 1:1 ratio), applied over compacted MSW,

and compacted again as it is applied. Mixing will be done close to the fill face in a manner that reduces dust emissions and dispersion.

5.14.3 Spray-Applied Covering

The County also proposes to use a spray-applied covering as ADC at SCLF, such as TOPCOAT®, Posi-Shell®, or BioCover™. These products are specifically formulated for use as landfill daily cover and have been proven effective at other NM facilities; therefore, the SWB considers these products to be "Category I ADCs".

Description and Equipment

TOPCOAT®, Posi-Shell®, and BioCover™ are proprietary mixtures of compounds, reinforcing fibers, and coloring. The base mix for each product is available dry in bags and is mixed with water and applied using a trailer-mounted hydro-mulcher (e.g., a Bowie Hydro-Mulcher ADCM 800, or similar). The materials are non-toxic, biodegradable, and no analytical testing is required. Production information for each of the three products, along with a corresponding materials safety data sheets (MSDS) are provided in **Attachment II.2.G**. Bags of the base materials will be temporarily stored on pallets in a covered area and transported to the mixing area with a pickup truck. Storage and use of this material does not cause a public nuisance or create a potential hazard to public health, welfare, or the environment.

Application

Potable or non-potable water can be used as the water fraction of the spray-applied coating. The ratio of water to the base mix utilized is prescribed by the manufacturer and calibrated in the field. The material will be mixed in the tank of a hydro-mulcher or equivalent device. The spray-applied ADC will be used on the working face once waste receipts and compaction are complete. The spray-applied ADC may be used daily, or as otherwise appropriate based on field conditions. It may not be practical in windy conditions, heavy precipitation events, etc. Application of the ADC will rely on a criss-cross pattern to ensure adequate coverage. The operator will observe the application area from all sides and re-cover areas where waste remains visible. It may be necessary to spray from two angles to correct a "spray-shadow" effect and assure a continuous unbroken coating. Once application is complete, the area

receiving the ADC will be left undisturbed until landfill operations resume.

5.14.4 Wood Chips

The County proposes to use wood chips as ADC for SCLF. SCLF currently accepts green waste which is typically shredded for use in the composting process, however should there be an excess of green waste, and the County would like the option to use it for ADC. Green waste is stored in temporary piles within the former PNM easement area as shown on the Site Plan, **Figure II.2.2**. Shredded green waste will be processed to 80% less than or equal to 8-inches using the County's existing equipment, the Doppstadt DW 3060 SA, and the Morbark 3600 Woodhog, as appropriate. Wood chips used as ADC will be spread over the fill face at a minimum of 6-inches in thickness, and may be mixed (1:1 ratio) with soil, as needed, prior to application.

5.15 Intermediate Cover

Currently, approximately 46 acres ± of SCLF has intermediate cover installed (i.e., Unit I – 30 acres ±, and a portion of Unit II – 16 acres ±). Intermediate cover for Unit I was continually applied throughout the active life of this portion of the site through April 2000, when fill operations transitioned to Unit II. Intermediate cover for Unit II has been continually applied since May 1, 2000, and the depth is subject to confirmation for final cover thickness upon closure. Areas of SCLF that have intermediate cover installed will be inspected routinely, at a minimum of once per month and also after significant (≥ 0.5 inches) rain events. Inspections will be recorded on a form similar to that provided as **Figure II.2.7** (Intermediate Cover Inspection Form). The form will be used to record cover observations, and photo-documentation will supplement the record as appropriate. The Intermediate Cover Inspection Forms will be maintained as part of the Facility Operating Record, and will elaborate on the following items, as applicable:

- Evidence of leachate
- Landfill gas odor
- Exposed waste
- Cracks greater than one inch in width and six inches in depth
- Surface water ponding
- Eroded or scoured soils
- Dead or stressed vegetation (if applicable)