Volume 1 of 3

Final Environmental Impact Statement
Prepared in Accordance with Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200, Hawaii Administrative Rules .

Waimānalo Gulch Sanitary Landfill Lateral Expansion

Waimānalo Gulch, O'ahu, Hawai'i
TMKs:(1) 9-2-003: 072 and 073

October 2008

City and County of Honolulu
Department of Environmental Services
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EXHIBIT K163

Asbestos disposal records may be incorporated in the records of the hazardous waste exclusion or special waste screening programs.

Emergency Condition Reports

Any emergency incident or condition at WGSLF is required to be documented in an incident report that will be maintained in the operating record. Emergency conditions include fires, hazardous material spills, injury accidents, natural disasters such as floods or violent storms, and any other event that threatens the safety or security of personnel and facilities.

Adequate Storage Procedures

The WGSL is required by permit to maintain records documenting secure storage and handling of any green waste, scrap vehicles, tires or white goods brought to the site. Documentation must show that these materials, which are prohibited from disposal, were stored, managed and removed from the site in accordance with applicable regulations. Records should include documentation of any removal or management of oil, grease, CFCs or other fluids from vehicles and white goods prior to removal from the site to recycling facilities.

4.6. Stormwater Management

4.6.1. Drainage Control System

Stormwater is managed by controlled grading on the surface of the WGSL and a maintained engineered system of drainage ditches, channels, pipes, and basins. The stormwater drainage control system is managed to:

- Prevent run-on of surface water to the active disposal face or uncovered refuse
- Minimize erosion in all sections of the WGSL to address run-off/run-on
- Maintain roads and other ancillary facilities in useable condition under all weather conditions

- Prevent excessive runoff or sedimentation impacts to neighboring properties

The WGSL in areas being used for active disposal of refuse is graded at a slope of 2 to 5 percent away from the disposal area. Earthen berms are constructed upgradient of the active disposal areas if needed to prevent runoff from mixing with the leachate control system and to divert drainage around areas susceptible to erosion. Earthen berms are also constructed downgradient of locations that may be susceptible to erosion.

The landfill stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm. Runoff is collected in a system of surface ditches, channels, pipes and ponds.

Design Criteria

According to GeoSyntec, RCRA Subtitle D requires that the surface water control features at landfills be designed to control both run-on and runoff from the 24-hour, 25-year storm. The 24-hour, 25-year storm at WGSL is 9.2 inches based on information presented by the State of Hawaii (1984) and is used as the basis to evaluate the performance of the sedimentation/detention pond and estimate runoff for the landfill grading plan. (GeoSyntec and WMH, 2008).

Proposed Improvements

There are two surface water control systems are proposed for WGSL (GeoSyntec, 2008):

- Western Bypass Channel. GEI Consultants (GEI) prepared the Western Bypass Channel (off-site stormwater conveyance) for the upper canyon and western areas flows adjacent to the Landfill. The system will capture the upper watershed's flows and route them around the landfill so that they do not mix with the surface water runoff from the landfill. The water

will flow via large diameter pipes and/or concrete-lined channel(s) and discharge at a point south of WGSL's existing sedimentation basin.

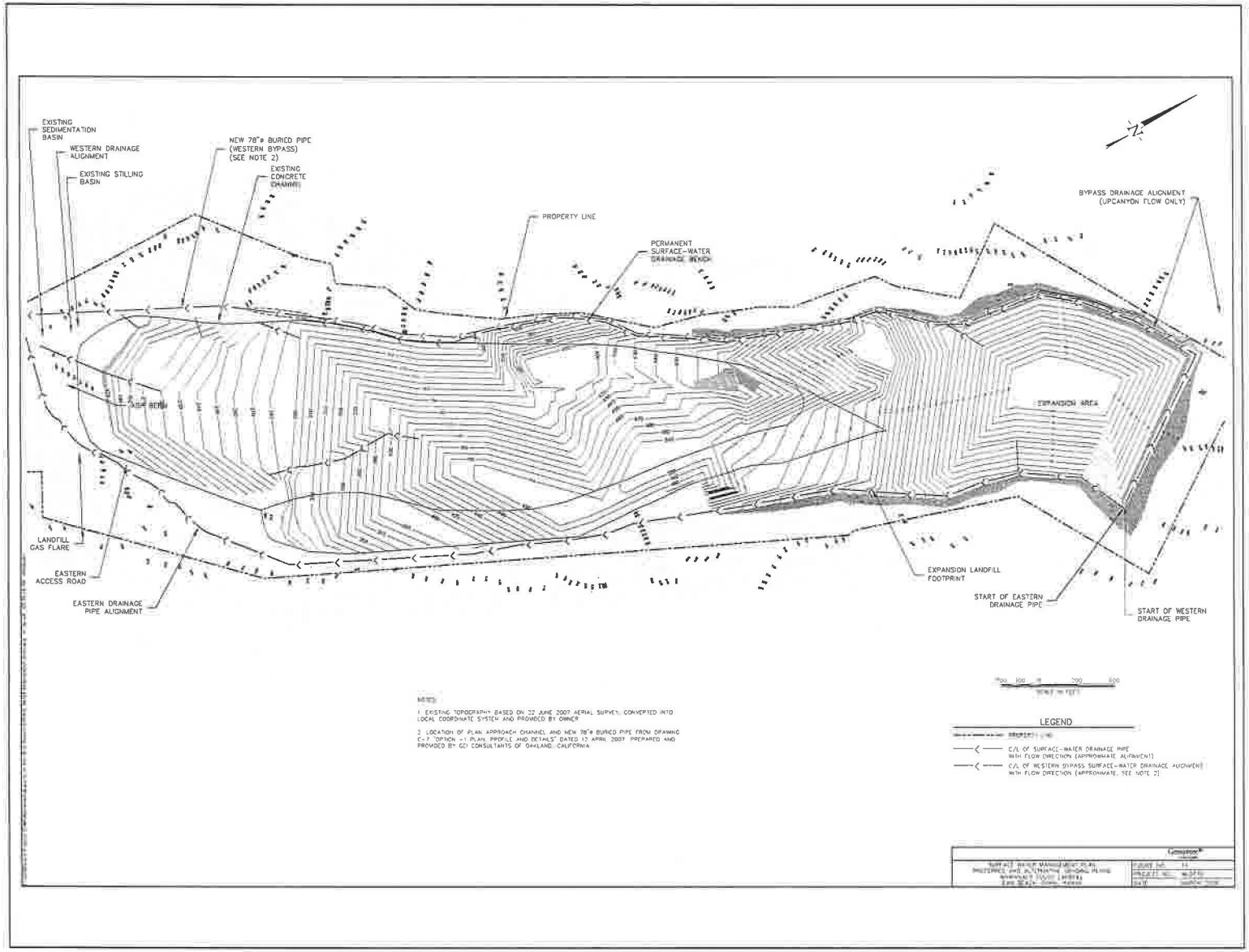
- Onsite Stormwater Management System. This system has two components that capture: (i) flows from the western side of the landfill (primarily landfill runoff with minor amounts of run on); and (ii) flows from the eastern side (both landfill runoff and run on). Both flows will discharge stormwater to the existing sedimentation basin.

Figure 4-8 shows the alignment for the landfill's eastern and western systems and general details for the pipe and collection channels for the preferred expansion. Pipes and channels will be sized when construction drawings for the expansion are prepared. (GeoSyntec, 2008).

GeoSyntec evaluated the existing sedimentation basin configuration (i.e., emergency spillway, etc.) for flood control and for water quality requirements in the County of Honolulu Drainage Standards (City and County of Honolulu, 2000). GeoSyntec also used information presented by Shimabukuro et al. (1986) and EarthTech (2006) (e.g., dimensions, riser elevations, infiltration trenches, spillway, etc.). GeoSyntec's evaluation concludes that the existing basin meets the requirements for flood control and for water quality provided upstream run-on is diverted around the basin. (GeoSyntec, 2008).

Surface Water During Operations

During operations, surface water will be controlled by temporary pipes and ditches that will be moved as necessary to address stockpiles, active fill areas, the extent of each cell, and fill sequencing. Since the size of each cell may vary depending on the waste stream at the time, surface water details will be designed as part of preparing the construction drawing package for each cell. (GeoSyntec, 2008).



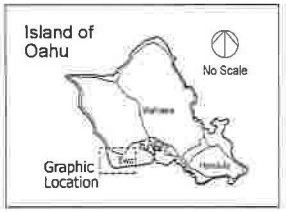


Figure 4-8
Proposed Surface Water Plan
Waimanalo Gulch Sanitary Landfill Expansion
Department of Environmental Services