OPERATIONS PLAN

For

MOLOKAI INTEGRATED SOLID WASTE MANAGEMENT FACILITY

Prepared for

County of Maui
Department of Environmental Management
Solid Waste Division
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October 2010
Revised January 2014
Revised October 2019

This work was prepared by me or under my supervision

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1 INTRODUCTION

This Operations Plan (the Plan) describes the proper operation of the Molokai Integrated Solid Waste Management Facility (MISWMF). All managers, operators, and attendants at the MISWMF must be familiar with facility operations, maintenance, monitoring, and reporting requirements described in this Plan. Proper operation and maintenance of the design features, environmental controls, and monitoring systems will achieve the required performance and projected capacity of the landfill.

The Plan outlines landfill operations and presents information necessary for site permitting. An Operations Plan is required by Hawaii Administrative Rules, Title 11, Chapter 58.1, Section 58.1-04(c). Specific requirements for the Plan contents are specified in the site's operating permit (Appendix A-1) and HAR 58.1-15.

The Plan will be amended throughout the life of the site based on design improvements, experience, or changed conditions. The County of Maui (County), Department of Environmental Management, Solid Waste Division (SWD) will modify the Plan from time to time as necessary and submit changes to the Hawaii Department of Health (HDOH). Any changes will be dated and signed by the SWD Chief. The affected sections of the Plan will be identified by the revision date.

This Operations Plan must be kept in the landfill office for reference by MISWMF operators, HDOH inspection personnel, and County personnel. Additional documents maintained at the landfill office provide design, operating, and general information for landfill operators.

2 GENERAL SITE DESCRIPTION

2.1 General

The MISWMF is a municipal solid waste (MSW) disposal facility owned by the County of Maui and operated by the Department of Environmental Management, Solid Waste Division (SWD). The facility provides the following services to residents and businesses of Molokai:

- Solid waste disposal;
- Recycling of green waste;
- Recycling of HI-5 beverage containers and other designated materials;
- Recycling of major appliances (white goods); and
- Recycling of scrap metal, automobiles and related materials including tires, batteries, and motor oil.

Solid waste disposal is provided for public and commercial customers, subject to acceptance screening upon delivery, weighing of each load, and payment of the posted gate fees. The disposal fees are set by County Council to support operation of the landfill and associated waste management programs.

2.2 Permits and Regulatory Compliance

The MISWMF operates subject to conditions and provisions of the Hawaii Administrative Rules Title 11**,** Chapter 58.1 and County of Maui Rules, Chapter 15-3. A municipal solid waste landfill permit is issued by HDOH for a period of 5 years. Appendix A-1 contains the current solid waste facility permit.

The Special Use Permit issued on March 1, 1995 by the State of Hawaii Land Use Commission Docket No. SP93-383 is required to operate the MISWMF. A copy of the permit is contained in Appendix A-2.

The facility is required to comply with stormwater pollution control provisions of Hawaii Administrative Rules Section 11-55-34.09. Under these rules, the County has filed a Notice of Intent (NOI) to comply with the provisions of the General Permit enacted by the HDOH pursuant to the National Pollutant Discharge Elimination System (NPDES). Appendix A-3 contains a copy of the most recent NPDES permit issued by HDOH for stormwater discharges from the MISWMF.

The SWD implements and interprets the provisions of the County Integrated Solid Waste Management Plan. Any issues concerning types of waste accepted or conditions of acceptance are to be referred to the County of Maui, Department of Environmental Management Director or designee. Any exceptions to policy provisions will be made on a case-by-case basis by the Director or designee.

2.3 Location

The MISWMF is located near the southern coast of the island of Molokai, on the dry leeward side of the island, approximately three miles northwest of Kaunakakai and approximately 1.25 miles inland with elevations spanning between approximately 200 to 250 feet mean sea level (MSL), and the topography gently slopes toward the south-southwest.

The project area is bounded to the north-northwest by Manawainui Gulch and to the south-southeast by a smaller unnamed gulch. Manawainui Gulch lies approximately 500 feet north-northwest of the site. Canyon walls of the gulch are over 50 feet high. Rock has been quarried from the southeast canyon wall of the gulch. The Tax Key Map identification for the MISWMF site is TMK (2) 5-2-11:27 (portion). See Figure 1 for the site location drawing.

2.4 Site History

The MISWMF was developed to replace the Kalamaula Landfill, which reached its capacity and was closed in 1993. The MISWMF received its Solid Waste Management Permit from the HDOH and began disposal operations in Phase 1 in October 1993. Phase 2 was constructed and placed in service in 1997, Phase 3 was constructed and placed in service in 2009, and Phase 4 was constructed and placed in service in 2014. Phases 5 and 6 are planned as the next phases of development for the landfill.

Consistent with the County of Maui Integrated Solid Waste Management Plan, the MISWMF also offers three waste diversion facilities: Recycle Molokai, which consists of a HI-5 redemption and source separated drop-off center for recyclables and electronic wastes; a green waste operation that receives, stores and mulches green waste for on-site and off-site use; and Molokai Metals, which receives and stores scrap metals, white goods, scrap vehicles, used tires, lead-acid batteries, and used motor oil, and periodically ships these materials to off-site recyclers and end-users.

2.5 Site Plan

Figure 2 presents the site map and existing conditions for the MISWMF indicating the major functional areas of the site:

- The currently planned solid waste landfill area (Phases 1 through 6) consisting of approximately 18.2 acres;
- The entrance area consisting of the scale house / landfill office building, and maintenance facility;
- Recycle Molokai facility;
- Green Waste Area; and
- Molokai Metals Facility.

2.6 Operating Hours

The facility accepts waste during the following hours only:

- Tuesday through Saturday from 8:00 a.m. to 2:30 p.m.

These hours are posted on the entrance sign. The site is closed on Sunday and Monday.

Operations that include use of earthmoving and other heavy equipment to compact and cover daily waste, manage cover material, excavate new landfill cells, maintain roads and grounds, or conduct other operations may be done during daylight hours (between sunrise and sunset). Emergency operations are not limited by these time restrictions.

2.7 Landfill Size, Elevation and Limits

The current site development plan includes the planned landfill footprint of approximately 18.2 acres with approved final grades with a maximum elevation of 290 feet above sea level; approximately 50 feet above surrounding terrain. To date, Phases 1, 2, 3 and 4, consisting of approximately 11.6 acres, have been developed and are being filled with solid waste; no area of the landfill, to date, has been filled to the final elevation of 290 feet. Figure 2 presents the most recent topographic map and current landfill grades. Figure 4 presents the interim final grading plan for Phases 1 through 4 with the proposed Phase 5 liner grades, and Figure 5 illustrates the final grading plan for Phases 1 through 6.

The Molokai Metals Facility is located west of Phase 4 along the access road. The facility covers approximately one acre and consists of an office building, receiving, processing, and storage areas. The facility is operated by a third-party contractor.

The Green Waste Area, approximately 2 acres and consisting of receiving, storage, and processing areas, is presently located to the south of the Molokai Metals facility and west of Phases 1 and 2. This location is within the planned footprint of landfill Phases 5 and 6. Prior to the development of Phase 5, the operation will be relocated to an area of approximately 2 acres located in the west corner of the property, south of Molokai Metals and west of Phase 6..

Recycle Molokai is located south of the entrance facility and is approximately half an acre. It consists of a HI-5 redemption center, bins for source separated residential recyclables, and an electronic waste receiving and storage area. The facility also includes an area where recyclables are processed, baled, and stored for shipping to off-site end users.

2.8 Types and Quantities of Waste

The MISWMF is permitted to receive non-hazardous municipal solid waste (MSW), and construction and demolition (C&D) waste from residential, commercial and industrial sources. The following waste types are not unacceptable for landfill disposal by permit and applicable regulations:

- Regulated hazardous waste
- Radioactive waste
- PCB waste
- Untreated medical / infectious wastes
- Liquids in bulk or containers
- Commercial loads containing greater than 25% green waste, or household loads containing more than 50% green waste.
- Scrap automobiles
- White goods
- Whole motor vehicle tires
- Lead acid batteries
- Compressed gas tanks

Of the above unacceptable wastes for disposal, the site is permitted to accept scrap automobiles, white goods, compressed gas tanks and lead acid batteries for recycling at the Molokai Metals Facility. All such wastes collected are shipped to off-site recyclers or end-users.

Inspection of loads and rejection of unacceptable waste is the responsibility of the scale house attendant and the landfill operators. Random checks of loads for unacceptable wastes are part of the waste screening process. Detailed discussion of waste screening criteria, processes, and records are included in Section 12.

By permit, the MISWMF is allowed to accept certain wastes, designated as Special Waste under specific procedures approved by the HDOH. Special Waste management procedures are detailed in Section 12.6, including a list of Special Wastes that the site does not accept for disposal as a matter of policy.

The MISWMF is permitted to dispose of no more than a nominal yearly average of 20 tons/day.

Disposal records for the period from April 16, 2013 and April 17, 2019, the period spanned by the 6 most recent topographical surveys performed for the site, indicate the MISWMF received 30,853 tons for disposal during this period. The nominal average daily disposal tonnage for this period was 14 tons. The nominal average daily disposal tonnage for the most recent period of study of May 31, 2018 through April 17, 2019 was 16 tons. The following table provides the disposal tonnage details:

Period of Study		Days In Period	Tons Received in Period	Nominal Average Daily Disposal Tonnage
4/16/2013	5/6/2014	385	3,746	10
5/6/2014	4/4/2015	333	3,863	12
4/4/2015	7/11/2016	464	7,167	15
7/11/2016	5/7/2017	300	4,575	15
5/7/2017	5/31/2018	389	6,493	17
5/31/2018	4/17/2019	321	5,009	16
4/16/2013 through 4/17/2019 Totals		2,192	30,853	14
Annualized Average Tons		5,137		

Over the period of Fiscal Year 2017 through Fiscal Year 2019, the MISWMF recycling operations have annually diverted from landfill disposal an average of 626 tons of scrap metal, 1,115 tons of green waste, and 46 tons of other recyclable materials.

2.9 Climate

The climate at the landfill is characterized by an average temperature range from 67°F to 82°F and annual precipitation of approximately 15 inches. The design rainfall event at the site for a 24-hour, 25-year storm is 7.5 inches, and the 1-hour, 50-year storm is 2.5 inches (U.S. Weather Bureau, 1962).

Prevailing winds at the MISWMF are generally from the northeast. Winds average approximately 13 miles per hour (mph) throughout the year and reach speeds of 25 mph or more with some frequency (WRCC, 2004). Litter and dust control measures described in Section 12.3 and 12.5, respectively, are developed with these wind conditions in mind.

2.10 User Population

Based on 2010 census data for the East and West Molokai, and Kalawao districts, the population served by the MISWMF is estimated at approximately 7,300 people (Maui County Data Book 2014).

3 SITE ANALYSIS

This section addresses the siting criteria established in HAR 11-58.1-13 for municipal solid waste landfills.

3.1 Airport Safety

HAR 11-58.1-13(a) establishes the following criteria:

(1) Owners or operators of new MSW landfill units, existing MSW landfill units, and lateral expansions of MSW landfills that are located within ten thousand feet (3,048 meters) of any airport runway end used by turbojet aircraft or within five thousand feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSW landfill unit does not pose a bird hazard to aircraft.

(2) Owners or operators proposing to site new MSW landfill units and lateral expansions located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).

The MISWMF is located approximately 18,480 feet from the runways at Molokai Airport, and is therefore outside the range within which a bird hazard demonstration is required. However, since the site is located within a five (5) mile radius of the airport, Airport administration and the FAA was notified of the county's initial intent to locate a landfill at the proposed location, and will be further notified of the planned development of Phases 5 and 6.

The United States Congress enacted Public Law 106-181, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, on April 5, 2000. The new law included an amendment to 49 USC 44718, Structures Interfering with Air Commerce, which prohibits the construction or establishment of new solid waste landfills within six miles of a public airport served by regularly scheduled flights of aircraft designed for 60 passengers or less. The restriction specifically does not apply, however, "to the construction, establishment, expansion, or modification of, or to any other activity undertaken with respect to, a municipal solid waste landfill if the construction or establishment of the landfill was commenced on or before the date of the enactment" of the new law. Because the MISWMF landfill has been in operation since 1995, its continuing development is not subject to the restrictions of 49 USC 44718.

3.2 Floodplains

HAR 11-58.1-13(b) places restrictions on facilities located within 100-year floodplains. MISWF is located approximately 3 miles from the nearest shoreline, at elevations higher than 200 feet above mean sea level. The site elevation is also well above the flow lines of the nearest drainage gulches. Therefore, the site is not subject to restrictions associated with 100-year floodplain areas.

3.3 Wetlands

HAR 11-58.1-13(c) prohibits or restricts the development of landfills in wetlands. The MISWF site contains no wetland areas, and vegetation and soils in the area are not indicative of wetlands.

3.4 Fault Areas

HAR 11-58.1-13(d) prohibits or restricts the development of landfills within 200 feet of an active earthquake fault. No faults have been identified in the vicinity of the MISWMF.

3.5 Seismic Impact Zone

HAR 11-58.1-13(e) establishes the following criteria:

New MSW landfill units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the director that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

"Seismic impact zone" is defined as an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percent of the earth's gravitational pull (g), will exceed 0.10g in two hundred fifty years. “Lithified earth material” is defined in USEPA regulations Subtitle D, Section 258.14 as “all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments”.

The United States Geological Survey (USGS) has classified the island of Molokai in UBC Seismic Zone 2B, defined as having a 10% probability of exceeding a peak ground acceleration of 0.15g in 50 years. According to USGS seismic hazard maps and data, the peak horizontal ground acceleration expected to occur with a probability of ten percent is 0.16g in 50 years, and 0.30 g in 250 years. Therefore, Molokai is located within a seismic impact zone and a seismic impact study must be conducted to demonstrate the landfill is designed to withstand the maximum horizontal acceleration.

The MISWMF landfill slopes and containment system design have been analyzed to demonstrate they will resist the maximum horizontal acceleration anticipated at the site. Using the final refuse grades, the stability of the final landfill slopes were evaluated using PCSTABL5M, a computer-based analytical program that computes static and pseudo-static factors of safety for the selected critical slope cross-sections. The set of critical slope cross-sections selected and analyzed passes through the unlined disposal cells of Phases 1 and 2 and the lined disposal cells of Phases 3, 4, 5 and 6. The analysis found for all of the cross-sections the static factor of safety exceeds 1.5 and the pseudo-static factor of safety exceeds 1.0, the generally accepted critical values for static and pseudo-static slope stability. Also, there will be no permanent deformation of the liner system during the design seismic event. Appendix B contains the slope stability report.

3.6 Unstable Areas

The MISWMF is not located in an unstable area. The site is underlain by hard andesite and basalt rock with no known earthquake faults in the vicinity. The site does not contain any geologic or geo-morphological features that could result in differential settling, landslides or other events that potentially occur in unstable areas.

3.7 Tidal Wave (Tsunami) Zone

The University of Hawaii, in cooperation with the Hawaii Civil Defense System, has established tsunami evacuation maps for coastal areas of the Hawaiian Islands. These maps define the expected areas along the coastline that may be subject to inundation by tsunamis. Maps 3 and 4 for Molokai demonstrate that the tsunami evacuation zone is limited to a narrow strip along the southern shoreline of the island. The MISWMF is located approximately one and half miles from the coastline, at an elevation of more than 200 feet above sea level. Therefore, it is outside the potential tsunami impact zone.

3.8 Consistency with Local Zoning Ordinances

The MISWMF site's zoning designation is Agricultural. The County of Maui Planning Commission approved Special Use Permit No. 9200017 on October 3, 1995, establishing operation of the MISWMF as a permitted use of the property.

3.9 Buffer Zone to Public Areas

The boundaries of the landfill are located over 2,000 feet from Maunaloa Highway and about the same distance from Kaluaapuhi Fishpond, which is located south of the landfill. There are no residential zoned properties near the site. The edge of the waste footprint is set back approximately 150 feet from the property lines of the landfill parcel

4 SITE UTILIZATION CONCEPT

4.1 Site Plan

Figure 2 illustrates the overall site plan showing the entrance area, disposal areas, and associated facilities. The MISWMF facilities include the following:

- Entrance facilities consisting of the scale house / landfill office;
- Recycle Molokai Facility;
- Green Waste Area;
- Molokai Metals Facility;
- Site access road to the landfill working face;
- Existing permitted and planned disposal areas Phases 1-6; and
- Perimeter drainage channels and the primary stormwater detention basin.

4.2 Access

The site is accessed from Maunaloa Highway by approximately 2,300 feet of asphalt-paved road leading to the entrance facility (scale house, landfill office, maintenance shop and Recycle Molokai Facility). The road consists of two 12-foot lanes with three-foot shoulders and open channel drainages. It is designed for travel at speeds not to exceed 25 mph, with grades not exceeding seven percent. The gate near the Maunaloa Highway entrance is to be locked at all times when the site is unattended or otherwise not open to the public.

Beyond the scale house, the road to the active landfill area is an all-weather asphalt-paved road, connecting to gravel and dirt roads to the active fill areas. It serves the commercial and residential route trucks, self-hauling residents and other vehicles delivering loads directly to the active area. The road is to be maintained in good repair to provide trucks and other vehicles easy transit to the fill.

Roads within the landfill footprint are constructed on compacted refuse covered with soil. These roads should be watered frequently to control wind-blown dust.

4.3 Entrance Facilities

The entrance facility consists of the following:

- Truck scale and scale house / landfill office building (modular structure);
- Maintenance shop;
- Recycle Molokai Facility a HI-5 redemption center and materials recycling operation with bins for recyclable materials storage and a designated area for electronic waste receiving and storage;
- Warehouse for Recycle Molokai materials storage.

The paved road between the site entrance and the landfill active area has in excess of 200 feet of length for queuing and storage of vehicles which is sufficient for at least 5

waste delivery vehicles.

4.4 Utilities

Electrical: 208 volt, 3-phase power is supplied to the landfill by Maui Electric Company, a subsidiary of Hawaiian Electric Company.

Water: Bottled water is provided for drinking purposes. Water for domestic use and fire control is delivered to the storage tank by tanker truck from existing off-site domestic supply sources.

Sanitary: Sewage disposal at the site is by use of a subsurface sewage disposal system consisting of a septic tank and leach field.

Communications: Telephone service is provided to the site. Radio communications from the office to the operator at the active area are provided and will be kept operable at all times.

4.5 Landfill Containment Systems

Figure 3 illustrates the existing landfill base grades for Phases 1 and 2, existing liner grades for Phases 3 and 4, and the proposed liner grades for Phases 5 and 6. Phases 1 and 2 were constructed without full composite liner systems as permitted by federal Subtitle D and Hawaii criteria for solid waste landfills, based on the exemption provided for facilities accepting less than 20 tons per day of solid waste.

Phase 1 was constructed with approximately 2 acres of the 3.3-acre cell floor lined with a PVC geomembrane above a compacted soil base, as a "pilot" test to determine whether subsequent cells would require liner systems for collection of leachate.

Phase 2 was constructed with a compacted soil liner and no geomembrane. Phase 2 has a geomembrane-lined 20' X 40' lysimeter constructed at a low point, with a perforated pipe at the bottom and a solid pipe sloped downward to a collection and monitoring point located outside the cell perimeter, as described in Section 4.7 below.

Phases 3 and 4 were constructed with a composite liner system consisting of the following elements, listed from bottom to top:

- A prepared subgrade consisting of a minimum 12 inches of native soil compacted to 90 percent of maximum dry density;
- A low-permeability soil liner with a minimum thickness of 12 inches and a maximum permeability of 1.0×10^{-6} cm/sec;
- Geomembrane consisting of 80-mil high density polyethylene (HDPE);
- 16-ounce per square yard cushion geotextile;
- Leachate collection drainage layer consisting of 12 inches of sand or gravel with a permeability capable of maintaining less than 30 cm (12 inches) of hydraulic head above the geomembrane;
- 16-ounce per square yard filter geotextile; and

- 24-inch thick protective soil layer.

Phases 5 and 6 will be constructed with the same composite liner system.

Figure 6 illustrates the liner system for the existing Phases 3 and 4 and the proposed Phases 5 and 6.

4.6 Landfill Development Sequence

Figure 2 illustrates the existing conditions of the Phases 1 through 4 disposal areas, and the proposed Phases 5 and 6 disposal areas. Figure 3 presents the constructed, and proposed liner grades of the disposal areas.

Phases 1 and 2 comprise approximately 6.8 acres of disposal area. Phase 3 comprises approximately 2.2 acres of disposal area. Phase 4 comprises approximately 2.6 acres of disposal area. Phases 5 and 6 will add approximately 6.6 acres of lined disposal area.

Figure 4 presents the interim final grades for the existing Phase 1 through 4. Figure 5 presents the final grading plan for Phases 1 through 6.

The incremental and cumulative design capacities for each phase of development in the current and planned waste footprint, in cubic yards, are:

Phase	Size (acre)	Phase Capacity (cy)	Cumulative Capacity (cy)
1 and 2	6.8	263,200	263,200
3	2.2	87,200	350,400
4	2.6	113,200	463,600
5	3.2	111,700	575,300
6	3.4	261,900	837,200
Total	18.2	837,200	837,200

The design capacities are based on gross volume adjusted for volume occupied by 1 foot of leachate collection gravel and 2 feet of protective cover soil in Phases 3, 4, 5 and 6, and by 3 feet of final cover soil in all phases.

4.7 Disposal Capacity Utilization and Requirements

As previously presented, disposal records for the period from April 16, 2013 and April 17, 2019, the period spanned by the 6 most recent topographical surveys performed for the site, indicate the MISWMF received an annual average of 5,137 tons for disposal. Comparing the landfill grades in these successive topographic surveys provides the landfill disposal capacity, also referred to as landfill airspace, which was consumed during each survey period and for the entire period bracketed by these surveys. Taking the recorded disposal tonnage and dividing it by the airspace consumed (measured in cubic yards (cy),

the average density of the landfilled waste and cover material achieved during each survey period and for the entire period bracketed by these surveys can be calculated. This average density is also referred to as the Airspace Utilization Factor (AUF), is expressed in pounds/cy (lbs/cy) or tons/cy, and can be used in combination with projected future disposal tonnage to project future airspace consumption and provide a basis for the schedule of development for additional disposal capacity to ensure continuous and un-interrupted landfill operations. The following table summarizes the disposal tonnage and AUF for the period from April 16, 2013 and April 17, 2019:

Period of Study		Days In Period	Tons Received	Net Airspace Utilized (cy)	Airspace Utilization Factor (AUF)(lbs/cy)	Airspace Utilization Factor (AUF)(tons/cy)
4/16/2013	5/6/2014	385	3,746	19,003	394	0.197
5/6/2014	4/4/2015	333	3,863	13,725	563	0.281
4/4/2015	7/11/2016	464	7,167	24,832	577	0.289
7/11/2016	5/7/2017	300	4,575	20,590	444	0.222
5/7/2017	5/31/2018	389	6,493	15,325	847	0.424
5/31/2018	4/17/2019	321	5,009	12,323	813	0.406
Totals		2,192	30,853	105,798		
Annualized Averages			5,137	17,617	583	0.292

Typically, projections of future disposal requirements include considerations of future population growth and development. Under current economic conditions, such considerations are difficult to make for the Island of Molokai where the major employer and landowner, Molokai Ranch, has suspended most business operations since mid-2008. Based on the uncertainties of future economic expansion or population growth, the primary drivers of disposal volume growth, estimates of future disposal capacity needs and the projected life of the landfill have been based on the average annualized rate of disposal capacity utilization (17,617 cy/year) observed during the period of April 16, 2013 to April 17, 2019.

As of the date of the most recent topographic survey, April 17, 2019, the remaining net disposal capacity, less the space to be occupied by final cover, within the currently developed Phases 1 through 4 is approximately 53,987 cy (See Appendix C). Additional net disposal capacity of approximately 373,600 cy is to be provided by the planned Phases 5 and 6, resulting in a total remaining site disposal capacity of approximately 427,600 cy. Based on the above outlined projected annualized rate of disposal capacity utilization of 17,617 cy and the total remaining site disposal capacity of 427,600 cy, the remaining site operational life is projected to be through the middle of the year 2043. The following table provides the disposal capacity utilization projection and the anticipated development schedule for the planned Phases 5 and 6:

Fiscal Year	Beginning Capacity (cy)	Cell Constructed	Additional Capacity (cy)	Projected Annual Airspace Consumption (cy)	Ending Capacity (cy)
2019	53,987			12,453	41,534
2020	41,534	Phase 5	111,698	17,617	135,615
2021	135,615			17,617	117,998
2022	117,998			17,617	100,381
2023	100,381			17,617	82,764
2024	82,764			17,617	65,148
2025	65,148			17,617	47,531
2026	47,531	Phase 6	261,898	17,617	291,811
2027	291,811			17,617	274,195
2028	274,195			17,617	256,578
2029	256,578			17,617	238,961
2030	238,961			17,617	221,344
2031	221,344			17,617	203,727
2032	203,727			17,617	186,110
2033	186,110			17,617	168,493
2034	168,493			17,617	150,876
2035	150,876			17,617	133,259
2036	133,259			17,617	115,642
2037	115,642			17,617	98,025
2038	98,025			17,617	80,409
2039	80,409			17,617	62,792
2040	62,792			17,617	45,175
2041	45,175			17,617	27,558
2042	27,558			17,617	9,941
2043	9,941			9,941	0

Notes:

1. Beginning capacity based on aerial topographic survey dated 4-17-2019.
2. Average Annualized Capacity Consumption: 17,617 cy/year
3. 2019 airspace consumption prorated for the period from 4-17-2019 through 12-31-2019.
4. Total Remaining Capacity projected to be exhausted approximately mid-2043.

4.8 Leachate Management System

4.8.1 General

The leachate collection and removal system (LCRS) is designed to collect water that has contacted waste and percolated through the landfilled waste. The LCRS consists of drainage media placed above the liner system and a system of perforated pipes leading to a collection sump from which the leachate is pumped. The LCRS systems are designed and operated to maintain hydraulic head below established compliance levels as discussed in the following:

4.8.2 Phase 1 Leachate Collection System

Any leachate generated in Phase 1 flows into collection trenches along the south and west sides of the cell that flow to the wet well located outside the Phase 1 waste limits. The leachate collection trenches were constructed with perforated pipes imbedded in gravel. The two perforated pipes connect in the southern corner of the cell where a solid pipe then penetrates the PVC liner through a boot and connects to the 6-foot diameter wet well located to the south of the Phase 1 waste limits. A riser pipe (for leachate head monitoring) followed by a plug valve lies between the containment area and the wet well. Though information about Phase 1 cell construction is limited, it is believed that the elevation of the low point of the cell is 204' above mean sea level (amsl); therefore, the leachate level must be maintained at a level below 205' amsl for HDOH compliance.

4.8.3 Phase 2 Leachate Collection System

Phase 2 was constructed with a geomembrane lined 20' x 40' lysimeter at the cell low point. A perforated pipe is located at the bottom of the lysimeter and connects to a solid pipe, which penetrates the liner on the west side through an anti-seepage boot. The lysimeter LCRS pipe projects beyond the limits of Phase 2, in a westerly direction from Phase 2, and functions as the Phase 2 leachate monitoring point. The leachate monitoring point can be accessed on the west side of Phase 2 near the interface with Phase 1. Leachate can be pumped from the sampling port if any is present. To date no leachate has been detected in the lysimeter.

4.8.4 Phases 3 and 4 Leachate Collection System

The Phase 3 disposal area is built with a lined internal LCRS sump constructed in the southwest corner of the cell. The leachate collection drainage layer in Phase 3 is 12-inch thick layer of gravel, placed above a geotextile cushion layer, which is immediately above the geomembrane liner. The LCRS gravel layer is covered with a geotextile filter layer. The cell floors for Phases 3 and 4 are graded with a minimum slope of 2 percent to drain to gravel-filled trenches in which 6-inch perforated HDPE pipes are placed. The cell floors and trenches are sloped toward the collection sump. The sump is located entirely within the lined area, with a bottom depth four feet below the adjacent floor liner area. It is lined with two feet of low-permeability soil and two layers of 80-mil HDPE geomembrane, and filled with gravel to the level of the adjacent drainage layer on the floor. The Phase 3 sump riser pipe is provided for sampling and withdrawing leachate from the sump. By regulation, the leachate head over the liner (saturated depth of water in the drainage layer) within the landfill cannot exceed 12 inches deep, except within the LCRS. The lowest elevation of

liner at the edge of the Phase 3 sump is 221.5 feet; therefore the compliance level is 221.5 feet amsl in the Phase 3 sump .

The Phase 4 liner is hydraulically connected to the Phase 3 liner and is designed and constructed with a liner consistent with the Phase 3 liner. The Phase 4 liner is sloped from the north/northwest side to the south/southeast side. A lined leachate collection trench, consisting of a perforated pipe surrounded by gravel, runs along the south/southeast side of the Phase 4 liner, roughly parallel with the edge of the Phase 2 area and ties into the leachate collection trench in Phase 3. The trench runs to the southeast through Phase 3, roughly parallel with the edge of the Phase 1 and 2 areas and terminates in the Phase 3 LCRS sump. The Phase 3 sump was sized to serve both Phases 3 and 4.

4.8.5 Proposed Phases 5 and 6 Leachate Collection System

The Phases 5 and 6 LCRS systems will have designs consistent with based on that of Phases 3 and 4, where the liners slope to leachate collection trenches. Phases 5 and 6 will be constructed with an LCRS gravel filled trench and perforated collection pipe, sloped to drain to a new sump to be located in south corner of Phase 5.

As discussed previously, in regards to the Phase 3 LCRS sump, the Phase 5 LCRS sump must be monitored and pumped out in order to maintain leachate levels below the compliance level elevation. The compliance elevation for the Phase 5 sump will be determined after completion of construction and be based on as-built liner and sump floor elevations. The compliance elevation will be properly documented and communicated to site operations personnel to ensure proper monitoring and disposal of leachate.

4.9 Construction Procedures

All additions and modifications to the leachate collection and liner systems of current and proposed phases at the MISWMF will be constructed by qualified contractors working under a construction quality assurance (CQA) program directed by an experienced professional engineer. The following requirements must be met:

A registered land surveyor will survey the prepared sub-grade of the disposal area prior to placement of liner materials, to verify it is constructed according to approved plans.

Geosynthetic liner materials will be installed under the supervision of the material manufacturer, or shall be installed by a contractor who has installed a minimum of 500,000 square feet of similar types of liners. An experienced CQA landfill inspector with at least five years of experience in landfill liner CQA, working at the direction of a professional engineer, will observe the liner installation.

A complete report of the installation will be prepared by the CQA inspector and engineer, documenting the installation of liner systems including the observation and testing of welded seams. A professional engineer registered in Hawaii, with at least five years of experience in designing landfills, will review the inspections, test records and CQA report, and certify that the liner and leachate collection system have been constructed in accordance with the approved plans.

No waste will be placed in a newly designed and constructed phase until it has been certified by the engineer, and inspected and approved by the HDOH.

4.10 Stormwater Management Facilities

A stormwater "Notice of General Permit Coverage" File No. R50A626 (Appendix A-3), issued by the State of Hawaii Department of Health, governs the management and discharge of stormwater from the MISWMF operations.

Stormwater facilities are designed to serve both active and closed landfill conditions and consist of a series of ditches and channels draining to a sedimentation basin. Critical elements of the current and planned stormwater management system include the following:

- Temporary diversion and containment berms to prevent rainfall that has contacted waste in the active disposal area from being discharged to the stormwater management system. Site operators are responsible for constructing and maintaining soil berms to divert runoff from inactive areas away from the active area, and berms to contain any stormwater incident on refuse that has not been covered with daily cover soil. Any stormwater that has contacted waste must be allowed to percolate into the refuse and be treated as leachate.

- Temporary ditches or channels on the landfill to direct runoff to the perimeter drainage channels. They must be frequently inspected and maintained to minimize erosion of intermediate soil cover.

- Perimeter channels and perimeter road drainage around the disposal area to convey stormwater to the sedimentation basin. Including channels along the north and east sides of Phases 3 and 4, and along the west side of proposed Phases 5 and 6. These channels also provide collection of stormwater runoff from the metals recycling and green waste processing areas.

- The primary sedimentation basin includes an overflow spillway to permit water discharge in a controlled manner. During construction of Phase 5, the basin will be enlarged by approximately 200%, to increase retention capacity, improve sediment removal, and minimize discharge events. See Figure 3.

- A proposed channel that will convey runoff from the entrance facility area to the sedimentation basin via the existing channel bordering the Phase 3 disposal area. See Figure 3.

Based on a hydrologic analysis, the current and proposed features of the surface water management system are designed to manage the 24-hour, 25-year storm as required by HAR 11-58.1-15(g).

4.11 Monitoring Installations

4.11.1 Groundwater

In 2008, the County conducted a study to determine if groundwater monitoring was necessary. It determined that groundwater monitoring was not necessary under both the "small landfill" and "no-migration" exemptions set forth in HAR 11-58.1-11(f) and HAR 11-58.1-16(a)(2) respectively. The study was conducted in 2008 by A-Mehr, Inc. confirming the findings of the original Dames & Moore study done in 1998 and states:

> *Maui County currently estimates that the total volume disposed during the 2006 calendar year was 6,421 tons or 17.6 tons per day on a 365 day per year basis (A-Mehr, Inc., 2007)*
>
> *A no-migration demonstration (Dames & Moore, 1998) was previously submitted by Maui County to the State of Hawaii Department of Health, pursuant to HAR 58.1-16(a)(2). Updated information related to that demonstration included in Section 7 of this monitoring plan (Site-Specific Groundwater and Leachate Monitoring Plan for the Molokai Integrated Solid Waste Facility; A-Mehr, Inc., April 2008). The analysis concludes, like the 1998 study, that although migration of leachate constituents is theoretically possible, the character of the underlying groundwater is such that hazards to human health and environment are highly unlikely.*

In the event the HDOH requires a groundwater monitoring program in the future, monitoring wells would be installed up-gradient and down-gradient of the landfill. The wells would be completed to the depth of sea level, with screened intervals established to monitor groundwater located at a maximum elevation of 0 to 5 feet above sea level. The wells would be capped with 12-inch diameter locking well monuments and protected by steel post bollards set in concrete.

4.11.2 Leachate

Leachate is currently monitored at 5 locations at MISWMF, as described below:

- **Phase 1 Wet Well.** Leachate from Phase 1 drains by gravity toward the wet well shown in Figure 7. A valve at the inlet to the wet well is kept closed except when leachate is allowed to flow into the wet well for pumping and removal from the site.

  The Phase 5 liner will tie into the Phase 1 liner/base grades and leachate from Phase 1 will drain onto the Phase 5 liner and be collected and managed in the Phase 5 sump which is sized to manage leachate from Phases, 1, 2, 5, and 6. The Phase 1 leachate wet well will be abandoned and removed upon completion of the construction of the Phase 5 area.

- **Phase 2 Lysimeter and Monitoring Point.** A test lysimeter in the southwest corner of Phase 2 drains to a monitoring point on the west side of Phase 2 as shown in Figure 7. The design elevation of the soil liner within the Phase 2 test lysimeter is approximately 224.5 ft. amsl. Therefore, the compliance level in Phase 2 is indicated by a liquid level in the standpipe at elevation 225.5 ft. amsl.

In order to develop the liner grades for Phase 6, the current Phase 2 lysimeter sampling port will be removed and the lysimeter will be converted to drain onto the adjacent Phase 6 liner. Drainage from the Phase 2 lysimeter will be collected in the Phase 5 sump.

- **Phase 3 Leachate Collection Sump.** The elevation at the bottom of the double-lined sump in Phase 3 is 216 ft. amsl, and the elevation at the liner system adjacent to the sump edge is 221.5 feet. The compliance elevation, at which the adjacent liner system has no more than one foot of hydraulic head above it, is 222.5 feet amsl.

- **Phase 3 Sump Lysimeter.** The sump lysimeter is constructed below the clay liner in the bottom of the sump. Any significant volume of liquid in the lysimeter is to be investigated as potential indication of a release of leachate from the sump.

- **Phase 3 Pan Lysimeter.** The pan lysimeter is constructed below the lowest area of liner outside the Phase 3 sump. Any significant volume of liquid detected in the pan lysimeter is to be investigated as potential indication of a release of leachate from the liner system.

Phase 5 will be constructed with a sump, a sump lysimeter, and a pan lysimeter similar to those constructed in Phase 3. Compliance levels for leachate head in the LCRS sump will be calculated after completion of construction and based on documented as-built elevations of the sump floor and the adjacent floor liner.

4.11.3 Surface Water

No special facilities are required for surface water monitoring. Surface water runoff samples are to be collected at the outfall or overflow of the sedimentation basin or as otherwise required by HDOH. Sampling procedures are described in the Stormwater Pollution Prevention Program contained in Appendix E.

4.11.4 Landfill Gas

In compliance with HAR 11-58.1-15(d) quarterly landfill gas monitoring is conducted to ensure that landfill gas does not exceed 25% of the lower explosive limit.

The present network of gas monitoring wells at the MISWMF, as shown in Figure 2, consists of 5 perimeter probes installed in 2011. Gas probes GP-2 through GP-5 are located near the site property line with the fifth probe, GP-1, located between the landfill and entrance area. The gas probes provide early warning of any gas migration towards the property boundary or the entrance facility structures.

5 AIR CRITERIA

5.1 Gas Emissions

The MISWMF will comply with the Clean Air Act. On March 12, 1996, the United States Environmental Protection Agency (USEPA) released its final rule that modifies the Clean Air Act to limit the ambient emissions of non-methane volatile organic compounds (NMOCs) from solid waste landfills (40 CFR Parts 51, 52, and 60, Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills). Under this rule, landfills having a design capacity in excess of 2.5 million megagrams (2.76 million tons) and 2.5 million cubic meters (3.27 million cubic yards) are required to establish control programs for landfill gas.

With a design capacity of 837,200 cubic yards, MISWMF Landfill is substantially below the regulatory threshold for requiring gas emission controls. Therefore, the site is not required to install a landfill gas collection system.

5.2 Open Burning

Open burning is prohibited and is not practiced at the MISWMF.

6 ACCESS CONTROL

The MISWMF has constructed access control facilities and implemented procedures to control public access and prevent unauthorized vehicular traffic and illegal dumping of waste. The site is fully fenced, with the only public access located at the site entrance gate on Maunaloa Highway. The gate is locked at all times when the landfill is closed. Keys to the gate are limited to contractors and SWD staff. Distribution of additional keys must be authorized by appropriate County of Maui supervisors.

Documentation of entries to the site are maintained in scale tickets issued to commercial customers, and sign-in sheets used to register all non-customer visitors to the site.

7 SURFACE WATER MANAGEMENT

7.1 General

The primary facilities for surface water management are described in Section 4.10. These facilities must be maintained, modified and supplemented as needed to achieve the surface water management requirements of the operating permit for the MISWMF, including:

- Prevention of run-on and collection and control of run-off from a twenty-five year, 24-hour storm.
- Prevention of soil erosion and exposure of waste due to soil erosion.
- Prevention of a discharge of pollutants into waters of the United States, or violating any requirement of the Clean Water Act or state-wide water quality management plan.
- Compliance with all state and federal requirements related to water quality.

Facilities and operating procedures to meet these requirements are addressed below.

7.2 Run-on and Runoff Control

Stormwater diversion berms have been constructed around the entire perimeter of the disposal footprint to prevent stormwater from running onto the landfill areas. The MISWMF operations and maintenance personnel are responsible for maintaining the integrity of these berms throughout the year.

Control of stormwater on the landfill top deck and sideslopes is another important responsibility of site operating staff. This includes:

- Diversion berms must be constructed and maintained upslope from the active landfill face to prevent surface water from running onto refuse that has not received daily cover. The berms must be frequently moved and rebuilt as the active face changes location on the landfill top deck.
- Containment berms must be constructed and maintained to prevent runoff from leaving the active disposal area after it has contacted waste. Rainfall or surface water that contacts refuse must be retained and allowed to percolate into the landfill, where it will either be absorbed in the waste mass or percolate to the leachate collection system and be managed accordingly.
- Runoff from the landfill top deck and sideslopes must be directed to the perimeter drainage channels without eroding the landfill cover. This is accomplished by proper preparation and maintenance of temporary or permanent ditches and channels along the access roads to the top deck, installation of sandbag or rock check dams to reduce velocity and trap sediment in runoff, and other measures that are detailed in the Surface Water Management plan, and described in the Section 7.4.

7.3 Runoff Control at Active Disposal Working Face

Among the most critical responsibilities of site operations for storm water control is to prevent run-on and run-off of surface water from the active working face. All precipitation incident on exposed refuse must be contained within the immediate area and be allowed to infiltrate into the refuse for subsequent management as leachate. This is accomplished primarily by sloping areas near the toe of the active face toward the exposed refuse on a daily basis so rainwater running off of the exposed refuse can be contained and absorbed into the refuse and cover soil. At the end of each working day, the working areas are covered and adjacent areas re-graded to convey storm water to intermediate slopes or the existing drainage system.

7.4 Stormwater System Maintenance

The stormwater collection system, including all ditches, channels and the sedimentation basin will be inspected annually during the month of August, and an annual surface water management plan will be prepared. The annual surface water management plan will include the following:

- Documentation of the inspection, together with a description of recommended maintenance, repairs and modifications to be made based on the observed conditions.

- Updated drawings of the landfill based on current topography, showing current conditions and planned changes to the stormwater management system.

The annual stormwater plan will be completed by September 1, and all modifications recommended in it will be implemented by November 1 of each year. The SWD Chief or a designee (staff engineer or consultant) shall prepare the annual plan and verify its implementation.

The stormwater management system is to be inspected weekly during the rainy season, and after major storm events to detect any deterioration. The berm separating the uncontaminated stormwater from the leachate collection system must be inspected weekly during the rainy season.

Maintenance actions will consist of reshaping any berm that shows erosion, slumping, or scouring by channel flow. Eroded areas in the intermediate cover on sideslopes are to be repaired by adding compacted soil. Channel reinforcement with geotextile mat or armoring with rock to control erosion may be required. Excavation of silt accumulation may be required to maintain the channel flow capacity.

8 LEACHATE MANAGEMENT

Appendix D contains the Site-Specific Groundwater and Leachate Monitoring Plan for the MISWMF. It describes the existing leachate monitoring and collection facilities and procedures required to maintain compliance with regulations and permit conditions for leachate management. The MISWMF personnel should be thoroughly familiar with all aspects of the Plan. Upon completion of construction of the Phase 5 LCRS sump, the Site-Specific Groundwater and Leachate Monitoring Plan will be updated to include the compliance elevations for leachate management which will reflect the as-built elevations of the sump and adjacent liner.

Currently all leachate is disposed of at the Kaunakakai Waste Water Treatment Facility. The County requests that the MISWMF be allowed to reintroduce leachate at the active face of Phases 3 and 4, and proposed Phases 5 and 6. This proposed practice would benefit in both litter control and waste compaction.

Specific procedures for monitoring and managing leachate, as contained in the Plan, are listed in the following sections.

8.1 Leachate Level and Quantity Monitoring

As required by the site's solid waste management permit, leachate level monitoring in each measurement location will be performed on a monthly basis. In addition, leachate levels will be checked after each significant rain event with more than 0.1 inch of rain in 24 hours. Procedures for each sampling point are summarized below.

8.1.1 Phase 1 Leachate Monitoring

At each monthly monitoring event, site personnel will perform the following procedures:

1. Open the valve in the leachate line and drain leachate into the wet well until either the flow of leachate is reduced to a trickle or the wet well is full.

2. If the wet well is full, arrange for liquid removal at the earliest possible time. At that time, drain liquid from the cell into the sump until the incoming flow is reduced to a trickle.

3. Document all leachate removals based on the capacity of the truck-mounted tank used to haul it from the wet well to the wastewater treatment facility or for use on-site if allowed by the HDOH.

4. Upon construction of the Phase 5 liner and LCRS sump, the Phase 1 wet well be removed and the leachate from Phase 1 will drain onto the Phase 5 liner and be managed at the Phase 5 sump. At which time, monitoring of the wet well will be terminated and the wet well removed.

8.1.2 Phase 2 Leachate Monitoring

At each monthly monitoring event, site personnel will perform the following procedures:

1. Measure the liquid level in the Phase 2 leachate monitoring standpipe. If an electric sounding tape is available, level will be determined by measuring distance from the top of the standpipe to the liquid surface; otherwise the depth of liquid will be measured using a dipstick.

2. Calculate the elevation of the liquid surface using the surveyed elevation of the top of the standpipe.

3. Calculate the liquid level in the Phase 2 test lysimeter based on an assumed lysimeter base elevation of 224.5 feet above mean sea level.

4. Record all measurements.

5. If the elevation of the liquid surface in the Phase 2 standpipe equals or exceeds 224.5 feet above mean sea level, use a portable pump or suction hose to remove as much liquid as possible from the standpipe. The removed liquid may be discharged to the Phase 1 wet well or hauled directly to the wastewater treatment plant. Document the volume and disposition of all liquid withdrawn from the Phase 2 standpipe.

6. If the liquid elevation at any time exceeds the compliance level of 225.5 feet, initiate reporting procedures as directed in the Site-Specific Groundwater and Leachate Monitoring Plan in Appendix D.

7. Upon construction of the Phase 6 liner, the Phase 2 leachate monitoring standpipe will be removed and the leachate from Phase 2 will drain onto the Phase 6 liner and be managed at the Phase 5 sump. At which time, monitoring of the standpipe will be terminated.

8.1.3 Phases 3 and 4 Leachate Monitoring

Phase 4 base liner and LCRS collection trench are sloped to drain leachate by gravity into the Phase 3 sump. Each monthly monitoring event of leachate in the Phase 3 sump will include the following procedures:

1. Measure distance from the top of the LCRS sump riser pipe to the liquid surface in the sump using an electric sounder, if available. Alternatively, measure the depth of liquid in the sump using a long dipstick (Note: the measured distance from the PVC bulkhead fitting at the top of riser pipe to the sump bottom is 19.4 feet in Phase 3).

2. Calculate the liquid head above the liner, if any, using the as-built survey information for the elevation of the liner adjacent to the sump.

3. Estimate the volume of liquid contained in the sump using the chart or table supplied by the site engineer. If the estimated volume exceeds 5,000 gallons, arrange for leachate to be pumped from the sump and either be transported to the wastewater treatment plant or, if permitted by the Department of Health and documented in the site's Operations Plan, spread at the active disposal face in Phases 3 and 4, and Phases 5 and 6, once developed, as an aid to litter control and compaction.

4. Check the Phase 3 test lysimeter for the presence of liquid, using an electric sounding tape attached to a pole approximately 15 feet long. If any liquid is detected, notify the County Solid Waste Division designated environmental compliance officer, who will initiate the notification and investigation activities detailed in Section 6.3 of the Site-Specific Groundwater and Leachate Monitoring Plan (Appendix D).

5. Record all data regarding leachate levels, volumes, withdrawals and disposition of leachate, using forms provided by the County Solid Waste Division.

6. If the liquid elevation at any time exceeds the compliance level, initiate reporting procedures as directed in the Site-Specific Groundwater and Leachate Monitoring Plan in Appendix D.

8.1.4 Phases 5 and 6 Leachate Monitoring

The Phase 6 base liner and LCRS collection trench are designed to drain leachate by gravity into the Phase 5 sump. Each monthly monitoring event of leachate in the Phase 3 sump will include the following procedures (specifics of procedures will be further defined after construction of Phase 5 as necessary based on as-built conditions):

1. Measure distance from the top of the LCRS sump riser pipe to the liquid surface in the sump using an electric sounder, if available. Alternatively, measure the depth of liquid in the sump using a long dipstick.

2. Calculate the liquid head above the liner, if any, using the as-built survey information for the elevation of the liner adjacent to the sump.

3. Estimate the volume of liquid contained in the sump using the chart or table supplied by the site engineer. If the estimated volume exceeds the action level established by the site engineer, arrange for leachate to be pumped from the sump and either be transported to the wastewater treatment plant or, if permitted by the Department of Health and documented in the site's Operations Plan, spread at the active disposal face in Phases 3 and 4, and Phases 5 and 6, once developed, as an aid to litter control and compaction.

4. Check the Phase 5 pan lysimeter for the presence of liquid, using an electric sounding tape attached to a pole. If any liquid is detected, notify the SWD designated environmental compliance officer, who will initiate the notification and investigation activities detailed in Section 6.3 of the Site-Specific Groundwater and Leachate Monitoring Plan (Appendix D).

5. Record all data regarding leachate levels, volumes, withdrawals and disposition of leachate, using forms provided by the SWD.

6. If the liquid elevation at any time exceeds the compliance level, initiate reporting procedures as directed in the Site-Specific Groundwater and Leachate Monitoring Plan in Appendix D.

8.2 Leachate Sampling

By permit, a sample of leachate must be collected from each leachate collection point on a semi-annual basis. Collection points currently sampled are the Phase 1 wet well, the Phase 2 standpipe and the Phase 3 sump. Upon completion of Phase 5 and commencement of disposal operations within the area, the Phase 5 sump will be sampled on a semi-annual basis. Sampling will be conducted by trained personnel using procedures outlined in Section 8 of the Site-Specific Groundwater and Leachate Monitoring Plan (Appendix D).

8.3 Reporting

MISWMF personnel will forward all monitoring data to the SWD Wailuku Office and maintain copies on site. SWD staff will compile the data and submit reports to the HDOH in conformance with the solid waste management permit and Operations Plan requirements. Reports will include, at a minimum:

- Any measurement of a leachate level above the designated compliance level in any phase will be reported to HDOH within 24 hours using a Noncompliance Notification form provided by the SWD.

- Notification of any leachate detection in the Phase 3 and Phase 5 lysimeters will be made to HDOH within 10 days after detection.

- Laboratory analyses of leachate samples will be submitted to HDOH within 45 days after the results are received from the analytical laboratory.

- A summary of data on leachate withdrawals, including at a minimum the total volume and disposition of leachate from each monitoring point, will be included in the site's Annual Operating Report due by July 31 of each year.

9 EQUIPMENT AND PERSONNEL REQUIREMENTS

9.1 Personnel

The number of employees needed to operate and maintain a landfill is a function of the hours a facility is open, the daily tonnage received, and the overall areas to be maintained. A minimum of four people must be at the site during operating hours to manage the landfill in a safe and efficient manner. This includes a Working Supervisor, Scale Attendant, Landfill Attendant (spotter), and Equipment Operator.

The **Working Supervisor** is responsible for daily operations of the site, compliance with environmental regulations, following SWD policies, safety training and safety issues, and adherence to this Plan. The Working Supervisor will supervise the activities of Scale Attendants and Landfill Attendants. The Working Supervisor may be called upon to fill in should the Equipment Operator be absent, however their primary responsibility is site management and should the Equipment Operator become unavailable for extended periods, additional personnel should either be hired temporarily or reallocated from other County operations.

The **Equipment Operator** is responsible for operating equipment for landfilling and other site activities. General duties include compacting landfill waste, covering waste at the end of each day, stockpiling and borrowing soils for interim cover, performing general site earthwork, and maintaining roads and drainage.

The **Landfill Attendant** (spotter) is responsible for screening incoming waste for unacceptable materials, directing customers to the correct unloading location, controlling traffic in and around the unloading location, and maintaining the unloading area in safe and workable condition.

The **Laborer** has primary responsibility for litter control and pickup and provides assistance to other landfill personnel as directed**.**

The Scale Attendant is responsible for weighing waste loads, collecting fees, recording the source accounts billed, initial screening for unacceptable materials, enforcing the covered and secured loads requirements, and directing customers to the correct location for unloading.

Overseeing the Working Supervisor is the **Landfill Operations Supervisor** based on Maui. The Landfill Operations Supervisor is responsible for overall operations of the site, compliance with environmental regulations, following SWD policies, adherence to this Plan, and site development plans. The Landfill Operations Supervisor implements policies and programs of the SWD by carrying out the following activities:

- Provides training for all personnel;
- Schedules crews and equipment;
- Oversees all safety training and safety issues;
- Monitors the MISWMF for compliance with plans and regulations; and
- Directs waste fill operations, leachate management, and site maintenance activities.

Overall environmental compliance is assured by an **Environmental Compliance Officer** (ECO) based on Maui. The ECO is primarily responsible for ensuring that environmental monitoring and reporting is implemented according to required procedures and schedules. The ECO also conducts training and makes periodic site visits to observe site operations and work with the site manager and other personnel to ensure that the site is operated in accordance with regulatory and permit requirements.

9.2 Technical Support

The Maui-based SWD administrative and support staff includes technical personnel with responsibilities for environmental and engineering support at the MISWMF. An Engineer based in the SWD Wailuku office assists with contractual matters, environmental monitoring activities and general technical assistance. Another Engineer is broadly responsible for field monitoring and reporting, permit management, design, construction management and other technical activities at the site. An Engineering Technician provides additional resources to assist the Engineers in carrying out their assigned duties and monitoring activities.

9.3 Third Party Assistance

In conformance with permit conditions, the County may contract with qualified third party consultants as needed to advise the MISWMF operating personnel in proper means of safely and efficiently operating and maintaining the landfill in compliance with regulatory requirements. Consultants may provide guidance on operational procedures to protect the liner system, leachate management, monitoring programs and numerous other aspects of facility operations. The County will continue to retain outside assistance as needed in the future.

9.4 Training Requirements

Site personnel must receive the following minimum training as noted:

1. In-house briefing on landfill design and operations. They will be given a copy of this Plan and a verbal walk-through of all of its sections (all site employees).

2. Landfill operator's training course offered by the Solid Waste Association of North America (SWANA) (Landfill Operations Supervisor, Working Supervisor, and Equipment Operator).

3. Certified training in first aid and CPR (all site employees).

4. Instruction in recognition and control of noxious weeds (Landfill Operations Supervisor, Working Supervisor, and Equipment Operator).

Records showing the training date, place, and instructor are to be kept at the facility office.

9.5 Operating Equipment

Primary operating equipment at the MISWMF as of October 2019 includes the following, which are adequate to manage the volume of waste currently being received:

- One CAT D6 bulldozer
- One CAT D7 bulldozer
- One CAT 953C track loader
- One CAT 279D track loader
- One Polaris Ranger 900XP all terrain vehicle
- One Peterbilt dump truck
- One Morbark horizontal grinder
- One Peterbilt water truck

Operating equipment is to be serviced according to manufacturers' recommendations and standard practice. Engine mufflers will be replaced as needed. Each operating day, equipment is inspected for leaks and to verify adequate oil, hydraulic and fuel levels. Fluids are added as necessary to ensure proper operating levels. Leaks or other operational concerns noted during daily inspections are corrected and repaired as necessary. To prevent potential equipment fires, particularly in equipment operating in the refuse, dozer and track loader undercarriages will be cleaned and trash removed at least once per week.

10 ON-SITE RECYCLING ACTIVITIES

This section describes the facilities and activities at the MISWMF that support the County of Maui's waste diversion programs.

10.1 Recycle Molokai Facility

The Recycle Molokai facility, which is operated by a third-party contractor, serves as a HI-5 redemption center and recycling drop off center accepting the following materials from the public and commercial collection companies:

- Cardboard;
- Newspaper, and other paper materials;
- Glass;
- Aluminum;
- Plastic;
- Bimetal;
- Electronic waste.

The facility is located immediately south of the landfill entrance area, is approximately half an acre, and includes a variety of bins for depositing and storing dry materials, and a warehouse storage building. Equipment includes a glass pulverizer, and a baler for cardboard, paper, plastics, aluminum, and bi-metal cans. Recyclable materials are sorted, processed, stored, and loaded into shipping containers for transport to end users or off-island processors. The facility is staffed by 5 employees. The Recycle Molokai facility operates under its own solid waste management permit issued by HDOH.

10.2 Green Waste

The green waste receiving and processing area is presently located to the south of Molokai Metals. The area is currently operated by a 3rd party contractor utilizing County-owned equipment.

The County may, in the future, elect to assume operational responsibility for the green waste operation. Under such circumstances, the County would continue the current practice of producing mulch for on-site use and for use by Molokai residents utilizing the current County-owned processing equipment.

Green material less than six inches in diameter is accepted from residential and commercial customers, temporarily stored, and periodically ground into mulch by a third-party contractor. The mulch is made available to Molokai residents at no charge and is also utilized on site.

10.3 Scrap Metal, White Goods, Propane Tanks, Tires, Batteries, and Motor Oil

The Molokai Metals Facility, operated by a 3rd party contractor, is the only location on Molokai authorized to receive and store scrap automobiles, white goods, used propane tanks, tires, lead-acid batteries and other scrap metal materials. The facility also receives

and stores used motor oil. Materials are received and stored, and are periodically transported to end users or off-island processors. The facility covers approximately one acre, is located to the west of Phase 4, and consists of an office building, receiving, processing, and storage areas.

10.4 C&D Materials Designated for Recovery

Clean Inert Materials

The MISWMF may use rock, dirt, concrete and asphalt materials received from customers and off-site sources for on-site use such as refuse cover material, road base, wet weather operations decking, etc. Source-separated clean loads of these materials will be diverted to designated stockpile areas for future use.

Scrap Metal

Subject to the availability of equipment and labor, large metal assemblies may be separated from mixed loads after discharge at the working face, and transported to the Molokai Metals Facility.

Wood

Source-separated loads of clean untreated/unpainted wood materials (pallets, dimensional lumber, etc.) may be directed to the Green Waste Facility for processing into mulch.

11 LANDFILLING, COMPACTION AND PLACEMENT

11.1 Landfilling Procedures

Landfill operational procedures are designed to minimize leachate production (i.e., contact of stormwater with waste), control stormwater runoff, compact waste to its smallest practical volume, cover the waste effectively, control litter, control vectors, prevent odors, and control dust. The Equipment Operator is to follow site operational procedures and the Working Supervisor's filling instructions to accomplish these goals.

11.1.1 Daily Waste Placement

The daily active area will be 50 feet wide or less and ramped from top to bottom on a 3:1 (horizontal to vertical) slope. Refuse will be spread, placed and compacted in layers of approximately 2 feet to construct a lift of waste that may vary from 5 to 10 feet thick. At the conclusion of each working day, an ADC (alternative daily cover) geosynthetic tarp, green waste mulch, or a 6-inch layer of daily cover soil is placed over the refuse fill area.

Temporary access roads to the working face and dumping pads will generally be constructed over intermediate cover and maintained by the landfill crew. They will be constructed from imported or stockpiled soils, crushed rock, recycled inert materials (concrete, asphalt, etc.), or contaminated soils meeting qualifications specified in Section 12.7.3.

During periods when rain is possible, the Equipment Operator will ensure that temporary perimeter berms around the active area will maximize diversion of storm water away from or around the active working face to prevent contact with exposed waste. Berms around the active working face will contain storm water that has come into contact with the waste and force it to percolate into the underlying waste where it will be collected in the drainage layer at the bottom of the landfill and managed as leachate.

If the Equipment Operator or Landfill Attendant notice anything unusual in the waste, the Working Supervisor will be notified, and the load will be inspected before burying.

11.1.2 Filling Operations

At the active face, the Landfill Attendant and Equipment Operator are responsible for directing the vehicles to the desired dumping area. Dumping will not be allowed until the vehicle comes to a complete stop. No operation of equipment will occur within 20 feet of vehicles discharging refuse payloads. The Equipment Operator will coordinate with the Scale Attendant to direct incoming loads. Operators and Landfill Attendants are responsible for monitoring customer activities at the active face to ensure safe operations, and prevent customers from attempting to scavenge waste materials. Scavenging is prohibited at the landfill.

The Equipment Operator will limit the active face to a 50-foot wide area as noted above. The size of the working face will vary each day to accommodate the tonnage of incoming waste and weather conditions. The waste will be spread in layers approximately 2 feet thick prior to compacting.

Inert and C&D wastes, not suitable for on site re-use, are disposed at the active area of the landfill along with other waste. To ensure protection of the landfill liner, C&D waste is not placed within the first 5-foot lift of refuse.

11.1.3 Initial Lift Placement

To protect the landfill liner from damage, a 2-foot-thick layer of operations layer soil is placed over the 12-inch leachate collection drainage layer during liner construction. To further reduce the chances for liner damage, the first lift of waste in a new disposal cell will be 5 feet thick, and will consist only of select waste containing no objects greater than 24 inches in any dimension. Residential route collection waste is suitable for this purpose and will be used exclusively in placing the first 5-foot lift across a new cell. In addition, the first lift will not be compacted as heavily as subsequent waste lifts, in order to minimize potential disturbance to the protective soil layer.

Based on these considerations, the first lift of waste in each new cell area will be constructed generally as follows:

- During initial placement of the first lift in a new cell, the MISWMF will continue operations in a previous area for all waste except the select residential loads, which will be diverted to the new lined area.

- An access road will be constructed to allow access to the new cell floor. At the point where trucks enter the cell, an additional 1-foot of soil will be placed to ensure that a minimum of 3 feet of soil lies above all liner components. The access road will terminate at a tipping pad, also constructed with an additional 1-foot of protective soil, where trucks can maneuver to dump their loads over the lined area.

- As loads are dumped at the initial tipping area, a bulldozer will push and spread the waste in approximately 2 foot layers out across the cell. Compaction will be by 2 to 3 passes of the dozer over each layer. Additional layers will be spread and compacted until the desired lift thickness of at least 5 feet is reached.

- At the conclusion of each working day, cover soil will be delivered by truck and spread by the dozer in a 6-inch layer across the waste.

- When the surface of the first 5-foot lift is sufficiently large to allow truck circulation, the initial temporary tipping pad will be abandoned and refuse delivery trucks will access and maneuver on top of the completed portion of the first 5-foot lift.

- When the 5-foot thick lift of select waste is sufficiently large, commercial waste loads may be accepted and placed on top of the select waste to build a thicker initial lift. A compactor may be used to compact waste placed above the initial 5 feet of select waste.

- Care will be taken in each new cell to construct the first lift so that it will shed surface water from the cell, minimize accumulation and ponding of water on the reuse, and minimize leachate production. This generally means that the lift must be substantially thicker at one side of the cell than at the other, in order for surface water to be drained

to the outside of the cell to be collected in the perimeter channel.

Waste placement against lined side slopes will not be done until the Working Supervisor has verified that a minimum of 24 inches of protective cover soil is in place over the geosynthetic liner components on the side slopes. If the protective cover is less than 24 inches, additional soil will be brought to the area by truck and spread using a loader.

The liner system is expensive and is the only barrier to prevent leachate from potentially impacting the underlying groundwater. It is critical to observe and follow the above outlined operational procedures that will ensure no damage to the liner system. Any damage to the liner system must be reported immediately to the Working Supervisor filling operations suspended in that area until liner repairs are completed and the Landfill Operations Supervisor authorizes filling the area.

11.1.4 Compaction

In general, waste will be advanced across a cell in 5 to 10-foot high lifts until final grades are reached. Waste delivery trucks will discharge waste at the top or bottom of the lift, and the operator will spread it in typical two-foot-thick layers. The layer will be compacted by no fewer than three to five passes of a bulldozer or compactor over all portions before more waste is added.

11.1.5 Side Slope Grades

The Landfill Operations Supervisor and Working Supervisor are responsible for correctly filling the landfill with proper grades on exterior side slopes. The maximum intermediate and final slopes should not exceed 2.5: 1 at the time of placement, so that they will settle back to 3:1 after the landfilled refuse has consolidated over several years.

It is also important that benches shown on the external slopes of final grading plans be constructed during waste placement. The Working Supervisor should request engineering assistance as needed when filling in external slope areas, to have benches surveyed and staked as needed to guide filling and grading activities.

11.1.6 Maximum Elevation

The site is permitted to reach a maximum refuse elevation of 290 feet above sea level.

11.1.7 Active Area Leachate Containment

The Working Supervisor and Equipment Operator must ensure that precipitation falling in the active area is contained as leachate through the use of berms as discussed previously. The Working Supervisor must follow the fill progression and sequencing plan within a cell and regulate the size of the active area to limit the area of open refuse that is exposed during a precipitation event. The Working Supervisor must also manage interim alternative cover and soil cover to control stormwater.

As each lift is advanced, the top of the lift will form an intermediate surface, or deck; this will serve as an unloading pad for the trucks and as the foundation for the next lift. The top of the deck will be filled to create a 1 to 3-percent slope away from the active area.

11.2 Cover Soil Procurement and Stockpiling

Soil material for daily and intermediate cover will be obtained from off-site sources or reclaimed from loads of C&D should it meet requirements specified in Section 12.7.3. In order to ensure adequate cover supplies at all times, the County will maintain and continuously fund a supply contract with one or more sources of suitable cover material. When possible, the contract will provide for soil to be delivered directly to the working face area on a daily basis, to minimize the cost of applying cover. However, the MISWMF will also maintain a working stockpile of cover soil at a convenient location where it can be accessed by site equipment when the contractor may be unable to supply it. The stockpile should contain a minimum of one week's supply of soil for daily cover, as described in the following section. Stockpiled material should be placed on top of at least 12 inches of intermediate cover and must not interfere with surface water flow.

When crushed glass is available for use as a leveling layer before placement of soil cover, it will be stockpiled at a location as close to the active area as practical and will not interfere with surface water management. No more than 100 cubic yards or 100 tons of crushed glass material should be stockpiled at any one time. Whenever possible, deliveries should be scheduled for days when cover material is needed. Only Advance Disposal Fee (ADF) glass or other source-separated glass may be used as a leveling layer. HI-5 glass may not be used in daily cover.

11.3 Daily Cover Soil

If alternative daily cover (ADC) is not used (See Section 11.4), a minimum of 6 inches of soil is required as daily cover over the working face of the landfill. The Equipment Operator will ensure that all waste is covered at the conclusion of each operational. A silty or clayey soil is preferable, as this soil type functions best and is effective in limiting air intrusion. Crushed rock, no coarser than 1 inch minus with the fines left in, can be used if soil is not available.

The amount of soil needed to achieve an effective thickness of 6 inches of daily cover will vary depending on several factors, including:

- Compaction of the waste: Well-compacted waste will have fewer and smaller voids to be filled with soil.

- Soil characteristics: Sand tends to filter deep into the waste, whereas more silty or clayey soils tend to bridge the voids in the waste surface.

Regardless of the type of soil or degree of compaction, some soil will be lost into voids on the uneven waste surface. An effective thickness of 6 inches of cover must be placed above the upper surface of the refuse.

As a means of limiting the quantity of daily cover soil needed, a dozer should be used to strip off the previous day's daily cover soil from areas where new refuse will be placed. The stripped daily cover soil can be stockpiled adjacent to the working face. Because the stripped daily cover soil will be contaminated with refuse, this material is not suitable as a replacement for clean daily cover soil. The stripped daily cover soil will be used as a

leveling layer prior to clean daily cover soil placement.

Prior to placing the stripped daily cover soil, the day's working face should be prepared to receive the stripped daily cover soil. The first step is to smooth the surface of the refuse and minimize exposed voids by running a bulldozer over it. After the bulldozer has smoothed the entire refuse surface, then the bulldozer is to spread the available stripped daily cover soil over the surface of the refuse. Once the stripped daily cover soil is reinstalled, clean daily cover soil can be placed over it.

11.4 Alternative Daily Cover

The MISWMF utilizes alternative daily cover (ADC) in place of soil under specified conditions, as approved by the HDOH.

11.4.1 Alternative Daily Cover (ADC) Tarps

ADC Tarps are currently used as ADC at MISWMF. Tarps used for ADC will be a thick, woven geosynthetic material that will be placed manually. Tarps use less airspace than cover soil therefore increasing the life of the site. Additionally, the use of tarps will provide cost savings, by reducing the quantity of soil purchased for daily cover use.

11.4.2 Green Waste Mulch ADC

The County is requesting the use of green waste mulch as ADC for the MISWMF. Green waste mulch, a clean green material typically less than 6-inches in size, would provide several important benefits to the landfill:

- Because of its fibrous nature, mulch effectively covers the refuse and functions similarly to soil as a cover material.

- Organic materials used as ADC will degrade in the landfill over time, resulting in greater consolidation of the waste mass and use less airspace for cover material resulting in an increase in site operational life.

- Use of mulch as ADC is a beneficial use of waste products that is appropriately considered as diverted waste counting toward the County’s attainment of Hawaii’s 50% recycling goal.

Use of green waste mulch as ADC will provide cost savings, by reducing the quantity of soil purchased for daily cover use.

11.4.3 ADC Application Methods

Alternative daily cover materials will be applied only on advancing temporary slopes that will receive additional waste the following working day. The top deck of the daily advancing lift will be covered with soil.

Tarps will be manually deployed to cover the working face and will be weighted down with

tires or other dense, on-site materials. Tarps will not be used when wind conditions make the handling of tarps unsafe or excessively difficult to deploy.

ADC will not be used during periods of rain. ADC will not be used on permanent or semi-permanent exterior landfill slopes, or on the top deck.

11.5 Intermediate Cover

Landfilled areas that will not receive additional waste fill for 30 days or more will be covered with an intermediate cover layer of at least 12 inches of soil. This additional 6-inches of soil over the previously placed daily cover provides additional thickness to ensure control of vectors, fires, and odors. The soil will be obtained from stockpiles or imported in accordance with a soil management plan prepared by the Landfill Operations Supervisor with the concurrence of the SWD Chief. The Working Supervisor will calculate the quantity of intermediate soil cover to be placed prior to placement of the soil.

Intermediate cover will be dumped at or near the area to receive intermediate soil, as directed by the Equipment Operator. The dozer will be used to spread the soil in a 6-inch-thick layer (for a final thickness over refuse of at least 12 inches), or more, as needed to produce the required 12-inch thickness.

When areas that have received intermediate cover are scheduled for additional waste filling, the Equipment Operator will use bulldozers to scrape off as much of the cover soil as possible before additional waste is placed. This should be done on a daily basis each morning before incoming refuse vehicles arrive. The soil should be pushed into a temporary stockpile adjacent to the working face, for reuse as daily cover at the end of the day. Care should be taken when stripping off the intermediate cover not to mix any significant volume of trash with the soil.

12 SPECIAL AND HAZARDOUS WASTE SCREENING PROGRAMS

This section describes procedures and programs implemented at the MISWMF to prevent the disposal of hazardous or other unacceptable or prohibited wastes, and to manage special wastes in accordance with State regulations and the site's operating permit.

12.1 Waste Acceptance

Preventing unacceptable waste from entering the MISWMF is critical. The principal objective is to prevent the improper disposal of hazardous waste as defined in 40 CFR 258.20 or acceptance of other prohibited waste as dictated by the site operating permit (a copy of Hazardous Waste Exclusion Program is provided in Appendix G). To ensure no hazardous or prohibited wastes are received, a stringent waste acceptance program and a hazardous waste exclusion program have been implemented.

Waste delivered for disposal will be weighed at the scale and recorded on individual scale ticket receipts. A receipt showing weight delivered will be produced for each delivery. One copy of the receipt is to be provided to the driver of the vehicle making the delivery.

The SWD requires waste loads to be secured and covered, or the waste may not be accepted.

12.2 Unacceptable Wastes

The following waste types are not accepted for disposal at the MISWMF by permit:

- Regulated hazardous waste, as defined in HAR 11-261 through 268;
- Radioactive waste, which shall be managed in accordance with HAR 11-58.1-64;
- Polychlorinated biphenyl (PCB) waste, as defined in 40 CFR Part 761;
- Untreated infectious waste, excluding infectious waste generated within the household, in accordance with HAR 11-58.1-53;
- Bulk or non-containerized liquid waste, except as provided in HAR 11-58.1-15(i);
- Containers holding liquid waste, except as provided in HAR 11-58.1-15(i)(2);
- Commercial loads containing greater than 25% green waste and household loads containing greater than 50% green waste, in accordance with HAR 11-58.1-65(b);
- Scrap automobiles, white goods, and whole motor vehicle tires, in accordance with HAR 11-58.1-65(c);
- Lead acid batteries, in accordance with HRS 342I; and
- Compressed gas tanks.

Additional wastes that are not accepted for disposal by County policy include:

- Agricultural waste unless approved by landfill personnel;
- Unflattened cardboard boxes;
- Tree trunks, roots, telephone poles, piling, cables, wire fences, and similar types of materials;
- Drums unless one end is completely open;
- Sewage sludge;

- Fats, oils and greases; and
- Electronic wastes.

The Molokai Metals Facility receives and stores scrap automobiles, white goods, compressed gas tanks, used tires, lead-acid batteries, and used motor oil. The Recycle Molokai Facility receives and stores electronic wastes. Periodically these facilities transport these accumulated recyclable materials to off-site processors or end users. Receipt, storage, and off-site transport of these materials is done accordance with applicable HDOH regulations

12.3 Radioactive Waste

As provided by State and Federal law, the MISWMF does not accept radioactive waste of any type. Radioactive materials generated by medical establishments and other sources are managed under regulations of the HDOH in Chapter 45 of Hawaii Administrative Rules, Title 11.

In order to prevent inadvertent acceptance of radioactive waste, the scale house is equipped with a radiation monitor. Should the radiation detector be activated, the Scale Attendant would have the suspect vehicle pull over to an isolated area on site away from employees and the general public and immediately notify the Working Supervisor and the Landfill Operations Supervisor. A portable radiation monitor would then be used to confirm radioactive loads and rule out the possibility of false positives.

Upon confirmation that contents of the vehicle triggered the alarm, the driver would be prohibited from approaching the vehicle, the vehicle would be retained in the isolated area, and the appropriate radiation management agencies shall be notified.

The radiation management agency will then isolate the radioactive refuse and determine the appropriate course of action in compliance with HDOH regulations. For further information refer to the Molokai Radiation Monitoring Plan.

12.4 Hazardous Waste Exclusion and Waste Screening

The MISWMF has implemented a Hazardous Waste Exclusion Program. This program was developed to comply with 40 CFR 258.20 and involves waste acceptance procedures that prohibit the receipt of hazardous and prohibited wastes. A copy of this program is included in Appendix G.

The waste inspection program includes a series of waste screening actions as listed below. These careening actions meet or exceed the state's criteria for solid waste screening and are described in the Hazardous Waste Exclusion Program. These screening actions include at least the following five major components:

- Inquiry by Scale Attendant;
- Visual check of loads by Scale Attendant;
- Random waste inspections at unloading point;
- Signed certification by deliverer for questioned materials; and

- Reference to list of unacceptable materials and recording previously rejected materials by source.

All generating sources of solid wastes that could potentially be prohibited from acceptance at the MISWMF are advised of the facility waste acceptance criteria, are asked to obtain approval for disposal of their waste before delivery, and employ management procedures that ensure their waste conforms to MISWMF operating requirements and permit conditions. Information is supplied to generators describing acceptable and restricted wastes.

Physical inspection of wastes occurs at two locations: (1) the generating source by commercial and municipal collection operators, and (2) the disposal facility. Operating personnel are trained to differentiate between conforming and nonconforming waste and to identify typical unacceptable wastes. If waste appears to be nonconforming, the waste rejection procedures outlined in the Hazardous Waste Exclusion Program are to be implemented. All operations personnel are informed of the implications and risks, to the MISWMF and themselves, of accepting nonconforming wastes.

If unacceptable wastes are identified, they are to be handled in accordance with regulatory requirements for that class of waste. The waste should either be returned to the source or shipped to a disposal facility permitted to accept it. Personnel at the generating source will be notified about the unacceptable material and informed of the waste acceptance criteria. The SWD will notify the HDOH if a regulated hazardous waste or PCB waste is discovered at the MISWMF.

12.5 Special Waste Screening Program

The following types of waste are designated by permit as Special Wastes and may be accepted for disposal only after individual review and approval by the SWD. Special wastes are also managed under special handling procedures at the landfill.

The MISWMF is permitted to accept the following special wastes:

1. Asbestos;
2. Semi-solid wastes including:
    a. Water separation, car and equipment wash wastes;
    b. Off-specification and outdated products;
    c. Underground storage tank and other sludges;
3. Contaminated soils and debris including:
    a. Resins and chemical debris;
    b. Petroleum and other contaminated soils;
    c. Diesel or motor-type fuels and debris;
    d. Used oils and debris;
    e. Gasoline, jet fuel, kerosene, and debris;
4. Baghouse dusts;
5. Inorganic filter cakes;
6. Treated poles and lumber;
7. Empty containers;
8. Treated medical waste;

9. Contaminated materials under current EPA Region 9 industrial PRG's;
10. Construction and Demolition (C&D) wastes including:
    a. Concrete and asphalt rubble;
    b. Steel and nonferrous metal;
    c. Wood, glass, masonry, tile, roofing, siding, and plaster;
    d. Waste plumbing, mechanical and electrical building components
    e. Dirt and rock;
    f. Brush, wood, roots, stumps, dirt and rocks from clearing and grubbing activities;
    g. Mattresses, furniture, and other furnishings resulting from whole-building demolition;
    h. Paint waste from removal, construction and demolition; and
    i. Sandblast grits.

Among the permitted Special Wastes listed above, however, by policy, the MISWMF presently accepts only the following:

- Treated medical wastes;
- Asbestos;
- Contaminated soils;
- Semi-solid wastes other than sewage sludge or septic wastes, which are not accepted; and
- C&D wastes.

The MISWMF also accepts dead animals and offal for disposal under Special Waste management procedures. Permitted Special Wastes listed above that are not currently accepted as a matter of policy may be accepted in the future according to appropriate acceptance and management procedures that will be documented as amendments to this Operations Plan.

12.6 Special Waste Management Procedures

This section describes the specific programs and procedures implemented at the MISWMF to manage the categories of Special Wastes accepted for disposal.

12.6.1 Infectious Waste

Only medical wastes that have been autoclaved or otherwise rendered non-infectious may be accepted for disposal at the MISWMF. Acceptable medical wastes will be handled in accordance with the following procedures:

- Generators of medical waste within the landfill's service area will be notified that all medical waste to be received at the landfill must be placed in red bags marked "Medical Waste" and autoclaved.

- Waste haulers will also be notified of these requirements to ensure that their drivers know how to properly inspect waste prior to pick-up.

- Properly packaged medical wastes will be disposed of at the working face with other wastes.

- Site personnel, when conducting random load checking, will verify that the acceptance criteria have been complied with. However, under no circumstances are the red bags to be broken and spread out for inspection or handled by anything but landfill equipment.

- Site personnel will attempt to determine the source of any observed medical wastes that do not meet the acceptance criteria. Site personnel will interview the refuse truck driver and try to determine the origin of the waste.

For purposes of this document and acceptance at the MISWMF, the definition of unacceptable medical waste are those which are generated at a medical facility and have not been red-bagged and autoclaved, including the following: pathological and surgical wastes, medical clinic wastes, wastes from biological laboratories, syringes, needles, blades, tubing, I.V. bags, bottles, drugs, patient care items such as liners, personal and food service items from contaminated areas, chemicals, personal hygiene wastes, and animal carcasses used for medical purposes. These restrictions do not apply to household wastes which may contain incidental amounts of the listed items.

12.6.2 Asbestos Waste

Special procedures are implemented at the MISWMF to ensure that the requirements of 40 CFR 61.154 (National Emission Standards for Hazardous Air Pollutants) are met. After complying with all special waste acceptance and approval procedures, asbestos waste transporters are allowed entry to the site at a pre-scheduled time. The scheduled time is to be established by the Working Supervisor in consultation with the Scale Attendants.

All asbestos containing wastes are required to be double bagged in plastic with a minimum thickness of six mils. Asbestos loads are inspected at the scalehouse to verify that:

- The load is accompanied by a properly completed Maui County Landfill Asbestos Manifest form;
- The load is is double bagged in 6-mil clear plastic bags, not exceeding four feet in length, with warning labels specified by OSHA; and
- A label on each bag or package that identifies the generator and location at which the waste was generated.

After acceptance at the scale house, the asbestos delivery vehicle is directed to an area near the working face for disposal, where a trench or pit has been excavated in previously filled solid waste. The designated asbestos disposal area is posted with warning signs to identify and restrict access to the area to all except for trained personnel.

A Landfill Attendant is always present at the disposal area when a customer is there and must inspect the paperwork to ensure the load has been properly processed at the scalehouse. If the documentation is in order, the spotter directs the customer to the disposal trench and oversees the unloading process. Asbestos loads are unloaded by hand. All employees handling asbestos must have valid asbestos identification cards,

protective suits and respirators. If the overseeing spotter observes significant tearing of the plastic wrapping of the asbestos waste, the customer is required to re-wrap and seal it. After the unloading process is complete, the spotter must sign the manifest form, which is returned to the Scale Attendant for final approval.

Asbestos waste is not compacted or otherwise disturbed by equipment after being unloaded, in order to maintain the integrity of the double wrapping. It is covered on a daily basis with a minimum of 6 inches of soil. Soil cover is delivered by truck and spread by a loader or bulldozer. No equipment is operated in contact with the asbestos waste. Equipment operation over the waste is permitted after placement of the prescribed soil cover.

Documentation of the date, time, names of the waste generator and transporter, and location within the site where the waste was disposed is placed in the site's permanent operating record. Asbestos load locations are identified by a grid coordinate system, including the elevation within the fill.

Landfill personnel are trained in asbestos handling and hazard management. Training topics include manifest requirements, unloading and covering procedures, use of personal protective equipment, safety measures, and emergency procedures. These and other topics are covered in annual refresher training sessions required of all personnel involved with asbestos disposal. Training records are maintained in the site's operating record.

In addition to the general emergency procedures described in Section 13.5 of this Operations Plan, the following contingencies unique to asbestos disposal are covered in training:

Asbestos material spills are to be treated generally as a hazardous material spill, as described in Section 13.5.5, with the following refinements:

- A manager or supervisor with asbestos experience is to direct all cleanup activities.

- After isolating the spill area with cones or flags, the material is inspected to determine the extent of damage to plastic wrapping or other containment, and whether the material appears to be friable or non-friable asbestos.

- If the material is non-friable, site personnel wearing gloves and respirator masks may repackage the material in plastic or in drums, and load it for transport to the disposal area.

- If the material is friable and the packaging is substantially damaged, the load must be covered by a plastic tarp and secured, and a licensed asbestos contractor will be called in to repackage the spilled material and deliver it to the disposal area. Landfill personnel are not to participate in handling friable asbestos waste until it has been properly repackaged and placed in the disposal area.

- A full report of the incident, including a description of the cleanup activity, will be placed in the daily operating log.

Mismanaged asbestos deliveries are incidents where undocumented loads of asbestos might be accepted for disposal, or loads containing asbestos waste are mistakenly accepted as general solid waste and are directed to the general disposal area. Landfill Attendants and Equipment Operators are trained to recognize such loads and prevent their disposal as general solid waste. Appropriate responses to mismanaged asbestos loads include the following:

- If a load shows up at the working face without proper asbestos paperwork (a manifest approved by the scale attendant), the Landfill Attendant is to deny it access to the dumping area and direct the driver to return to the scalehouse.

- If the Landfill Attendant or Equipment Operator at the disposal area are not aware that an asbestos load is expected and identify an asbestos-containing load before it is dumped, they will summon the Working Supervisor to check the driver's paperwork. If the documentation is in order the Working Supervisor will determine whether to reject the load entirely, or to prepare a disposal trench and allow it to be unloaded.

- If asbestos waste is identified during or after the time a load is dumped outside the designated asbestos area, it will be treated as an asbestos material spill. The area will be cordoned off by cones or flags and regular disposal operations will be relocated away from the area.

12.6.3 Contaminated Soil

Generators must submit a Soil Profile Sheet (Appendix H) describing the source of the material with analytical test results for specified contaminants.

Additional testing may be requested on a case-by-case basis. After additional testing, soils may or may not be classified as hazardous waste.

Soils containing TSCA- regulated polychlorinated biphenyls (PCBs) are not accepted.

Depending on the contaminant type and level of contamination, as determined by the soil profile and test results, the SWD establishes the classification of each soil material and the appropriate management method as follows:

- Soils classified as regulated hazardous waste or TSCA regulated waste are rejected;
- Soils that must be disposed in the landfill as waste; or
- Soils that may be used on-site.

Soils that may be used on-site may be placed in soil storage stockpiles or used for their intended purpose upon discharge from the delivery vehicle. If the soil is to be stockpiled, a bulldozer is used to push the soil into one of the stockpiles, which are located in a designated area.

Soils meeting the Tier 1 State of Hawaii Residential Environmental Action Levels (unrestricted land use, drinking water resource, less than 150 meters to nearest surface water body) and maximum aggregate size of 2 1/2-inch minus will be placed in the soils storage areas, where they will be held for subsequent use as structural fill, intermediate

cover, and final cover materials.

Soils meeting the Tier 1 State of Hawaii Commercial/Industrial Environmental Action Levels (direct exposure) and maximum aggregate size of 2 1/2-inch minus will be placed in the soils storage areas, where they will be held for subsequent use as daily cover. If used as daily cover, the soil shall not be exposed for more than 24 hours.

Soils that do not meet the Tier 1 State of Hawaii Commercial/Industrial Environmental Action Levels (direct exposure) and maximum aggregate size of 2 1/2-inch minus shall be disposed of in the landfill as waste.

12.6.4 Semi-solid Waste

The MISWMF is prohibited from accepting bulk or non-containerized liquid wastes or semi-solid wastes containing less than 50 percent solids. Small quantities of liquid waste generated by households, other than septic waste, can be accepted.

Customers proposing to dispose full loads of unusually wet wastes to the landfill may be required to submit test results demonstrating that the waste contains at least 50% solids as determined by the paint filter test, before the waste is accepted for disposal.

12.6.5 C&D Wastes

All C&D customers are subject to the MISWMF prequalification procedures. Customers are required to execute a disposal agreement and submit a Request for Clearance Number Form to the MISWMF, generally 7 days in advance of the date when the customer proposes to begin transporting waste to the MISWMF. Following the inspection, MISWMF issues a clearance number which is referenced for each load from the job site.

Waste generators are responsible for determining and certifying to the MISWMF that wastes proposed for management are not regulated hazardous waste. The MISWMF requires special testing for several categories of C&D waste, including debris containing lead paint, and sand blast sand and soil. These materials must be tested using the Toxicity Characteristic Leaching Procedure (TCLP) and meet the following maximum criteria:

Lead Paint Debris	Lead	5.0 mg/L
Sand Blast Sand and Soil	Arsenic	5.0 mg/L
	Barium	100.0
	Cadmium	1.0
	Chromium	5.0
	Lead	5.0
	Mercury	0.2
	Selenium	1.0
	Silver	5.0

Fiberglass or steel waste storage tanks proposed for disposal must be certified clean by a qualified environmental contractor.

Customers are required to submit test results and certifications for these materials before

the MISWMF issues a Clearance Number authorizing acceptance of the waste for disposal.

When waste transporters arrive at the MISWMF, if the Scale Attendant has any doubt or concern regarding the acceptability of the material, Working Supervisor is summoned to inspect the load and determine its acceptability.

A minimum of one load of C&D waste is selected each week for a random inspection according to procedures detailed in Section 12.4. If unacceptable waste is found, the material is reloaded in the customer's vehicle and removed from the site. Records are maintained of unacceptable wastes observed during inspections.

Once a waste load has been determined acceptable, it is weighed and the data entered into the scalehouse records, and the customer is directed to the appropriate processing or disposal area.

C&D waste loads will be delivered to the active working face and unloaded as directed by the Landfill Attendant. Unacceptable materials identified by the Landfill Attendant or Equipment Operator will be removed from the load and managed according to operating procedures indicated in the Hazardous Waste Exclusion Plan. The remaining load will then be spread, compacted and covered by the conclusion of the operating day.

As previously discussed, no C&D waste is placed or buried in the initial 5-feet thick layer of select waste above the protective soil layer.

Clean Inert Materials

The MISWMF may use rock, dirt, concrete and asphalt for construction of on-site roads and wet-weather pads. Source-separated clean loads of these materials will be diverted to the designated stockpile areas for future use.

Scrap Metal

Subject to the availability of equipment and labor, large metal assemblies may be separated from mixed loads after dumping at the working face and stored in bins (above intermediate cover) for later transport to the Molokai Metals Facility.

Wood

Source-separated loads of clean untreated wood materials (i.e. pallets) may be directed to the Green Waste Facility.

C&D waste acceptance forms are included in Appendix H.

12.6.6 Dead Animals and Offal

Dead animals, or offal from the slaughter of animals, will be handled in accordance with the following acceptance and disposal procedures:

- The Scale Attendant will notify the appropriate site personnel of the waste and direct

the customer to an area isolated from the main unloading area.

- A trench will be cut to facilitate disposal and the carcass or offal will be buried immediately. The carcass will be covered with a minimum of two feet of soil or solid waste, and compacted before the conclusion of the work day.

- Customers wishing to bring in extremely large carcasses, such as a whale, must notify the MISWMF in advance by telephone so provisions can be made to excavate a sufficiently sized trench.

13 OPERATIONAL CONTROLS

13.1 Disease Vector Control

Vectors are animals or insects capable of distributing pathogenic materials from the landfill to human receptors outside of the facility. The term commonly refers to birds, rodents, flies, and, less commonly, dogs, deer, or other wildlife species. The measures described are applicable both at the active area of the landfill and the on-site public drop-off facilities. The fencing around the landfill is intended to discourage entry by people and larger animals. The gates must be closed and locked at the end of each operating day.

13.1.1 Bird Control

Birds may be attracted to food or water sources at landfills. Avoiding spillage of wastes outside the operating area, complete covering of the deposited wastes, and maintenance of areas with intermediate cover are usually effective in discouraging birds. To the extent possible, birds should be discouraged from roosting or nesting on active or inactive areas of the site. These measures have been effective in the past, resulting in very few birds being present at the MISWMF.

13.1.2 Rodent Control

Control of rodents is accomplished by eliminating food supplies and shelter or harborage. Adequate compaction, complete covering of wastes, and maintaining a clean facility without shelter for rodents is a priority assignment of landfill personnel.

13.1.3 Insect Control

Flies and insects are controlled by compacting waste soon after it is placed and covering of waste at the conclusion of each operating day. Regular cleaning of the containers at the entrance transfer facility is also required. Chemical controls may be used with the approval of the SWD Chief for control of peak seasonal populations.

13.1.4 Other

In the event feral dogs or cats are regularly observed on the site, the Molokai Humane Society or other agency will be contacted for assistance with trapping and removing the animals.

13.2 Explosive Gases Control

Waste volumes at the MISWMF are not projected to ever exceed those at which mandatory installation of an active landfill gas collection would be required under state or federal regulations.

However, landfill gas monitoring is required. Five landfill gas monitoring probes, shown in Figure 2, have been installed to ensure that explosive gas levels remain below 25% of the lower limit as required by HDOH regulations. These levels are checked quarterly per permit requirements.

13.3 Odor Control

No adverse air quality impacts or odors should result off-site from landfilling operations. Measures to be taken on site to reduce the potential for odors are as follows:

- Waste materials are landfilled and covered by the conclusion of the operating day on which they are received, thereby minimizing exposure of odorous wastes to the atmosphere. Disturbance or excavation of waste after landfilling should be minimized.

- Enhance mixing of waste materials. Potential for odors can be reduced when different waste types are mixed together. This does not mean that the mixing needs to produce a totally homogeneous fill, but that large fill zones of a single type of decomposable waste should be broken up during landfilling, as practical.

- Unusually odorous loads should be covered immediately by other waste. This measure may include using a bulldozer to excavate a pit in the active face for the load to be dumped in, then covering it immediately with additional waste.

13.4 Litter Control

Litter should be collected daily from all parts of the landfill property, in accordance with permit requirements. Special attention must be paid to litter control during periods of high winds. Unloading trucks at the base of the lift, compaction immediately after unloading, and use of extra soil cover can reduce scattering of litter. A portable litter fence, when available, should be deployed downwind of the active face to capture escaping litter and reduce fugitive materials.

13.5 Emergency Operating Procedures

13.5.1 General

Possible emergency conditions at the MISWMF may require special response by the operators to maintain facility operations and protect public health and the environment. This section describes potential emergencies situations and response procedures for each. Landfill personnel should conduct a thorough review of emergency plans and procedures on an annual basis.

When the Equipment Operator is notified of an emergency situation, the response should include the following steps:

- Make a preliminary assessment of the situation and its potential impact upon human lives, public health, the environment, and facility operation.

- Respond to the emergency by providing first aid, clearing access to the site, and securing the emergency site.

- Notify the appropriate emergency response organization, the Working Supervisor, and utility companies as soon as possible.

- Take corrective actions to restore facility safety and return to normal operation.

The following sections describe specific procedures to respond to specific categories of emergency. Preventive measures are also described, where applicable.

13.5.2 Surface Fires

In the event of a surface fire, landfill personnel should take the following steps:

- Clear the area of personnel and customers.
- Notify emergency response team (911).
- Administer any first aid required.
- Notify the Landfill Supervisor.
- Determine if the fire is manageable. If not, no action shall be taken unless directed by the Fire Department.
- If the fire is deemed manageable, push out the burning material from the refuse face to a soil covered area with the dozer or compactor.
- Extinguish the burning material either through smothering with soil or application of water.
- If using water, apply with caution and cease application if the fire appears to react and grow (may indicate the fire is a result of chemical reaction).
- Avoid inhaling fumes, smoke, or vapors even if no hazardous material appears to be involved. Do not assume that gases or vapors are harmless because they lack odor.
- Provide directions to outside support organizations upon arrival.
- Keep all personnel up-wind and clear of the incident.

All efforts are to be focused on controlling the fire to prevent spreading. Once the fire is controlled and extinguished, the affected material should be opened up and fully extinguished before final disposal in the landfill.

If a fire occurs near the liner it will be necessary to remove all refuse and protective soil in order to expose the liner and either verify no damaged has occurred or to determine the extent of damage, if any, after the fire has been extinguished. If damaged, arrangements for repair and inspection will be required before landfilling in the immediate area of the damage.
Prevention of landfill equipment fires will be accomplished by removal of debris from undercarriages and engine compartments at regular intervals and as needed, by repairing oil and fuel leaks, and by providing a portable fire extinguisher in the cab of each vehicle. The office and equipment/maintenance building are also equipped with fire extinguishers.

Any incoming load that is burning, as evidenced by smoke or flames, will be unloaded away from the active working face and extinguished. If the hot load is inadvertently unloaded at the working face, the hot materials will be excavated, removed from the active fill area, and extinguished as previously described.

13.5.3 Subsurface Fires

Subsurface landfill fires may be caused by several mechanisms in municipal solid waste landfills, including:

- Air intrusion into the landfilled refuse from convection currents or wind.

- “Hot" loads being disposed in the landfill.

A buildup of heat, the presence of oxygen, and a fuel source can result in subsurface fires. To prevent a fire at least one of these elements must be eliminated. As fuel (the landfilled refuse) cannot be removed from a landfill, then oxygen must be prevented from infiltrating into the landfill and any source of heat eliminated.

To prevent air intrusion, soil cover is regularly placed over the landfill. The soil can be clay, silt, sand, rock, or a combination of these materials. If crushed rock is used, the maximum size shall be 2.5-inch minus. The cover shall be tracked-walked to create a dense surface that is minimizes air intrusion into the refuse. The minimum soil thickness is six inches.

On areas that do not receive waste for 30 days or more, the MISWMF is required to establish intermediate cover by placing additional cover soil to a minimum depth of one foot over the waste. No refuse is to show through the one-foot soil layer.

"Hot" loads of ash or other materials could provide a heat source and contribute to causing a subsurface fire. The waste placement practices at the active face of spreading incoming waste in layers approximately 2 feet in thickness provides the opportunity for the Equipment Operator and Landfill Attendant to observe the waste and locate potential hot or burning waste. Any potential hot spots identified will be removed and managed accordingly to prevent further combustion.

If a subsurface fire does occur, there are several options the MISWMF will need to consider for implementation. These options include the following:

- Excavation
- Smothering
- Injection

Excavation would require digging out the area that is on fire. Care will be required to ensure no flare-ups occur. Spraying the refuse with water and fire foam as it is excavated is recommended. Spread the excavated refuse over a soil covered area in one to two-foot lifts and thoroughly wet and compact. Excavation is recommended for shallow underground fires less than 10 feet deep, or if it is suspected that the bottom liner has been impacted. Contractors can be hired with successful experience in excavation of burning refuse if the project is outside the abilities of the MISWMF and/or SWD.

Smothering is spreading additional soil over the suspected subsurface fire area and maintaining the added soil in a moist condition. The placement and maintenance of moist soil over an area where a subsurface combustion is occurring prevents oxygen from being drawn into the underground fire area. Depriving a fire of oxygen will prevent its spread and eventually extinguish it. This technique would be suitable if there is no chance the underground fire could reach the bottom liner system.

Injection of water, foam, or inert gases (typically, nitrogen or carbon dioxide) is a suitable technique to extinguish a limited subsurface fire. Injection consists of drilling and installing perforated steel pipe into the immediate vicinity around the combustion location. The

perforated piping is then connected to the reservoir of foam, water, or gas selected to extinguish the underground fire. The injection technique is recommended if the underground fire appears too hot for excavation or is above the liner system and is too deep for excavation. If it is suspected that the bottom liner has been impacted, then excavation to uncover the liner system will be necessary.

13.5.4 Rain

The MISWMF staff will carefully monitor the condition of access roads and vehicle maneuvering areas on the top deck during periods when rainfall occurs or is expected. At any time when rainfall is sufficiently heavy to create excessively muddy conditions in the operating areas of the landfill, rock or rubble should be spread on roads and vehicle maneuvering areas to ensure vehicles can safely enter and exit the facility safely without getting stuck, and with minimal tracking of mud beyond the landfill footprint.. Additional maintenance of roads will be conducted as needed to ensure safe operating conditions during rainy periods.

In addition to adjusting disposal operations, the MISWMF staff must also increase the level of monitoring and maintenance of leachate and stormwater management systems during rainstorms. Special attention must be given to the following:

- The stormwater management system should be inspected at least daily during periods of rain, and maintained to ensure it is functioning as intended.

- The leachate monitoring points should be inspected at least weekly to ensure that leachate is removed as it is generated and leachate head levels are maintained below the regulatory limits.

13.5.5 Hazardous Material Spill

The MISWMF has a low potential for spills of hazardous materials, but incidents are possible in the event of vehicle accidents or malfunctions that could cause spills of coolant, fuel or lubricants. Actions to be taken in the event of a spill are described below.

The first step in responding to an oil or substance release incident is to prevent the material from impacting or reaching water, which will minimize migration and the potential for human and environmental exposure. Every effort should be made to prevent spills and emphasize substance containment at the source rather than resort to separation of the material from expanded portions of the environment or downstream waters.

Discovery of a Release

The person discovering a release of material from a container, tank, or operating equipment should initiate the following actions immediately.

- Extinguish any sources of ignition. Until the material is identified as nonflammable and noncombustible, all potential sources of ignition in the area should be removed. Vehicles should be turned off. If the ignition source is stationary, attempt to move spilled material away from the ignition source. Avoid sparks and movement creating

static electricity.

- Attempt to stop the release at its source. **Assure that no danger to human health exists first**. Simple procedures (turning valves, plugging leaks, etc.) may be attempted by the discoverer if there is no health or safety hazard and there is a reasonable certainty of the origin of the leak. No site personnel shall come into contact with unknown or hazardous substances illegally brought into the facility.

- Initiate spill notification and reporting procedures. Report the incident immediately to a supervisor. If there is an immediate threat to human life (e.g. a fire in progress or fumes overcoming workers), an immediate alarm should be sounded to evacuate the building, and the fire department should be called. Request the assistance of the fire department's hazardous materials response team if an uncontrollable spill has occurred and/or if the spill has migrated beyond the site boundaries.

Containment of a Release

- Attempt to stop the release at the source. If the source of the release has not been found; if special protective equipment is necessary to approach the release area; or if assistance is required to stop the release, the fire department should be called to halt the discharge at its source. Facility personnel should be available to guide the fire department's efforts.

- Contain the material released into the environment. Following proper safety procedures, the spill should be contained by absorbent materials and dikes. Consult applicable material safety data sheets for material compatibility, safety, and environmental precautions.

- Obtain the assistance of outside contractors to clean up the spill, if necessary.

Spill Cleanup

- Recover or clean up the material spilled. As much material as possible should be recovered and reused where appropriate. Material that cannot be reused must be declared waste. Liquids absorbed by solid materials shall be shoveled into open top, 55-gallon drums; or if the size of the spill warrants, into a roll-off container(s). When drums are filled after a cleanup, the drum lids shall be secured and the drums shall be appropriately labeled (or re-labeled) identifying the substance(s), the date of the spill/cleanup, and the facility name and location. Combining non-compatible materials can cause potentially dangerous chemical and/or physical reactions or may severely limit disposal options and should be avoided. Compatibility information can be found on material safety data sheets.

- Cleanup of the spill area Surfaces that are contaminated by the release shall be cleaned by the use of an appropriate substance or water. Cleanup water must be minimized, contained and properly disposed. Occasionally, porous materials (such as wood, soil, or oil-dry) may be contaminated; such materials will require special handling for disposal.

- Decontaminate tools and equipment used in cleanup Even if dedicated to cleanup efforts,

tools and equipment that have been used must be decontaminated before replacing them in the spill control kit.

- Arrange for proper disposal of any waste materials. The waste material from the cleanup must be characterized, transported and disposed according to State and Federal Regulations.

13.5.6 Solid Waste Spill

The Working Supervisor will address solid waste spills on site and is responsible for seeing that the waste is immediately contained and picked up. The responsible transporter will respond to off-site spills, or the SWD Chief will coordinate a response.

In general, spilled solid waste can be cleaned up with standard equipment (e.g., front-end loader). Once the situation is under control, the impacted areas will be identified, inspected to determine if there is any residual contamination. Impacted soils will be removed, and restoration will be completed on a timely basis.

13.6 Mud and Dust Control

Dust levels will be monitored during dry periods. Regular watering of haul roads with a water truck is the most common control measure. Revegetation of intermediate cover surfaces at final grades, and on other disturbed areas outside the lined landfill area, will help control dust on a long-term basis.

During the rainy season, measures will be taken to minimize the tracking of mud beyond the landfill footprint with a priority to prevent track out onto public roads. Such measures begin with ensuring that on-site roads are properly maintained with rock and gravel

13.7 Safety Procedures

13.7.1 General

Site safety issues are the responsibility of the all landfill personnel. Health and safety must be protected for all users of the facility and for all employees working at the site.

All operating personnel are required to wear hard hats, hearing protection (where applicable), and steel-toed boots on site. While working, they should also have gloves and half-mask respirators (with dust and organic vapor cartridges) available for use as needed.

All site personnel will be trained in first aid and CPR. The 40-hour OSHA hazardous materials course with annual 8-hour updates is required for the Working Supervisor and Equipment Operators. In addition, all site personnel requiring the use or potential use of a respirator will be trained, physically qualified, and fit-tested annually.

Directional signs will be posted to direct the public from the scales to the proper unloading location. Signs prohibiting public scavenging from the refuse will be posted and the Equipment Operator and Landfill Attendant will enforce this prohibition at the active face area.

Implementing the following will enhance worker safety:

- Identify waste types at the scale house and minimize exposure to any waste that may present a health hazard.

- Train site personnel in safe operating procedures consistent with the operating provisions contained herein.

- Maintain on-site first-aid equipment and supplies.

13.7.2 Working Face

Equipment will not be operated near unloading vehicles when personnel are outside the vehicles. Loose waste material will be kept clear of the unloading area to prevent people from contacting wastes. Operating equipment will be kept clear of vehicles entering or leaving the unloading areas.

14 ENVIRONMENTAL MONITORING

14.1 Leachate Monitoring

Leachate levels in all monitoring points will be checked monthly to ensure leachate levels above the liner are being maintained below the regulatory limit. Any time leachate is removed from a wet well or sump, the volume of leachate removed will be recorded.

Leachate quality will be tested on a semi-annual basis per the Leachate Monitoring Plan in Appendix D.

14.2 Landfill Gas Monitoring

Gas monitoring in the gas probes and facility structures will be conducted quarterly. Gas monitoring procedures are presented in Appendix F.

14.3 Surface Water Monitoring

Surface water monitoring will consist, at a minimum, of observing the stormwater control system and the infiltration areas. In accordance with the Storm Water Pollution Control Plan (Appendix E), samples will be collected and analyzed for specified parameters annually from the two sedimentation basin points of discharge.

15 RECORD KEEPING

The MISWMF will maintain an operating record in a designated area of the landfill office, including the categories of records and documents listed below.

15.1 Daily Operating (Scalehouse) Records

Each load of refuse delivered to the site is documented in terms of the customer identity, type of waste, source of waste, and weight. Records of each load are maintained on a daily basis and are accumulated for monthly and annual reports. Scale records, including waste manifest forms, are transmitted to the Maui County Finance Department, where they are archived and maintained for a minimum of three years.

15.2 Daily Log

Any unusual occurrence at the site is documented in a daily log record maintained at the site. Operations personnel are trained to report and document incidents of unacceptable waste being identified in incoming loads, accidents, severe weather conditions, fires or other unusual events. Daily logs are maintained on site for a minimum of three years.

15.3 Records Related to Hazardous Waste Exclusion

The MISWMF maintains records of the date, content and names of employees attending annual training events related to the hazardous waste exclusion program. Any reports or other detail related to waste load inspections or incidents of unacceptable waste discovered at the landfill, in addition to information in the daily log, are placed in the hazardous waste exclusion files of the operating record.

15.4 Groundwater and Gas Monitoring Data

The MISWMF will place in the operating record and maintain for a minimum of three years, all results of groundwater monitoring and explosive gas monitoring at the site.

15.5 Climatic Data

The MISWMF will collect and maintain a database of climatic data suitable for evaluating potential leachate generation at the site. Data will be obtained on a daily basis and will include information on rainfall, temperature, solar radiation, evaporation, wind speed, wind direction and humidity.

15.6 Closure and Post-Closure Plans and Data

The operating record includes copies of the current closure plan and post-closure plan, plus records related to any actual closure or partial closure activity. Such records include engineering plans, construction inspection reports and certifications related to closure activities. Additionally, records pertaining to financial assurance for closure and post-closure will be maintained, including cost estimates and documentation of financial assurance mechanisms.

15.7 Location Restrictions Demonstration

The MISWMF will maintain a copy of its solid waste permit application documents containing analyses of the site location in relation to criteria listed in HAR 11-58.1-13, including airport safety, floodplains, wetlands, fault areas, seismic impact zone, unstable areas, tidal wave zone and local zoning ordinance consistency.

15.8 Access Control Documentation

Daily sign-in sheets for visitors and other records documenting how the MISWMF controls access to the site and prevents unauthorized dumping will be maintained.

15.9 Liquids Restrictions Documentation

The MISWMF does not accept liquid wastes for disposal. Records will be maintained of liquid waste loads rejected during the special waste screening process or in load checks. This information may be incorporated in records of the hazardous waste exclusion program.

15.10 Leachate Management Records

The MISWMF is required by permit to maintain in the operating record current copies of all leachate pumping agreements with third party contractors engaged to pump and transport leachate to the treatment plant. In addition, records will be maintained of all leachate loads pumped and transported to the treatment facility by the MISWMF or third-party tanker trucks.

15.11 Training Records

Copies of employee training program agendas and attendance sheets will be maintained. Applicable training programs include those related to hazardous waste exclusion, safety, environmental compliance, emergency procedures and other elements of facility operation.

15.12 Vector Control Records

Periodic (daily, weekly or monthly) inspection reports will be maintained that include observations of insects, rodents, birds or other potential disease vectors at the site. In addition, records will be maintained of special inspections or abatement activities by pest control contractors providing services to the facility.

15.13 Litter Control Records

A daily record will be kept of litter control activities, and maintained in the operating record. The log will contain information on the wind conditions each day, the number of litter control personnel on site, and the volume or weight of litter collected.

15.14 Asbestos Disposal Records

The MISWMF is required by permit to maintain a record of each load of asbestos waste disposed at the site. Information to be recorded includes the type of waste, source and location, preferably by GPS or survey coordinates, of its disposal location in the landfill. Asbestos disposal records may be incorporated in the records of the hazardous waste exclusion or special waste screening programs.

15.15 Emergency Condition Reports

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

15.16 Adequate Storage Procedures

The MISWMF is required by permit to maintain records documenting secure storage and handling of any green waste, vehicles, tires, white goods, propane tanks, scrap metal, used oil, and batteries 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 and management of CFCs or other fluids from white goods prior to removal from the site to recycling facilities.

15.17 Inspection Reports

Inspections will be conducted on a routine basis to verify implementation of the Operations Plan and identify needs for special maintenance or repairs. Inspection reports will be maintained as part of the site's operating record.

15.18 C&D Waste Acceptance and Disposal Logs

The MISWMF will maintain submitted records documenting accepted loads of C&D waste including; Declaration of Non-Hazardous Commercial Construction and Demolition Waste Forms, Soil Profile Sheets, and other material certifications as required. Recovered C&D material records will be maintained and included as part of MISWMF Annual Reporting.

16 REPORTING

This section describes the reports that the MISWMF is obligated to submit to the HDOH, including special reports and regularly scheduled reports.

16.1 Incident Reports

By permit, the County must submit an Incident Report to the HDOH whenever there is an incident that could threaten human health or the environment. Such incidents would include a fire, explosion, or release of a regulated hazardous or toxic material. Such incidents must be reported by phone or fax within 8 hours, if possible, but no longer than 24 hours after discovery of the occurrence. A written report must be submitted by mail within three days and include:

- Name, address, and telephone number of the owner and operator;
- Name, address, and telephone number of the facility at which the incident occurred;
- Name and quantity of material(s) involved;
- The extent of injuries, if any;
- Date, time and type of incident (i.e. fire, explosion, release, etc.);
- An assessment of actual or potential hazards to human health or the environment, where applicable; and
- Estimated quantity and disposition of recovered and unrecovered material that resulted from the incident.

16.2 Non-Compliance Reports

The MISWMF must submit to HDOH a written Incident Report of any occasion on which the landfill is unable to comply with any condition or limitation of the site's solid waste management permit. Verbal notification of such occasions must be given to HDOH within 24 hours of the occurrence, and the written Incident Report must be filed within three days of the occurrence. Each Incident Report must contain the following information, at a minimum:

- A description of the occurrence and its cause;
- The actual or anticipated time the period of non-compliance will continue; and
- Steps taken or being taken to reduce, eliminate and prevent recurrence of the non-compliance.

16.3 Annual Operating Report

The annual operating report is due by July 30 of each year, and will contain the following information for the year ending June 30:

a) Types of solid waste received (MSW, green waste, industrial/commercial, tires, wood, metals, metal containers of 20-gallons or larger capacity, asbestos, and other special wastes).

b) Quantities of solid wastes received, by type.

c) The average daily disposal rate on a yearly basis

d) Quantities of semi-solid and liquid waste received (if any) and how it was handled or disposed.

e) Volume of leachate generated and how it was handled or disposed.

f) Volume of filled airspace for the present year, past filled airspace and remaining airspace.

g) An annual topographic survey showing the vertical and horizontal dimensions of the landfilled area.

h) An annual sequencing plan, including a drawing, identifying areas planned for filling in the coming year and areas to be used for wet weather operations. The square footage or acreage of cells and wet weather operating areas will be computed and shown on the plan. Final fill areas, intermediate fill areas and future fill areas will be identified for the projected year.

i) A soil balance report for the past year and coming projected year. Soil balance to include daily cover, intermediate cover and erosion replacement soil. Sources and type of soil to be included in the data, which is to be based on daily, weekly and monthly records of actual use.

j) After closure of any portion of the landfill, a summary of post-closure care and maintenance activities conducted at the closed landfill.

k) A copy of the detailed written estimates and documentation of financial assurance.

16.4 Annual Surface Water Management Plan

The annual surface water management plan must be submitted to HDOH annually by September 1 and will contain, at a minimum:

a) Report of an annual inspection of surface water management features and facilities, together with a description of required maintenance and changes.

b) Updated drawings showing current topography and surface water drainage paths and conveyances, and modifications planned during the coming year.

c) Engineering calculations documenting the capability of the surface water management system to manage a 25-year, 24-hour storm as required under HAR 11-58.1-15(g).

d) Any Storm Water Pollution Prevention (SWPP) plan or Spill Prevention Countermeasure and Control (SPCC) plan prepared pursuant to federal requirements under the Clean Water Act.

16.5 Environmental Monitoring Reports

Reports of groundwater, leachate, surface water and gas migration monitoring data will be submitted to HDOH within 90 days after completion of monitoring events. Reports of these monitoring activities are kept on file at the landfill and made available to regulatory agencies for inspection or submittal upon request.

HDOH will be notified in writing within seven days if any of the monitoring systems indicate non-compliance with the performance standards specified in HAR 11-58.1.

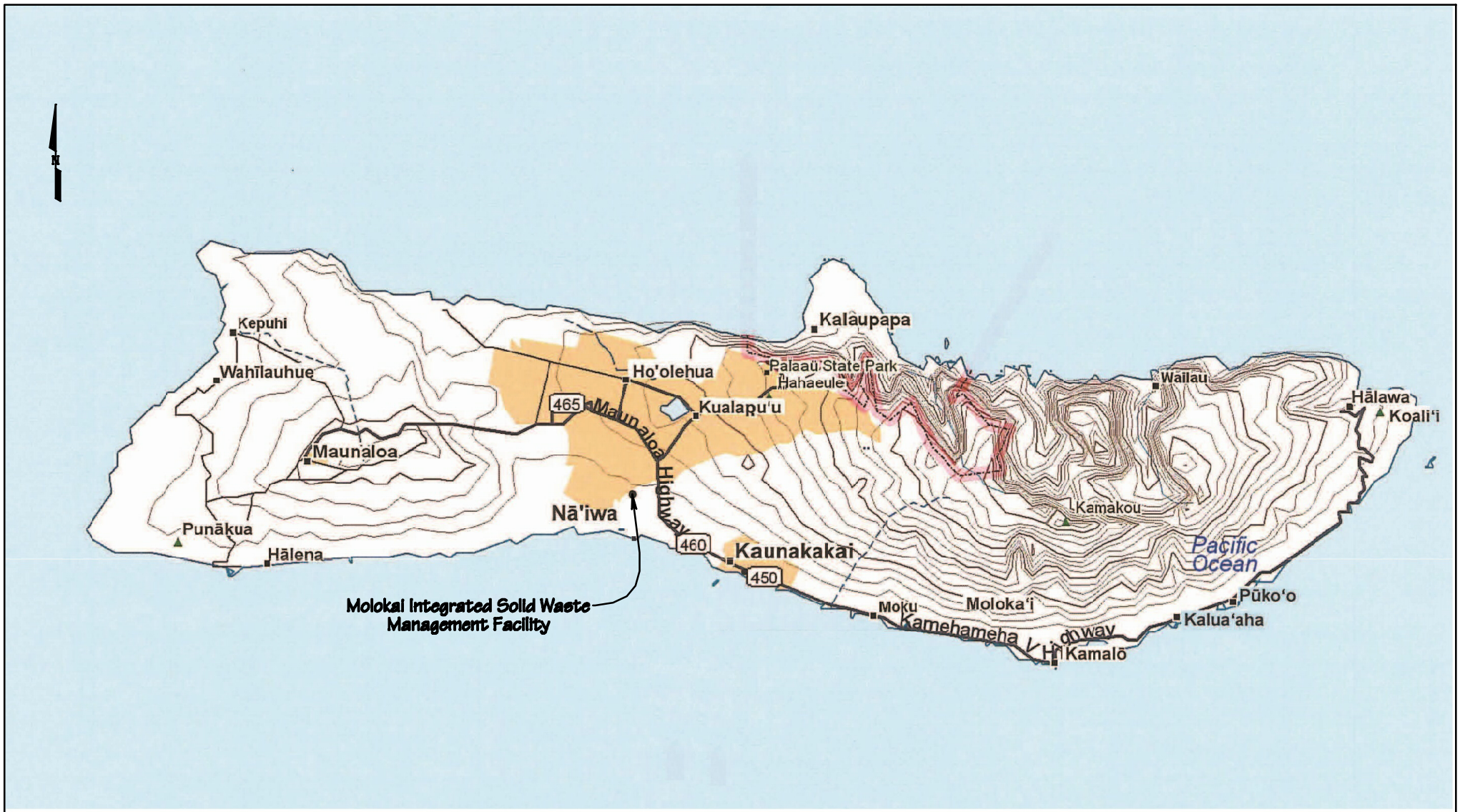
17 REFERENCES

State of Hawaii Data Book 2012, http://www.hawaii.gov/dbedt

U.S. Weather Bureau, Technical Paper 43, Rainfall-Frequency Atlas of the Hawaiian Islands. 1962.

Western Regional Climate Center, wrcc@dri.edu, 2006

FIGURES



Source: Delorme Topo Quads and Muneklyo Hiraga

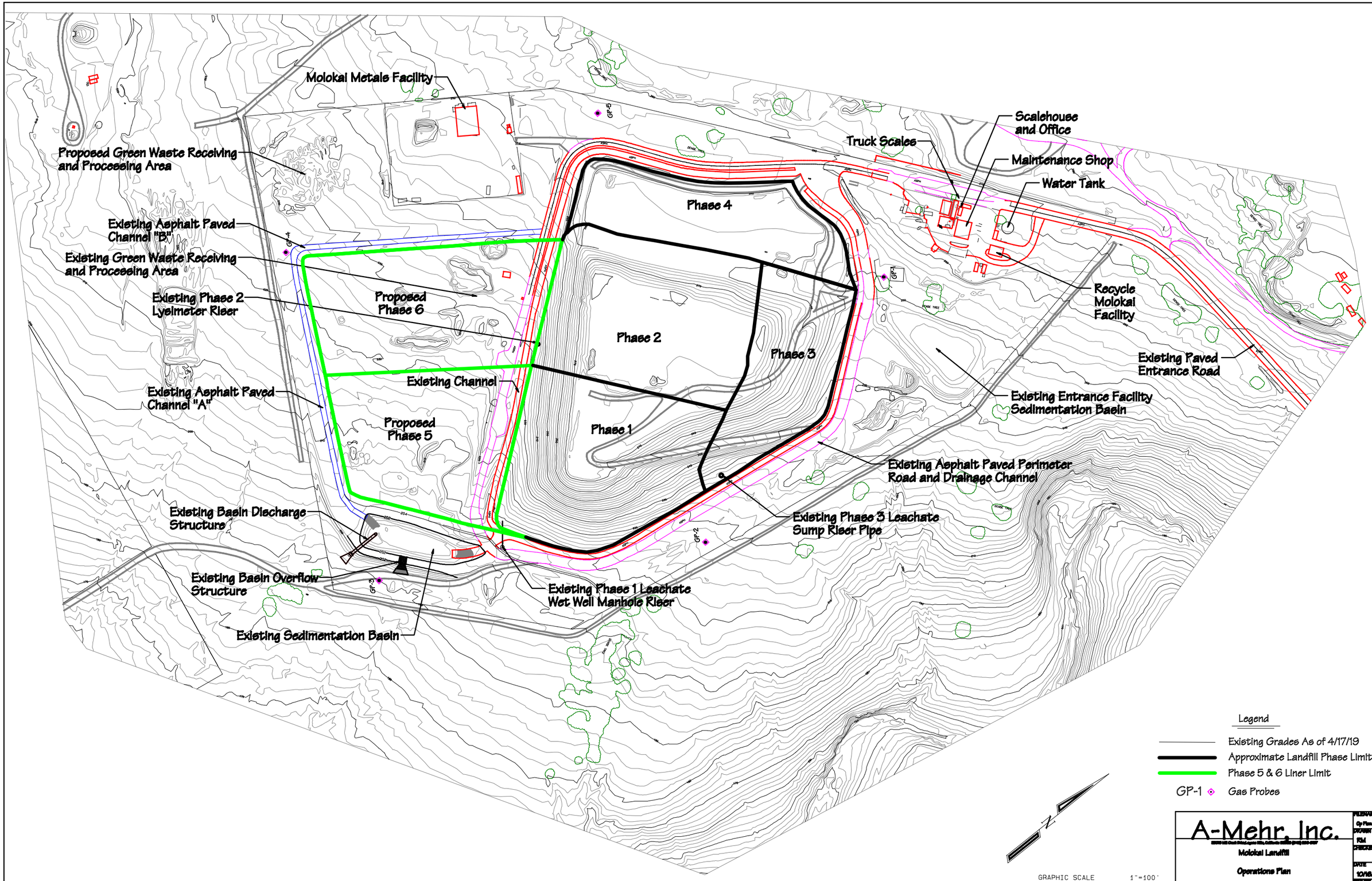
A-Mehr, Inc.
22016 Mill Creek Drive,Laguna Hills, California 92653 (949) 206-0157

Molokai Landfill

Operations Plan

Location Drawing

FILENAME	Clo Plan 101619
DRAWN	
CHECKED	
DATE	10/16/19
FIGURE	1



A-Mehr, Inc.

Molokai Landfill

Operations Plan

Site Map and Existing Conditions

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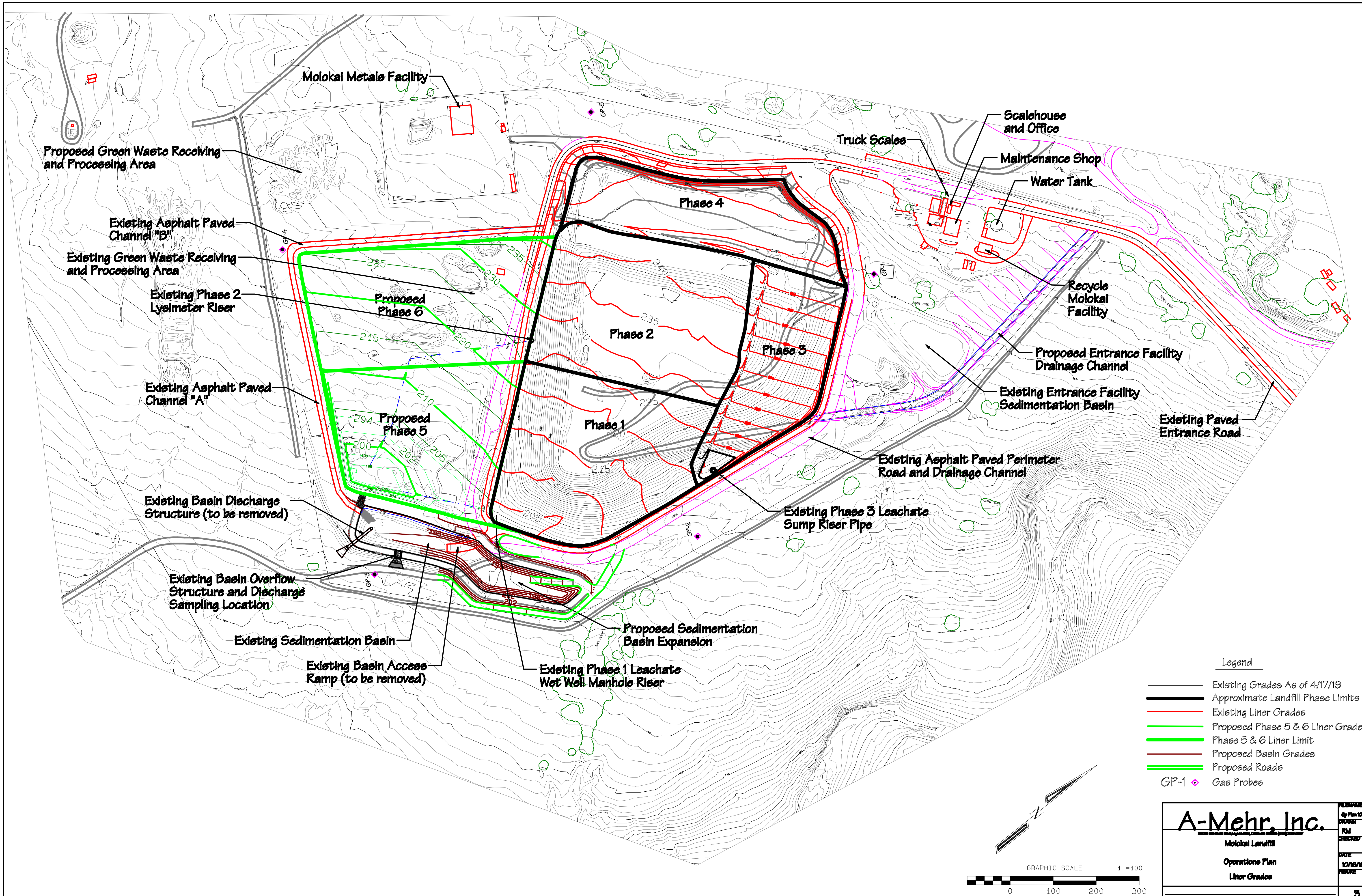
DRAWN: RM
CHECKED:
DATE: 12/16/19
FIGURE: 2


Molokai Metals Facility
Proposed Green Waste Receiving and Processing Area
Existing Asphalt Paved Channel "B"
Existing Green Waste Receiving and Processing Area
Existing Phase 2 Lysimeter Riser
Existing Asphalt Paved Channel "A"
Proposed Phase 6
Proposed Phase 5
Phase 4
Phase 2
Phase 3
Phase 1
GP-1
GP-2
GP-3
GP-4
GP-5
Truck Scales
Scalehouse and Office
Maintenance Shop
Water Tank
Recycle Molokai Facility
Proposed Entrance Facility Drainage Channel
Existing Entrance Facility Sedimentation Basin
Existing Paved Entrance Road
Existing Asphalt Paved Perimeter Road and Drainage Channel
Existing Phase 3 Leachate Sump Riser Pipe
Existing Basin Discharge Structure (to be removed)
Existing Basin Overflow Structure and Discharge Sampling Location
Existing Sedimentation Basin
Existing Basin Access Ramp (to be removed)
Existing Phase 1 Leachate Wet Well Manhole Riser
Proposed Sedimentation Basin Expansion
Legend
Existing Grades As of 4/17/19
Approximate Landfill Phase Limits
Existing Liner Grades
Proposed Phase 5 & 6 Liner Grades
Phase 5 & 6 Liner Limit
Proposed Basin Grades
Proposed Roads
GP-1 Gas Probes
N
GRAPHIC SCALE 1"=100'
0 100 200 300
A-Mehr, Inc.
Molokai Landfill
Operations Plan
Liner Grades
FILENAME
Op Plan 101619
DRAWN
RM
CHECKED
DATE
10/16/19
FIGURE
3

EXISTING LINED LANDFILL
(PHASES 1 THROUGH 4)

PHASE 6

PHASE 5

PHASE 4

PHASE 2

PHASE 1

PHASE 3

Stormwater Diversion Berm

GP-1
GP-2
GP-3
GP-4
GP-5

260
290
280
270
260
240
260
250
240
230
220
210
210
204
200
198
196
202
205
194

Legend

- Existing Grades As of 4/17/19
- Approximate Landfill Phase Limits
- Phase 5 & 6 Liner Limit
- Proposed Phase 5 Liner Grades
- Proposed Basin Grades
- Interim Grades
- Proposed Roads
- GP-1 Gas Probes

GRAPHIC SCALE 1"=60'
0 60 120 180

A-Mehr, Inc.

Molokai Landfill

Operations Plan

Phases 1 through 4 Interim Refuse Grades

FILENAME: Op Plan 10/8/19
DRAWN:
CHECKED:
DATE: 10/16/19
FIGURE: 4

PHASE 4

PHASE 6

PHASE 2

PHASE 3

PHASE 5

PHASE 1

LCRS Riser Pipe

GP-1

GP-2

GP-3

GP-4

GP-5

260

290

280

270

260

240

220

230

210

202

198

194

ASPH

DENSE TREE

Legend

- Existing Grades As of 4/17/19
- Approximate Landfill Phase Limits
- Phase 5 & 6 Liner Limit
- Refuse Grades
- Proposed Basin Grades
- Proposed Roads
- GP-1 Gas Probes

GRAPHIC SCALE 1"=60'

0 60 120 180

N

A-Mehr, Inc.

Molokai Landfill

Operations Plan

Final Grades

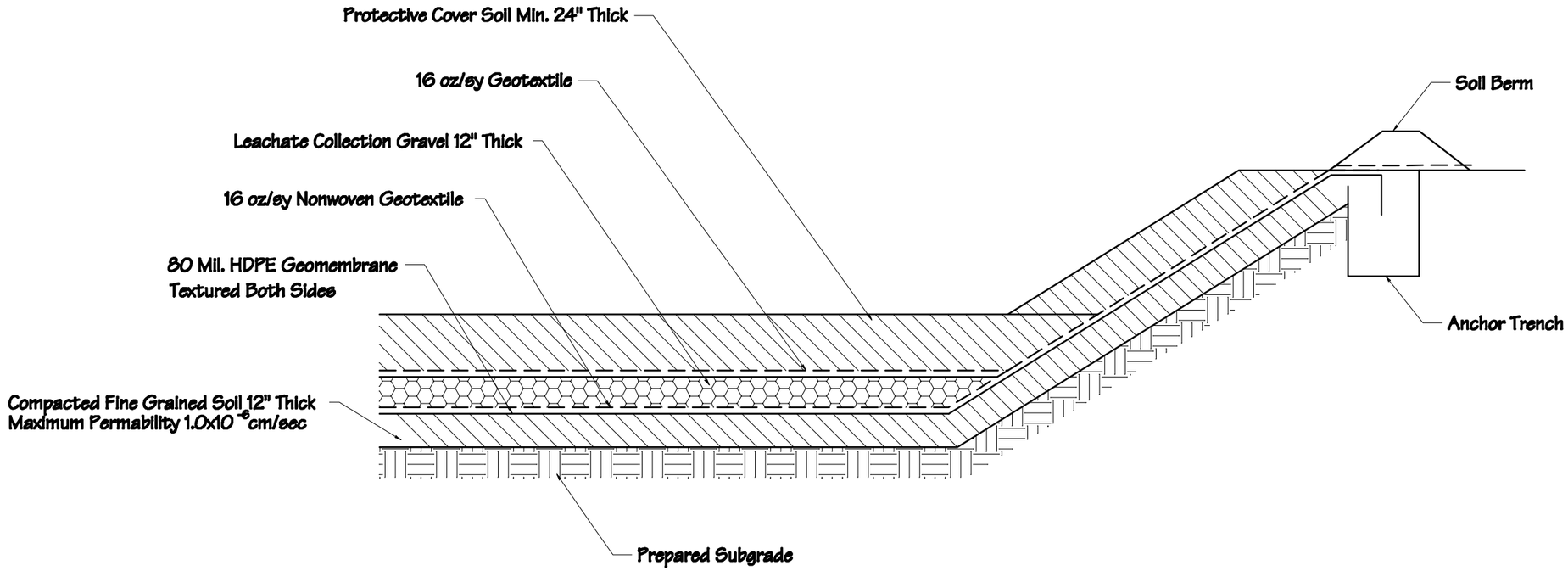
FILENAME: Op Plan 10/18/19

DRAWN:

CHECKED:

DATE: 10/18/19

FIGURE: 5



A-Mehr, Inc.

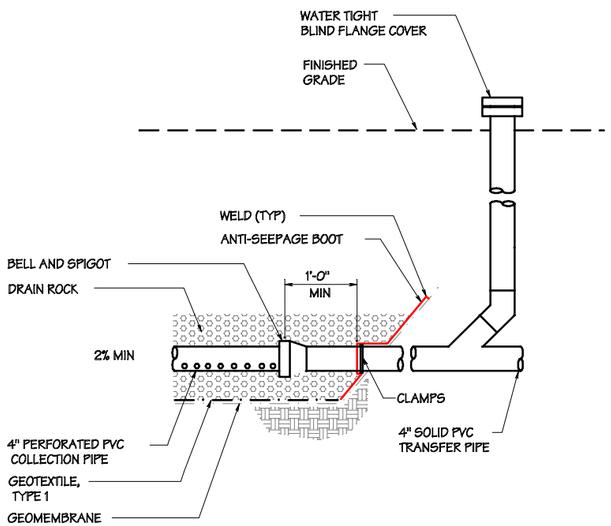
Molokai Landfill

Operations Plan

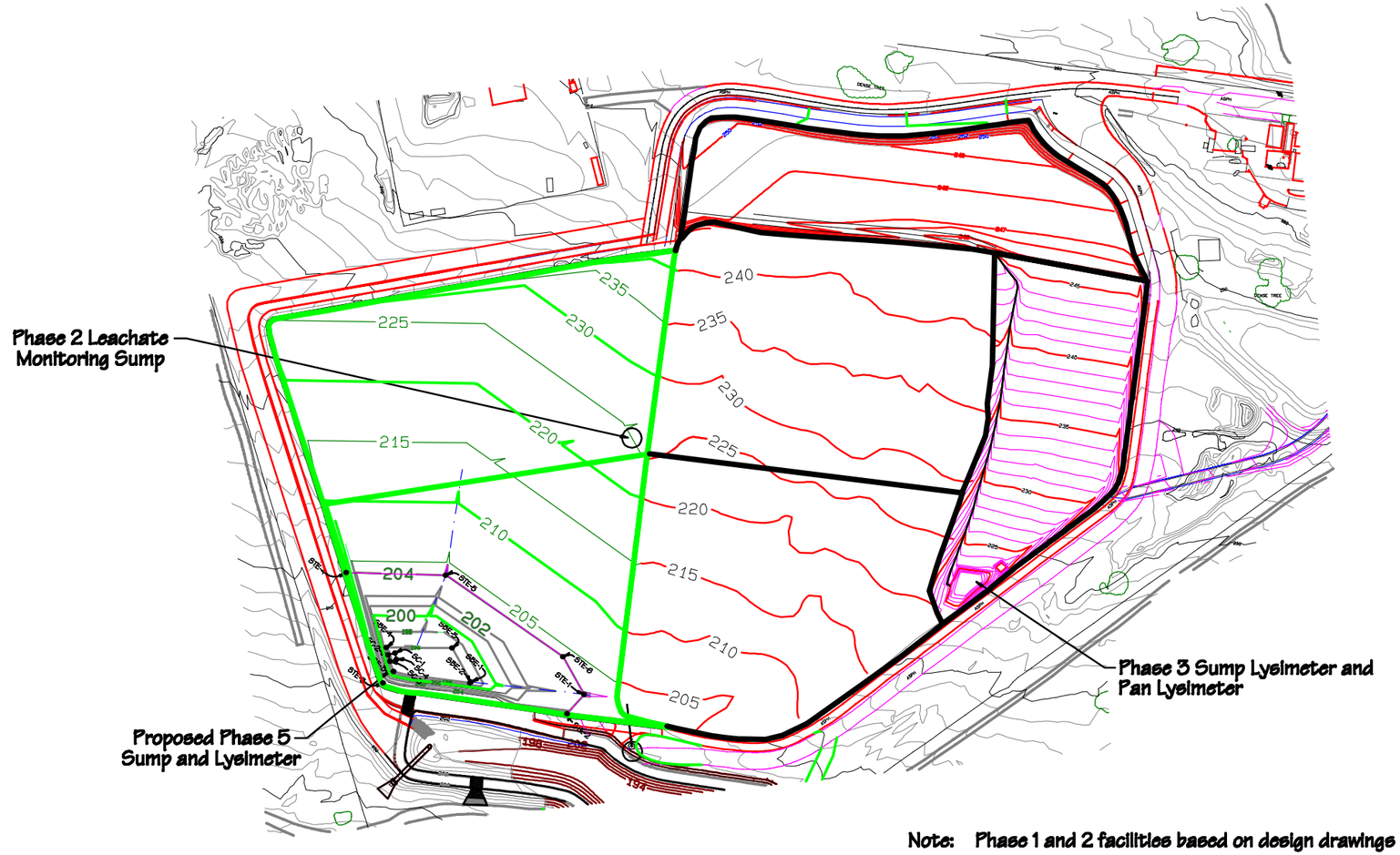
Liner System Phase 3-6

FILENAME: Op Plan 101619
DRAWN: RM
CHECKED:
DATE: 10/16/19
FIGURE: 6

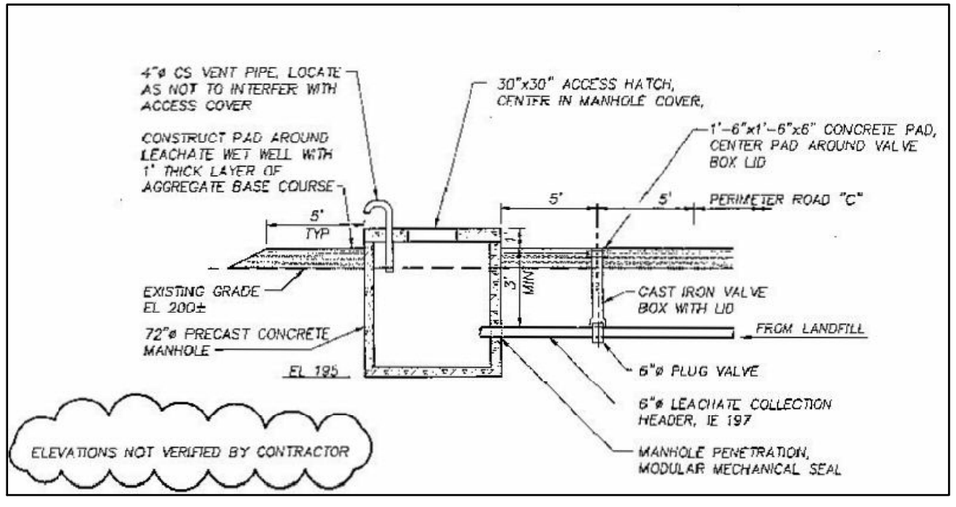
Note: The existing Phase 2 Leachate will be drained onto the phase 5 Liner and LCRS.



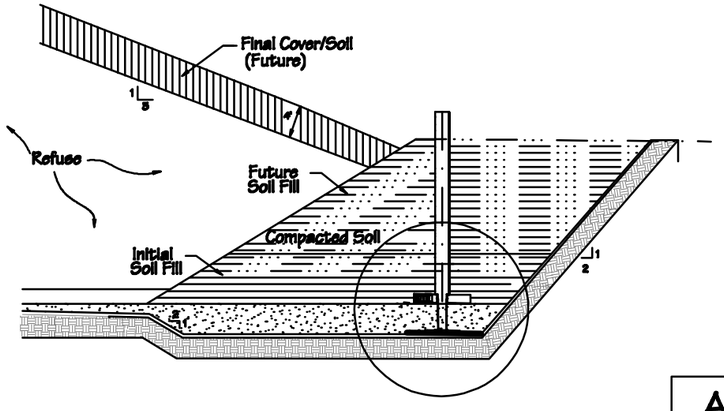
Leachate Monitoring Sump - Phase 2



Note: Phase 1 and 2 facilities based on design drawings



Leachate Wet Well - Phase 1



Leachate Collection Sump - Phase 3 and 5

A-Mehr, Inc.

Molokai Landfill

Operations Plan

Leachate Collection and Monitoring Points

FILENAME: Op Plan 101819

DRAWN

CHECKED

DATE: 10/18/19

FIGURE: 7

APPENDIX A

PERMITS

APPENDIX A-1

SOLID WASTE MANAGEMENT PERMIT

PERMITTEE:
OWNER/OPERATOR:
County of Maui
Molokai Integrated Solid Waste
Management Facility
Naiwa, Molokai

PERMIT NUMBER: LF-0070-09
DATE OF ISSUE: January 30, 2010
EXPIRATION DATE: January 29, 2015
COUNTY: Maui
LATITUDE/LONGITUDE: 21° 07' N, 157° 03' 42" W
PROJECT: Molokai Integrated Solid Waste Management Facility

SOLID WASTE MANAGEMENT PERMIT

This solid waste management permit is issued under the provisions of Chapters 342H, "Solid Waste Pollution" Hawaii Revised Statutes (HRS), and Title 11, Chapter 58.1, "Solid Waste Management Control" Hawaii Administrative Rules (HAR). The above-named permittee is hereby authorized to construct and to operate the facility shown on the application and additional submittals, and other documents on file with the Department of Health as follows:

To Construct: (1) A municipal solid waste (MSW) sanitary landfill consisting of approximately 7.6 acres in Phases 1 and 2, and approximately 4.4 acres in Phases 3 and 4. Phase 1 began disposal operations in October 1993 and Phase 2 began disposal operations in 1997. Phase 1 is equipped with a single bottom geosynthetic liner and a leachate collection system. Phase 2 is equipped with a soil liner and leachate monitoring and collection system. Phase 3 is equipped with a bottom composite liner system comprised of an 80-mil HDPE liner on top of a soil liner consisting of a minimum of two feet of material with an average permeability of less then $1x10^{-7}$ cm/sec and a complete leachate collection system. Phase 3 and Phase 4 shall be hydraulically isolated from Phases 1 and 2.

The leachate collection system of Phase 3 consists of a minimum of 12 inches of gravel with a minimum hydraulic conductivity of 1×10^{-2} cm/sec. The leachate collection system is designed and operated to maintain less than a 30cm depth over the bottom liner or a lesser value subject to detections in the alternative groundwater monitoring system. The operations layer consists of 6-inch minus material on the floor and 2-inch minus material on the slopes. The thickness of the operations layer on the cell floor is at least 24 inches above a drainage layer consisting of 12 inches of gravel. The operations layer on side slopes is at least 24 inches thick.

The construction on the Phase 4 expansion is subject to the submission of an engineering report and approval by the Department.

The landfill Phases 1 to 4 shall be limited to the 12-acre area with a maximum elevation of 290 feet above mean sea level (MSL) as indicated in the Molokai Integrated Solid Waste Management Facility, Operations Plan, prepared by A-Mehr, Inc. and dated of November 2006.

Not included in the landfill acreage are areas used for appurtenant uses such as offices, equipment and maintenance facilities, recycling facility, soil stockpile area, buffer zones, stormwater ditches, perimeter road, and parking.

(2) A Redemption Center and Materials Recycling Operations for source-separated fiber material (such as cardboard and newspaper), metal (aluminum, bi-metal and steel), plastic, and glass containers, used motor oil, electronic waste, and no regulated hazardous waste.

(3) A Greenwaste Storage/Composting Operation for clean greenwaste.

(4) A Salvage Yard for waste vehicles (i.e., accident, unwanted, derelict and/or abandoned vehicles as defined in accordance with HRS Chapter 290, Abandoned Vehicles), white goods, propane tanks, tires, lead-acid batteries, and uncontaminated ferrous and non-ferrous scrap metal.

To Operate: (1) A municipal solid waste (MSW) sanitary landfill consisting of approximately 7.6 acres in Phases 1 and 2, and approximately 4.4 acres in Phases 3 and 4, under the small landfill exemption, HAR 11-58.1-11(f).

The daily disposal rate for MSW shall not exceed a nominal yearly average of 20 tons per day. Adequate equipment and personnel to operate the MSW landfill facility shall be maintained. At the nominal operating rate of 20 tons per day, the site shall have a minimum of one bulldozer, and one spotter. The DOH shall be notified if the average disposal rate for a 12-month period exceeds the 20-ton nominal average. These requirements shall be met unless otherwise approved by the Department.

(2) A Redemption Center and Materials Recycling Operations for source-separated fiber material (such as cardboard and newspaper), metal (aluminum, bi-metal and steel), plastic, and glass containers, used motor oil, electronic waste, and no regulated hazardous waste.

(3) A Green Waste Storage/Composting Operation for clean green waste.

(4) A Salvage Yard for waste vehicles (i.e., accident, unwanted, derelict and/or abandoned vehicles as defined in accordance with HRS Chapter 290, Abandoned Vehicles), white goods, propane tanks, tires, lead-acid batteries, and uncontaminated ferrous and non-ferrous scrap metal.

IN ACCORDANCE WITH: (a) A permit renewal application for a permit to construct and operate a Solid Waste Facility dated July 24, 2009 for Phases 1, 2, 3, and 4; (b) an Operations Plan for Molokai Integrated Solid Waste Facility, prepared by A-Mehr and dated November 2006; (d) an Operation Plan for Recycle Molokai dated December 2004 and updated on May 2009;(e) a Composting Operations Plan dated August 2009, (f) an Interim Metal Recycling Plan dated April 2008, (g) all other engineering plans, as built drawings, and engineering data; and (h) Department-approved subsequent submissions.

LOCATED AT: Maunaloa Highway, Naiwa, Molokai, Hawaii (TMK (2) 5-2-11:27 (portion))

SUBJECT TO: HRS 342H; HAR 11-58.1; and General Conditions, Special Conditions I, Sections A through I, Special Conditions II and III, and Special Conditions IV, Sections A through C.

Acceptance of this permit constitutes an acknowledgement and agreement that the holder will comply with all rules, regulations, and orders of the Department and the conditions precedent to the granting of this permit.

This permit supercedes the Solid Waste Management Permit Number LF-0092-04, issued on December 30, 2004 and modified on January 29, 2008.

_____

(for) DIRECTOR OF HEALTH
State of Hawaii

The Solid Waste Management Facility is subject to HRS Chapter 342H, *Solid Waste Pollution* and HAR Chapter 11-58.1, *Solid Waste Management Control*, and the following conditions:

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable, pursuant to the authority of HRS §342H. The Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants, representatives, contractors, or subcontractors. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid.

2. This permit:

   a. shall not in any manner affect the title of the premises upon which the facility is or will be located;

   b. does not release the permittee from any liability for any loss due to personal injury or property damage caused by, resulting from, or arising out of the design, installation, construction, operation, maintenance, closure, or post-closure of the facility;

   c. does not release the permittee from compliance with other applicable statutes and regulations of the State of Hawaii or with applicable federal or local laws, regulations, or ordinances;

   d. in no way implies or suggests that the State of Hawaii, or its officers, agents, or employees assumes any liability, directly or indirectly, for any losses due to personal injury or property damage caused by, resulting from, or arising out of the design, construction, operation or maintenance of the facility; and

   e. shall not constitute nor be construed to be an approval of the design, construction, operation, maintenance, closure and post-closure of the facility beyond the regulatory requirements mandated by HRS §342H and HAR §11-58.1.

3. Issuance of this permit does not preclude the responsibility of the permittee to obtain any and all necessary approvals and permits from the appropriate federal, state, and local agencies, including zoning clearances, prior to the start of operations.

4. Unless the submitted documents and other information secured by the Department from the permittee contain confidential information, such as secret processes or methods of

manufacture, they shall be made available for inspection by the public (HRS §342H-14). The permittee shall be responsible for identifying, in writing, the specific information asserted to be confidential. The Department shall review the assertion made by the permittee and determine if confidentiality is indeed warranted.

5. This permit is valid only for the specific processes and operations applied for and indicated in the submitted application and additional submissions approved by the Department. Any unauthorized deviation that affects the facility's design, operations or procedures, or which could threaten human health and the environment, from the submitted application, approved drawings, operations manual, and additional submissions or conditions of this permit may constitute grounds for revocation of this permit, and/or enforcement action by the Department. Should there be any discrepancies between the submitted documents and the permit conditions, the permit conditions shall take precedence. A copy of the submitted application and additional submissions shall be maintained at the facility.

6. This permit is non-transferable whether by operation of law or otherwise, either from one location to another, from one solid waste disposal operation to another, or from one person to another without the written approval of the director [HAR §11-58.1-04(e)(2)].

7. This permit shall be kept at or near the construction and operation site for which the permit is issued and shall be available upon request [HAR §11-58.1-04(f)]. A request for a duplicate permit shall be made in writing to the director within ten (10) days after the destruction, loss, or defacement of this permit. A fee of $50 shall be charged and submitted with the request [HAR §11-58.1-04(h)(3)].

8. The permittee shall at all times properly operate and maintain the facility and systems of treatment, process, and control (and related appurtenances), as applicable to the facility, that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. The facility shall be designed, constructed, and equipped in accordance with best practicable technology so as to operate without causing a violation of applicable rules and regulations.

9. Incident Notification Requirements. The permittee shall notify the Department, in writing or facsimile, whenever there are incidents such as fire, explosion, or release of regulated material/waste, which could threaten human health or the environment (i.e., air, soil, or surface and subsurface waters). Initial notification may be by phone or fax and reported within eight (8) hours, whenever possible, and no more than twenty-four (24) hours. The notification report shall be completed and submitted by an Environmental Compliance Officer or other responsible official within seven (7) calendar days (three (3) calendar days for waste disposal facilities, such as landfills and incinerators) and shall include:

a. name, address, and telephone number of the owner and operator;
b. name, address, and telephone number of the facility at which the incident occurred;
c. date, time, and type of incident (i.e., fire, explosion, release, etc.);
d. name and quantity of material(s) involved;
e. the extent of injuries, if any;
f. an assessment of actual or potential hazards to human health or the environment, where this is applicable;
g. estimated quantity and disposition of recovered and unrecovered material that resulted from the incident;
h. evaluation of the circumstances that led to the incident;
i. steps being taken to prevent reduce, eliminate, and prevent recurrence, including an implementation schedule; and
j. other information or monitoring as required by the Department

Notification requirements for releases only apply to releases of a quantity equal or exceeding the reportable quantity (RQ) listed in HAR §11-451.

10. Noncompliance Notification Requirements. If, for any reason, the permittee does not comply with, or will be unable to comply with, any condition or limitation specified in the permit, the permittee shall notify the Department verbally within twenty-four (24) hours followed by a written report within seven (7) calendar days (three (3) calendar days for waste disposal facilities, such as landfills and incinerators) of the verbal notification. The written report shall be completed and submitted by an Environmental Compliance Officer or other responsible official and contain the following information:

a. description and cause of noncompliance;
b. period of noncompliance, including exact dates and times; and, if not corrected, the anticipated duration that the noncompliance is expected to continue; and
c. steps that will be taken to correct the area of noncompliance;
d. steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance, including an implementation schedule; and
e. other information or monitoring as required by the Department.

The permittee may be subject to enforcement action by the Department, penalties, or revocation of this permit.

The use of an electronic facsimile device (FAX) for notifications is acceptable. Any data transmission or detailed explanations transmitted shall be accompanied by regular mail submittals. Failure to notify in accordance with this requirement may initiate enforcement action.

11. Monitoring and Recordkeeping Requirements. The permittee shall comply with the following monitoring and recordkeeping requirements:
    a. Upon request, the permittee shall furnish all records (e.g., transaction reports, disposal receipts, sampling, and testing results) and plans required by the Department. The retention period for all records shall be a minimum of five (5) years; however, there shall be an indefinite retention period for all records associated with any unresolved enforcement action as determined by the Department.
    b. The permittee shall retain at the facility or other location designated by this permit, records of all monitoring information (including all calibration and maintenance records and all original recordings of monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The retention period shall be a minimum of five (5) years, or longer, as may be specified in the Special Conditions, from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. The retention period shall be for the life of the facility, through closure and post-closure periods, for waste disposal facilities (such as landfills and incinerators).
    c. Records of monitoring information, if applicable, shall include:
        i. the date, exact location, and time of sampling or measurements;
        ii. the person responsible for performing the sampling or measurements;
        iii. the date(s) analyses were performed;
        iv. the person responsible for performing the analyses;
        v. analytical techniques or methods used; and
        vi. results of such analyses.

12. The permittee shall submit complete and detailed plans and reports on existing solid waste management systems and of any proposed addition to, modification of, or alteration of any such systems that affects the facility's operations or procedures, or which could threaten human health and the environment and contain the information requested by the Department in the form prescribed by the Department. Any submission for permit modification shall be submitted in accordance with Standard Condition No. 13. The plans and reports shall be prepared by a competent person acceptable to the Department, and at the expense of the permittee.

13. Should the permittee decide to modify the permit or continue operation of the solid waste facility beyond the expiration date of the permit, the permittee shall submit a complete permit modification or renewal application at least one hundred eighty (180) days (one year for municipal solid waste landfills) prior to the modification or the date of permit expiration. Any submission for permit modification does not affect these permit conditions until such modification becomes final in accordance with HAR §11-58.1-04, or as approved by the Department.

14. The director may, in accordance with HRS §342H-6, enter and inspect the facility for the

purpose of:

a. investigating an actual or suspected source of solid waste or other pollution;
b. ascertaining compliance or noncompliance with any rule, regulation, permit condition, or standard promulgated by the Department; and
c. conducting tests in connection therewith (including collecting soil, water, air, ash, and any other material or samples).

The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises.

15. The Department may require the permittee to conduct sampling and testing to determine the degree of pollution, if any, from the solid waste facility (including soil, water, air, ash, and any other materials or samples).

16. When requested by the Department, the permittee shall within a reasonable time, as specified by the Department, furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly. Upon the written request of the permittee, the deadline for submission of information may be extended, if the Department determines that reasonable justification exists for the extension.

If the Department determines that the permittee has violated or is violating any provision of HRS §342H, HAR §11-58.1, or these permit conditions, the Department may pursue enforcement action in accordance with HRS §342H-7, *Enforcement*; §342H-9, *Penalties*; §342H-10, *Administrative Penalties*; §342H-11, *Injunctive and other relief*, or any other pertinent rules.

17. The Department may, on its own motion, modify, suspend, or revoke a permit if, after affording the applicant a hearing in accordance with HRS 91, the Department determines that any permit condition, rule, or provision of HRS §342H has been violated or that such is in the public interest [HAR §11-58.1-04(d)].

18. If the governor or the director determines that an imminent peril to the public health and safety is, or will be, caused by the disposal of solid waste or any combination of discharges of other waste that requires immediate action, the governor or the director, without a public hearing, may order the permittee to immediately reduce or stop the disposal, discharge, or process, and may take any and all other actions as may be necessary (HRS §342H-8).

SPECIAL CONDITIONS I: MSW Landfill
Section A. General Facility Conditions

1. MSW disposal activities shall not occur within buffer areas, minimum 1000 feet from the property line along any present or future urban area, and minimum 80 feet from any agricultural area.

2. The Molokai Integrated Solid Waste Facility Disposal Capacity **Master Plan** prepared by A-Mehr, Inc., dated of March 2009, and approved subsequent revisions shall be maintained by the County for planning purposes and be revised on a regular basis of not greater than five-year intervals. The master plan shall include the waste footprints and service lives of Phases 1, 2, and 3 and planned lateral expansions. The master plan shall also include the proposed Basis of Design (BOD), buffer areas, appurtenant and support facilities.

3. The maximum height of this landfill shall be 290 feet above mean sea level and in accordance with the **Operations Plan** for Molokai Integrated Solid Waste Facility, dated November 2006, prepared by A-Mehr, Inc. and approved subsequent revisions.

4. **Impact Buffer Area.** The permittee shall manage an impact buffer area, which shall include any adjacent public roads or environmentally sensitive areas. The permittee shall incorporate methods to minimize impacts from litter, vectors and odors. The buffer area to be managed shall be identified within the operations plan drawings and agreed upon by the Department.

5. **Air Criteria**. The permittee is responsible for obtaining permits and maintaining compliance with any state or federal Clean Air regulations, in accordance with HAR 11-58.1-15(e).

6. **Access Control**. The permittee is responsible for providing measures to control public access in accordance with HAR 11-58.1-15(f).

7. The permittee shall provide adequate queuing and storage space for a minimum of 5 waste delivery vehicles at the landfill disposal area.

Section B. Construction and Maintenance – MSW Disposal Cells

1. The permittee shall maintain the integrity of the liner system and leachate collection system as designed and constructed. In the event that damage to the liner and leachate collection systems has occurred, the permittee shall repair the liner and/or leachate collection system, or implement equivalent or better alternative environmental controls as approved by the Department.

a. Existing MSW landfill Phase 1, in accordance with the **Construction Drawings** prepared by Parametrix, Inc. and dated April 1993:
   i. A prepared subgrade;
   ii. A 6-inch thick bedding layer;
   iii. A 30-mil PVC liner;
   iv. A 12-inch layer of leachate collection gravel;
   v. Perforated leachate collection pipes in trenches along the south-west and south-east sides of Phase 1;
   vi. A 12-inch cover soil;
   vii. A lysimeter and a Leahate wet well located at the south corner of Phase 1.

b. Existing MSW landfill Phase 2, in accordance with **Drawings** prepared by Parametrix, Inc. and dated October 1996:
   i. prepared subgrade
   ii. 12-inch thick soil cover over andesite rock
   iii. 800 ft^2 collection basin lysimeter (CBL)

c. Existing MSW landfill Phase 3, in accordance with the **Phase 3 Design Report** prepared by A-Mehr, Inc. and dated March 2007 and revised April 2007 and the **Construction Quality Assurance Report** dated July 2009:
   i. A prepared subgrade consisting of native soil and rock, covered with a leveling layer of compacted soil as needed to provide a firm and smooth subgrade;
   ii. A 12-inch thick layer of compacted existing clayey soils with a minimum hydraulic conductivity of $1.0x10^{-7}$ cm/sec;
   iii. A 12-inch thick layer of compacted imported low-permeability soil with hydraulic conductivity of $1.0x10^{-9}$ cm/sec;
   iv. A geomembrane liner of 80-mil high density polyethylene (HDPE) double side textured panels on the floor and single side textured on the slopes;
   v. A layer of 16-ounce per square yard non-woven geotextile placed above the HDPE geomembrane liner and over the drainage layer;
   vi. A 12-inch thick layer of gravel drainage rock placed above the geotextile on the floor;
   vii. A leachate collection and removal system designed to manage leachate from the future Phase 4 disposal area as well as the Phase 3 area;
   viii. Perforated leachate collection pipes in trenches along the west and south sides of Phase 3;
   ix. A double-lined internal leachate collection sump in the southwest corner of Phase 3, with a depth of 4 feet below the adjacent cell floor; and

x. A vertical leachate collection pipe and riser for monitoring and pumping leachate from the sump.

d. The construction of Phase 4 is subject to the submission of an engineering design report by the permittee and approval by the Department. Upon approval, construction of Phase 4 shall be in conformance with the final construction plans and specifications.

2. Construction of Phase 4, or significant modification of the Phases 1, 2, and/or 3 disposal cells, shall not occur prior to the Department's approval of the final construction plans and specifications prepared and certified by a professional engineer, registered in the State of Hawaii, with at least five (5) years experience in designing landfills.

3. Prior to liner installation, the subgrade shall be prepared to provide a smooth, firm, unyielding, rut-less foundation with well-graded material no larger than 0.75-inch gravel.

4. The permittee is responsible for obtaining the services of a registered land surveyor who shall provide a minimum second order of accuracy on: triangulation, traverse, leveling and baseline measurements of the base grades, liner grades and key location and elevation points of the leachate collection and sump system as shown on the approved drawings. The liner contractor and installer prior to liner placement shall certify the base grades in writing.

5. Construction of the low-permeability soil liner component of a composite liner system shall be conducted according to the plans and specifications approved by the Department. The QA/QC engineer shall observe construction and perform testing as specified, and shall certify that the thickness and hydraulic conductivity of the soil liner comply with the approved plans and specifications.

6. Lined side slopes shall not exceed a slope of two to one (horizontal: vertical). The drainage layer on side slopes may either consist of gravel or a geosynthetic material provided that the design provides adequate leachate collection and removal capabilities. The operations layer on side slopes shall be a minimum of 24 inches of soil material with 100 percent passing a 2-inch sieve. A protecting geotextile of appropriate thickness shall be provided between the operation layer and the drainage layer and between the liner and any gravel drainage layer.

7. Installation of any geosynthetic liner shall be performed by an experienced installer who has installed a minimum of 500,000 square feet of similar type liners or shall be performed under the supervision of the manufacturer. An experienced QA/QC landfill inspector with at least five (5) years of experience in landfill CQA responsible to a professional engineer shall observe liner installation and grade elevations. The permittee shall notify the Department, in writing, at least five (5) days prior to any line installation work.

8. The leachate collection system shall be installed according to the approved plans and drawings, and designed to maintain less than a 30cm head on any portion of the liner system, except in the leachate collection sump area. The sump area shall be lined with two layers of 80-mil high-density polyethylene liner on the earthen liner. With a sump depth of 4 feet, the leachate level in the sump shall be no more than 5 feet. Operating leachate head on the liner may be revised by the Department pursuant to Special Conditions, Section H(2)(d).

9. In order to protect the primary liner, a minimum 16-ounce geotextile fabric and a twelve-inch gravel drainage layer, with gravel not to exceed 1.5-inch in diameter with a minimum hydraulic conductivity of 1×10^{-2} cm/sec, shall be placed over the liner on the cell floor. If approved by the Department, a geonet/geocomposite material or alternative design may be used in place of a twelve-inch gravel drainage layer.

10. An operations layer shall be placed over the drainage layer on the cell floor, consisting of a separating geotextile and a minimum 24 inches of earthen material. The entire thickness of the drainage layer and operations layer combined shall be a minimum of 36 inches. Operations layer material shall have a maximum particle size of 6 inches, and not more than 12 percent passing a No. 200 sieve if placed over a geonet or geocomposite leachate collection system.

11. The permittee shall retain a professional engineer, with at least five (5) years experience in designing landfills, and registered in the State of Hawaii, to provide construction quality assurance (CQA) for construction of new lined disposal cells. Upon completion of construction, the professional CQA engineer shall prepare a report for submittal to the Department containing, at a minimum:

    a. Documentation of quality assurance/ quality control testing procedures
    b. Summary of field test results
    c. Summary of results of laboratory analyses
    d. A map of each sector showing panel layouts as installed
    e. Certification that all weld test results and vacuum or pressure testing of all welded seams was visually observed.
    f. Certification that the bottom liner and leachate collection system have been installed in accordance with the plans as approved by the Department.
    g. As-built and survey drawings documenting the cell construction, including the location and elevation of base grades, liner system, and leachate collection system.
    h. Detailed documentation to show that panels were properly joined to liner in previous constructed sections, and/or the construction of anchor trenches and berms.
    i. Identification of any deviations from the construction plan, reason for the deviation and effects on the integrity of the design.

12. No solid waste shall be placed in any new cell or sector until: (1) the professional CQA engineer certifies, by submittal of the report referenced in Special Conditions Section B, Item 11 or a letter containing the certifications required therein, completion of construction in accordance with approved drawings; and (2) the Department completes inspection of each new sector. The permittee shall coordinate the inspection of each new sector by the Department, with the presence of the design engineer and on-site facility operator.

13. The first layer of solid waste shall consist of a minimum thickness of 5 to 6 feet of select waste that is screened for the removal of objects that can cause puncture or displacement damage. The thickness of the select waste layer shall be determined based on the size/weight of the compactor and shall be defined in the Operation Plan. Material that may cause puncture or displacement damage to the liner shall be removed. Compactor work on the select waste layer shall avoid wheel spinning and twisting. Equipment operation directly on the operation layer shall be prohibited. A record documenting select waste screening and placement shall be maintained at the facility and provided to the Department with verification by the construction quality assurance (CQA) engineer including photo documentation. An alternate select waste placement may be used if approved by the Department.

14. Containment system in Phase 4 shall be designed to withstand the maximum horizontal acceleration due to the design earthquake for Seismic Zone 2B as defined by the United States Geological Survey. Following any occurrence of an earthquake determined to cause horizontal acceleration at the site equal to or greater than the design event, the permittee shall inspect any exposed liner system to identify and assess any damage that may have occurred. A report of the inspection shall be filed with the Department within 30 days following the event, including proposed corrective actions to repair any damage identified by the inspection. A professional engineer registered in the State of Hawaii shall conduct the inspection and prepare the report.

Section C. Acceptance Criteria

1. The permittee is authorized to accept for landfill disposal, solid wastes, as defined in HAR 11-58.1-03.

2. The permittee shall implement a waste acceptance & hazardous waste exclusion Program for the landfill operations that meets the following conditions, Section C Items 2 to 4. The permittee shall immediately implement the Hazardous Waste Exclusion Program prepared by the County of Maui and dated of April 2008, however, the Department may require revisions to the plan. Should there be conflicts between the Operational Plan and the permit or solid waste rules, the latter shall prevail.

a. The permittee shall make every practicable effort to screen waste and prevent unacceptable waste from entering and being disposed at the landfill.
b. The permittee shall post a sign on the property that lists unacceptable wastes.
c. The permittee shall conduct random visual surveillance of mixed commercial loads (not inclusive of loads known to only contain single-source-separated materials, such as sludge), at least once per week, to spot check for unacceptable wastes. The permittee shall document findings on the Load Check Data Sheet.
d. The landfill operators at the active workface shall visually screen the contents of each load and remove unacceptable waste.
e. If unacceptable waste is observed, the permittee shall reject the load. If the waste has been unloaded, the permittee shall separate the unacceptable waste, move it away from the active workface, and manage it in accordance with Special Condition No. C.3.
f. Operators shall receive training on visual surveillance and unacceptable waste handling procedures set forth in the Site Operations Manual. Training shall be attended at least once per year, or more frequently as needed to ensure compliance with the facility procedures.
g. The permittee shall maintain records of random inspections on the Load Check Data Sheets, and personnel training.
h. Unacceptable waste is defined as:
    i. Regulated hazardous waste, as defined in HAR 11-261 through 268;
    ii. Radioactive waste, which shall be managed in accordance with HAR 11-58.1-64;
    iii. Polychorinated biphenyl (PCB) waste, as defined in 40 CFR Part 761;
    iv. Untreated infectious waste, excluding infectious waste generated within the household, in accordance with HAR 11-58.1-53;
    v. Bulk or noncontainerized liquid waste, except as provided in HAR 11-58.1-15(i);
    vi. Containers holding liquid waste, except as provided in HAR 11-58.1-15(i)(2);
    vii. Commercial loads containing greater than 25% greenwaste and household loads containing greater than 50% greenwaste, in accordance with HAR 11-58.1-65(b);
    viii. Scrap automobiles, white goods, and whole motor vehicle tires, in accordance with HAR 11-58.1-65(c);
    ix. Lead acid batteries, in accordance with HRS 342I;
    x. Compressed gas tanks; and
    xi. Other unacceptable wastes listed in the Site Operations Manual.

3. Should unacceptable waste be identified at the Molokai Integrated Solid Waste Facility landfill, the permittee shall separate the waste, manage, store, transport, and recycle/dispose it in accordance with the Molokai Integrated Solid Waste Facility

Operations Manual, Hazardous Waste Exclusion Program, and applicable laws and rules. Unacceptable waste identified at the facility shall not be disposed of at the landfill.

a. Unacceptable waste shall be transported from the landfill prior to posing a nuisance, health, or safety concern.
b. Unacceptable waste shall be transported to a permitted solid waste management facility allowed to accept the waste, or out-of-state recycling/ disposal facility.
c. The permittee shall maintain a daily log of unacceptable waste turned away from the landfill or separated from disposal, including date, hauler, waste type, estimated quantity, and destination.
d. The permittee shall notify the Department, in writing, within 24-hours or the next working day of the identification of hazardous or PCB waste. The notification shall include the date and time of incident, origin of the waste, hauler/generator, description and quantity of waste, actions that will be taken to manage the waste at the site, and actions that will be taken to remove the waste from the premises. The permittee shall also provide written notification, including a copy of the associated manifests, within seven (7) days of removal of the waste from the facility.

4. The permittee shall implement the **Radioactive Waste Monitoring Program**, to be provided in the Molokai Integrated Solid Waste Facility landfill Operations Plan by the end of May 2010. All incoming loads shall be screened to prevent the acceptance of radioactive wastes or an alternative program acceptable to the Department. Radioactive wastes shall be managed in accordance with HAR 11-58.1-64. In the event that a radioactive load is identified, the facility shall follow the procedures of the Radioactive Waste Monitoring Program. The permittee shall complete and submit a Radiation Monitoring Report, documenting the date, time, actions taken, and resolution of the event.

5. The permittee shall develop and implement a **Special Waste Acceptance Program**, to be provided in the Molokai Integrated Solid Waste Facility Landfill Operations Plan that meets the following conditions of Section C, Item 5. The permittee shall submit the Special Waste Acceptance Program to the Department for review with a separate section for contaminated material, as described under item C.5.c.viii by the end of May 2010. Should there be conflicts between the Operational Plan and the permit or solid waste rules, the permit and rules shall prevail. The Special Waste Acceptance Program shall be implemented upon submission to the Department, however, the separate section, contaminated materials, item C.5.c.viii, shall not be implemented at the landfill until a Special Waste Acceptance program for contaminated materials is approved in writing by the Department. The Department may also require revisions to the plan.

a. The permittee shall pre-approve special wastes, prior to acceptance at the facility.

b. The permittee shall maintain written documentation and implement special handling procedures associated with each type of special waste. The procedures shall be based on the physical, chemical or pertinent characteristics of the special waste.

c. Special waste means any solid waste which, because of its source or physical, chemical, or biological characteristics, require special consideration for its proper processing or disposal, or both, includes, but is not limited to:
   i. Asbestos;
   ii. Semi-solid wastes including:
      (1) Water separation, car and equipment wash wastes;
      (2) Sewage sludges;
      (3) Underground storage tank and other sludges;
   iii. Off-specification and outdated products;
   iv. Baghouse dusts;
   v. Inorganic filter cakes;
   vi. Treated infectious waste;
   vii. Dead animals and offal;
   viii. Contaminated Materials including:
      (1) Contaminated soils and debris, including: resins and chemical debris; petroleum and other contaminated soils; and petroleum fuels (i.e., used oil, diesel, jet fuel, gasoline) and debris
      (2) Sandblast grits;
      (3) Waste that are toxic in nature, such as insecticides, poisons, or radioactive materials (provided that they are not regulated under another authority such as RCRA Subtitle C, TSCA that requires disposal other than at a permitted MSW landfill), and
      (4) Other solid waste, which may be accepted for disposal such as contaminated industrial/commercial waste and non-TSCA regulated PCB waste, provided such materials are not regulated hazardous waste; and
   ix. Other special waste listed in the Site Operations Manual.

d. The owner and operator shall approve Contaminated Materials (as defined in this Special Condition C item 5.c.viii), on a case-by-case basis, prior to acceptance at the facility.
   i. The permitee shall implement the Procedures for the Acceptance of Contaminated Material. These procedures shall be implemented for all contaminated materials defined in this Special Condition C item 5.c.viii.
   ii. A notice of Contaminated Material Approval shall be submitted to the Department prior to acceptance at the facility. The use of facsimile submissions is acceptable. The notice shall include: acceptance date(s), quantity and description of waste, origin of waste, waste profile sheet/approval manifest; proposed management of contaminated material

(use as daily cover or disposal as void space fill) and any special management and handling procedures.

e. Records of all documentation shall be maintained at the facility.

Section D. Operation of the MSW Landfill

1. The daily disposal rate for MSW shall not exceed a nominal yearly average of 20 tons per day. The Department shall be notified if the average disposal rate for a 12-month period exceeds the 20-ton nominal average.

2. A permanent **sign** shall be posted at the facility entrance identifying the facility, the hours and days of operation, and the name and address of the operator, a telephone number and other pertinent information.

3. An **all-weather access road** shall be maintained into/out of the facility site, through the entrance facility and to/from the working face of the landfill.

4. Provide and maintain **controlled access** to the facility site in the form of fences and gates along the perimeter where natural barriers do not provide a means of controlled access. When natural barriers no longer prove to be an effective means of providing controlled access, then fences and gates shall be provided to meet the requirements of controlled access. All gates shall be kept locked when an attendant is not on duty.

5. Scavenging at the facility by the general public is prohibited.

6. **Operations Personnel Training**. Landfill operations shall be supervised at all times by an individual who has received a Manager of Landfill Operations training course conducted by the Solid Waste Association of North America or an alternative as determined by the Department. Records of such training shall be placed in the Operations Plan files.

7. The facility shall have a Site Manager and Environmental Compliance Officer, who shall be knowledgeable of state solid waste laws, regulations, these permit conditions and the permit application components including the Operations plan.

8. The **Operations Plan** for the Molokai Integrated Solid Waste Facility dated November 2006, and approved subsequent revisions shall be implemented. If there are discrepancies between the Operations Plan and these permit conditions or HAR 11-58.1, the permit conditions and rules shall take precedence. The Department may periodically require revisions to the Operations Plan. The contents of the Operations Plan shall address permit requirements and be implemented to ensure

compliance. Any changes to the Operations Plan shall be submitted to the Department for review and approval. Depending on the scope of the change, a permit modification may also be required. At a minimum, the following items and all of these permit requirements shall be included in the Operations plan and incorporated into landfill operations:

a. **General Site Description**, providing information on the location, size, elevations and limits of the site, and the types and quantities of waste received per day, a discussion of the climate, and a discussion of the surrounding area.

b. **Equipment and personnel requirements**, describing the number and types of equipment and the personnel with their respective titles needed to operate the facility on a minimum basis. The facility Site Manager and Environmental Compliance Officer shall be identified by name and have their responsibilities described.

c. **User Population**, identify and describe the user population that will be allowed to utilize the landfill site for disposal. Discuss the screening and review process to identify legitimate users. A list of the types of users shall be maintained for operator reference and regulatory review.

d. **Site Utilization Concept**, providing a plan to coordinate the overall use of the landfill site including the management/disposal of special waste.

e. **Waste Placement Procedures**, including methods of compaction, grading, and placing cover material.

f. **Operational Controls**, including control of disease vectors, explosive gases, mud, dust and litter.

g. **Emergency Operating Procedures**, including methods for managing fires, severe storm events and hazardous waste spills.

9. **Program for Regular Training**. The permittee, at a minimum, shall provide training to landfill operators annually. Operators shall be familiar with the Operations Manual by the use of regular training presentations by supervising staff. Records of such training shall be maintained and provided to the Department upon request.

10. **Mud Prevention Program**. The permittee shall provide measures for minimizing the tracking of mud onto public roads from the site. The measures shall include on-site road maintenance and cleaning, a wet-weather disposal area, and a truck or truck wheel cleaning area for vehicles prior to leaving the site. Possible truck or truck wheel cleaning

measures that may be implemented include: rumble strip, drive-through tire wash, trash clean out pad, and/or wash pad.

11. **Dust Control Program.** The Permittee shall provide measures to control dust from roads and all other areas of the site. The measures shall include road treatments and water sprays to minimize dust generation. Open areas of the landfill that are not to receive waste for a one-year period or more shall be further treated to minimize dust generation and erosion.

12. **Daily Cover Stockpile** stored within the landfill waste footprint shall be limited to a 30-day capacity and shall include stormwater controls.

13. **Adequate equipment and personnel** to operate the MSW landfill facility shall be maintained including provisions for back-up personnel and equipment. At an average operating rate of less than 20-tons per day of MSW, the site shall have a minimum of one bulldozer and one spotter. This equipment and personnel requirements shall be met unless otherwise approved by the Department.

14. **Daily Cover Material** shall be a minimum of six inches of earthen material or an alternative in accordance with HAR 11-58.1-15(b), with no exposed waste. Aggregate size shall be less than 2.5 inches and well-graded (having the representation of all particle sizes less than the specified maximum).

    Request for the use of an Alternative Daily Cover (ADC) as cover shall be submitted in writing to the Department at the address listed in Special Conditions I.1. The request shall evaluate the proposed ADC to its specific characteristics and its appropriate use at the facility. The Department requires demonstration periods in 6-month increments to show that the ADC and its proposed thickness can control disease vectors, fires, odors, nuisance, litter and scavenging without presenting a threat to human health and the environment. The permittee shall obtain Department approval prior to the commencement of the demonstration project. The use of ADC is limited to daily cover use. The demonstration period shall include oversight by the Department and at the end of increment period, the permittee shall report the performance of the ADC as to its specific characteristics and appropriate use at the facility. The demonstration period or the approved use of an ADC may be rescinded or cancelled by either the Department or Permittee at anytime without cause.

15. **Daily-Cover-Monitoring-Verification-Program with Recordkeeping**. The permittee, using appropriate personnel, shall take digital photos of the workface at the end of the each day of placement of earthen material and at the end of the third-day of placement of the tarp as daily covers, from a perspective that reveals the complete landfill, to demonstrate adequate placement of the daily cover. Records shall be maintained on file at the facility and information within verified as to its authenticity by the appropriate

personnel. The Department may require changes to the program at any time, including the use of independent third parties.
The Daily-Cover-Monitoring-Verification-Program shall include quantitative records of daily waste disposed, approximate cell dimensions and daily soil cover used in tons and cubic yards.

16. **Intermediate cover** is required for all inactive waste areas. Inactive waste areas are areas that do not receive waste within a 30-day period. Intermediate cover shall be a minimum of 12-inches of earthen material including daily cover and be capable of shedding and directing stormwater to conveyance systems, and withstanding traffic. Regardless of the time period since last receiving waste, all areas that have vehicular traffic shall be covered with intermediate cover.

    Intermediate cover shall be maintained on a regular basis including repairs by September 1 of each year for erosion and cracking. All intermediate slopes that are not to receive waste for a 1-year period shall be vegetated or have an equal approved by the Department. Measures shall be taken for all top deck areas that are not to receive waste for a 1-year period to control dust and erosion.

17. **Disease Vector Control**. The permittee shall provide measures to evaluate, prevent and/or control on-site populations of disease vectors and minimize nuisance conditions, and document any associated activities. At a minimum, such measures shall be taken on a monthly basis. The measures shall meet the requirements of HAR 11-58.1-15(c).

18. **Litter Control**. The permittee shall provide measures to minimize free litter in the landfill and prevent its occurrence beyond the property line of the facility. During the course of the working day of operation, all windblown material shall be collected and be properly disposed. The measures, at a minimum, shall include:

    a. The use of portable litter screens which shall be deployed within 100 yards of the active workface.
    b. The use of permanent or semi-permanent litter screens or fences in primary and secondary control positions.
    c. Litter cleanup in the event of a major windstorm or other incident in which litter escapes the normal litter containment systems.
    d. Provisions for a truck clean-out area near the active workface that shall be maintained on a daily basis. The truck clean-out area shall have litter control fencing and disposal receptacles for truck clean-out.
    e. The collection of litter shall be quantified with the number of litter pickers and the number of bags of litter collected on a daily basis.

19. **Asbestos Disposal.** The permittee shall ensure that the disposal of asbestos waste is in accordance with current NESHAP (National Emission Standards for Hazardous Air Pollutants) regulations, 40 CFR Part 61. Asbestos disposals shall be immediately covered on a daily basis with a minimum of 2 feet of cover unless managed in a dedicated disposal area. Disposals in dedicated disposal area shall be identified to the public and covered daily. All disposal locations for asbestos shall be recorded for future reference.

20. **Odor Control**. The permittee shall implement procedures for identifying odorous waste received at the landfill, and implement odor control procedures and/or mechanisms to control odor at the landfill. Odor control measures include acceptance standards for the receipt of waste, special handling at the landfill and immediate burial under a minimum of 2 feet of compacted soil. If the selected mechanisms are not adequate, the Department may require that additional measures be taken.

21. **Dead Animals and Offal**. The permittee shall immediately place a minimum of two feet of compacted soil over any accepted dead animals, offal or odorous waste. The cover soil shall be compacted and be of sufficient thickness (2 feet minimum) to control the release of odors.

22. **Inclement Weather**. A wet weather deck shall be prepared to allow for safe disposal of MSW material during times of inclement weather.

Section E. Surface Water Management

1. **Surface Water Management**. At a minimum, the permittee shall:

   a. Provide run-on control system for a peak discharge from a twenty-five year storm and run-off control system for a 24-hour water volume from a twenty-five yearstorm, as provided in HAR 11-58.1-15(g).

   b. Prevent soil erosion and exposure of waste. Surface water that comes into contact with waste material shall be managed as leachate. Should waste become exposed or soil cover materials erode, the permittee shall repair the cover immediately.

   c. Prevent a discharge of pollutants into waters of the United States, or the violation of any requirement of the Clean Water Act or statewide water quality management plan, Title 11 Chapter 54.

   d. Comply with all state and federal requirements related to water quality, as provided in HAR 11-58.1-15(h).

2. **A Surface Water Management Plan** shall be prepared and updated **annually** and filed with the Department by no later than September 1 of each year. The surface water plan shall include the surface water management of all areas in the Molokai Integrated Solid Waste Facility. It shall contain the following information:

   a. Report of an annual inspection of surface water management features and facilities, together with a description of required maintenance and changes, which shall be completed by September 1 of each year.

   b. Updated drawings showing current topography of the landfill, surface water drainage paths and conveyances, and drainage system modifications planned for the next year in response to waste filling.

   c. All areas with intermediate cover shall be graded to direct surface water away from the workface and towards the surface water collection system.

   c. Engineering calculations documenting the capability of the surface water management system to comply with the run-on and run-off requirements listed under Special Conditions Section E, Item 1.

   d. Any Storm Water Pollution Prevention Plan or Spill Prevention Control and Countermeasure Plan prepared pursuant to federal requirements under the Clean Water Act.

3. Top deck areas of the landfill shall have minimum slopes of 2% to 5% to promote drainage. Side-slope grades shall not exceed 2 horizontal to 1 vertical. Silt control fences shall be used as needed to maintain silt on-site.

4. Stockpiled materials within the landfill waste boundary shall be limited to cover material. The volume of stockpiled soil shall not exceed a limit of 30 days capacity and have stormwater controls. Stockpiled soil shall not exceed permit grades.

Section F. Perimeter Gas Management

1. The permittee shall submit to the Department within 120 days after issuance of this permit a **Landfill Gas Monitoring Plan**, including a proposed design for a permanent perimeter methane gas monitoring system consisting of monitoring probes placed not more than 1,000 feet apart. The proposed system and plan, including any modifications required by the Department, shall be installed and monitored within 12 months after approval by the Department.

2. The methane gas monitoring program shall be implemented in accordance with

HAR 11-58.1-15(d). The program shall have at a minimum a quarterly monitoring frequency and monitoring results shall be submitted within 45 days of data collection. However, should explosive gas concentrations exceed the limits specified in HAR 11-58.1-15(d) for structures and property boundary, then the permittee shall immediately notify the Department and take corrective measures in accordance with HAR 11-58.1-15(d).

Section G. Groundwater and Leachate Management

1. The permittee shall implement the Site-Specific Groundwater and Leachate Monitoring Plan, prepared by A-Mehr and dated April 2008. The Department may periodically require revisions to the plan. The plan shall demonstrate compliance with HAR 11-58.1-16, which may either include a demonstration that there is no potential for migration of hazardous constituents from the landfill unit to the uppermost aquifer during the active life of the unit and the post-closure care period, or the establishment of a groundwater monitoring system.

2. If the groundwater monitoring plan is to include a demonstration of no potential migration, then in addition to the requirements of HAR 11-58.1-16(a)(2), the plan shall include the monitoring of the leachate sumps and lysimeters positioned under the leachate sumps. In the event any liquid is detected in a lysimeter monitoring the sump and liner system in Phase 3 or Phase 4, the following procedure shall be implemented.

   a. The permittee shall notify the Department within 10 days after any liquid in the lysimeter is detected, and at a minimum, sample and analyze the liquid for major cations and anions (Mg, Na, Ca, K, Cl, CO3, SO4, HCO3), and major leachate indicators (TDS, TOC, total alkalinity, nitrogen-ammonia, Cl, Fe) to assist in the determination on whether this liquid is leachate.

   b. The permittee shall submit within 120 days thereafter the results of a technical study, prepared by a registered engineer or geologist, to determine the source and amount of leachate, including but not limited to:

      i. Results of the liquid sampling;

      ii. Evaluation of liquid levels or other data to determine the likely source of liquid/leachate (i.e. leakage from the sump or from the liner system);

      iii. Estimates of the volume of liquid being released from the liner system or sump; and

      iv. Recommended measures to eliminate or mitigate additional releases.

c. Based on its review of the technical report submitted by the permittee, the Department may direct the permittee to implement either or both of the following measures:

   i. Manage leachate to a specified maximum hydraulic head, less than 12-inches, above the liner, with a corresponding reduction of allowable leachate depth in the sump.

   ii. Implement a groundwater monitoring system based on detection monitoring wells, as provided in Special Conditions Section G, Item 3. If required by the Department, the permittee shall submit a revised groundwater-monitoring plan that provides for the design of the groundwater monitoring well network and implementation of the monitoring program. The revised plan shall be submitted within 90 days of the Department's determination that the demonstration of no potential migration is no longer appropriate.

3. If the groundwater-monitoring plan is to include the establishment of a groundwater monitoring well network, or the permittee is directed to establish one on the basis of Special Condition Section G, Item 2 of this permit, it shall be implemented within one year of the Department's approval of the groundwater-monitoring plan. The groundwater plan established under this condition shall also be in accordance with the State of Hawaii Landfill Groundwater Monitoring Guidance Document Version 1.8 dated September 2002 or its latest revision.

4. The permittee shall maintain reasonable access to all groundwater monitoring components, leachate manholes and sumps, and lysimeters required by this permit. In order to assure that representative samples are obtained, it shall be the responsibility of the permittee to maintain the integrity of the monitoring components and manholes and to protect them from destruction or vandalism. Should any of these components/manholes be destroyed, the permittee shall notify the Department immediately. The notification shall include pertinent information as to the cause, and what steps are being taken to replace the monitoring components/manhole and prevent the recurrence of such problems in the future. A Well Completion Report shall be sent to the Department within sixty (60) days of any new groundwater well construction.

5. All groundwater and leachate analyses shall be submitted to the Department within forty-five (45) days of sampling and analysis. Monitoring shall be on a semi-annual basis unless otherwise approved by the Department.

6. Leachate Management. The permittee shall implement leachate management measures as provided in the Operations Plan including the following:

a. Storm water that comes in contact with solid waste shall be treated as leachate. Leachate shall be managed to prevent any entry into the stormwater collection system and any contact with the public.

   Absent any order to the contrary issued by the Department pursuant to Special Conditions Section G, Item 2.c.i, leachate shall be removed from the landfill in a manner that maintains a maximum depth of 12-inches of leachate above any part of the liner in the cell, except in the sump area of Phase 3 where additional liner is installed and leachate depth may be up to five feet.

b. Leachate shall be pumped and transported to an authorized wastewater treatment and disposal facility. The permittee may petition the Department to use the leachate for use at the facility, pending evaluation of leachate quality. Use of leachate cannot constitute bulk disposal, and may only be used within the Phase 3 or Phase 4 areas only and is subject to Special Condition Section G Item 6.a is met.

c. If necessary, leachate may be pumped to on-site storage tanks for temporary storage. Storage tanks shall be double lined or be located within a secondary containment structure with capacity to hold the contents of the largest storage tank. Leachate shall be removed from the storage tanks for use in the landfill or transported to an authorized wastewater treatment and disposal facility. If on-site leachate storage tanks are provided, the permittee shall inspect the leachate storage tanks daily and record the volume of leachate in the tank. Leachate shall be pumped and removed from the tank for disposal at a sewage treatment plant or used at the active working face as provided in Special Conditions Section G, Item 6.b. above.

d. The permittee shall maintain records regarding the date and volume of leachate pumped from the leachate sumps, storage of leachate and final disposition of the leachate.

7. Leachate Monitoring. Leachate levels in the leachate collection points in Phases 1 and 2, and the leachate sump in Phase 3, as well as the lysimeters shall be monitored at a minimum once each month and after storm events. If measured leachate levels exceed the levels specified in Special Conditions Section G, Item 6.a, leachate level monitoring shall be performed before and after leachate pumping on a daily basis until the level has remained within the allowable limit for a period of one week.

   A sample of leachate shall be collected from each collection point or sump on a minimum semi-annual basis for constituent analysis. Leachate samples shall be analyzed for parameters listed in CFR Part 40, Appendix I and major leachate indicators

including cations/anions per the Hawaii Landfill Groundwater Monitoring Guidance Document.

Section H. Closure and Post-Closure

1. The permittee shall maintain and implement the Closure and Post-Closure Plan prepared by A-Mehr and dated of October 2007..

2. At a minimum, the Preliminary Closure and Post-Closure Plan and the Financial Assurance report shall be revised every five (5) years or earlier if facility plans are updated or changed. A notice and summary document shall be submitted for any change to the above documents. This is not withstanding the requirement to make adjustments for inflation on an annual basis.

3. The permittee shall submit two years prior to the final receipt of waste at the facility a Final Closure and Post-Closure Plan, prepared by a professional engineer registered in the State of Hawaii. The final closure plan shall contain detailed engineering drawings, plans and specifications for construction of closure cap, surface water management improvements and other elements of final closure. The final post-closure plan shall include all maintenance and monitoring requirements based on HAR 11-58.1-17 and the design/construction of the closure. The Department shall review the submitted Final Closure and Post-Closure Plan for conformance to requirements of HAR 11.58-17 and HAR 11-58.1-18, and approve it following correction of any deficiencies noted by the Department.

4. The permittee shall begin closure activities within 30 days after the date on which the facility receives the known final receipt of waste, unless the Department grants an extension of time pursuant to HAR 11.58.1-17(a)(6). Closure activities shall be completed within 180 days following the beginning of closure unless the Department grants an extension of time pursuant to HAR 11.58.1-17(a)(7).

5. The permittee shall retain a professional engineer registered in the State of Hawaii for the supervision of the closure construction, and upon the completion, the engineer shall submit a summary report to the Department as to the complete conformity to the plans and specifications as approved. This summary report shall include a documented control program of the closure cap construction, and the quality assurance/quality control testing procedures, laboratory analyses, and engineer's certification of construction.

6. Following completion of any closure construction, the permittee shall submit a copy of the notation on the deed to the landfill property in accordance with HAR 11-58.1-17; and implement post-closure care as provided in the approved post-closure plan in

accordance with HAR 11-58.1-17. The Department may periodically require revisions to the plan.

7. The permittee shall maintain and submit evidence that HAR 11-58..1-18, Financial Assurance, is satisfied on an annual basis.

Section I. Recordkeeping and Reporting

1. The permittee shall submit an **Annual Operating Report** (AOR), using June 30 of each year as the year-end point, by July 31 of each year to:

   Solid and Hazardous Waste Branch
   Environmental Management Division
   Hawaii Department of Health
   P.O. Box 3378
   Honolulu, Hawaii 96801-3378
   Fax No. (808) 586-7509

2. The **Annual Operating Report** shall include the following information:

   a. Types of solid waste received (MSW, green waste, industrial/commercial, tires, wood, metals, metal containers of 20-gallons or larger capacity, asbestos, and other special wastes).

   b. Quantities of solid wastes received by type with totals using an appropriate unit of measure.

   c. The average daily disposal rate on a yearly basis.

   d. Quantities of semi-solid waste (tons) received and how it is handled or disposed.

   e. Volume of leachate (gallons) generated and how it was handled or disposed. If requested by the Department, the permittee shall also provide water balance estimates of leachate generation by the use of the most recent EPA HELP model using climatic information collected in accordance with Special Conditions Section I, Item 4. Annual rain data for the site on a daily basis shall be provided with this analysis.

   f. Volume of airspace filled during the reporting year, airspace filled during previous years, and airspace remaining in both cubic yards and years shall be provided. The information shall be provided in both numerical and graphical presentations.

g. An annual topographic survey of the site as prepared by a land surveyor registered in the state of Hawaii or an approved alternate method. Any exceedance of permit grades shall be identified and the Department shall be notified by the use of a Non-Compliance Report. This survey shall clearly show the horizontal and vertical dimensions of the landfilled area.

h. A Sequencing Plan, including a drawing, identifying the cell areas to be filled in the coming year including identification of the wet weather areas. The cell areas and wet weather area capacity shall be provided using an appropriate unit of measure.

i. Final fill areas, intermediate fill areas, and future unused fill areas shall be identified for the projected year.

j. A soil-balance report of the past year and coming projected year reported separately. The soil daily cover and intermediate cover including erosion replacement soil also shall be reported separately. The source and type of soil shall be recorded separately for daily cover and intermediate cover. The soil-balance report for the past year shall be based on records of actual use in a daily, weekly and monthly basis. Any incomplete/non-application of daily cover shall be identified. Current soil use records shall be maintained at the facility for review.

k. After closure of any portion of the landfill, a summary of post-closure care and maintenance activities conducted at the closed landfill phases.

l. A copy of the detailed written estimates and documentation of financial assurance.

3. **Recordkeeping Requirements.** The permittee shall comply with the recordkeeping requirements of HAR 11-58.1-15(j).

4. **Climatic Information.** Daily rainfall shall be monitored and recorded for submission with the AOR. If directed by the Department, additional climate information shall be collected on a daily basis, including information on solar radiation, evaporation, wind speed and direction, humidity, temperature, and other applicable meteorological data, as applicable, for use in modeling evapotranspiration and leachate generation with the HELP Model at the landfill.

SPECIAL CONDITIONS II: Redemption Center and Materials Recycling Operation

1. The permittee may accept, collect, and process source-separated fiber material (such as cardboard and newspaper), and metal (aluminum, bi-metal and steel), plastic, and glass containers, as described in **Operations Plan, Site Plan,** and **Structures and Materials Dimensions and Capacity Tables** dated May 20, 2009, unless otherwise specified in

these permit conditions. The accepted materials shall be free of fluids and/or contaminants that may cause harm to human health or the environment (i.e., paints, oils, solvents, etc.).

2. The permittee may accept and store used motor oil in the oil collection shed. Collection, storage, transport, and recordkeeping should be managed in accordance with HAR §11-279, *Standards For The Management Of Used Oil*. The used motor oil shall be stored in a safe and orderly manner, and transported to DOH-permitted/approved facilities before creating a nuisance, health, safety, or environmental hazard. Measures shall be taken to prevent and respond to fires, and to control nuisance and environmental impact (spills, leaks, and emissions).

3. The permittee may accept electronic waste and the accepted electronic waste shall be immediately stored in a designated shipping/storage container. The designated shipping/storage container shall be removed out from the facility when it is filled. Cracked or damaged items must be managed in accordance with applicable requirements of HAR 11-260 through 280, *Hazardous Waste Management*.

4. No regulated hazardous waste, in accordance with HAR Chapter 11-261, shall be accepted at this facility.

5. All incoming material shall be screened to maintain compliance with SPECIAL CONDITIONS II, Items 1 through 4. Should unacceptable material enter the facility (including by-products or contaminants removed during screening, sorting, or processing), this material shall be properly stored, managed, and disposed of at appropriate and DOH-permitted solid waste facilities prior to causing or creating a nuisance condition, health, safety, or environmental hazard. If any of this waste or waste generated at the facility is determined to be hazardous, the waste should be properly managed and disposed of in accordance with HAR Chapter 11-260 through 268.

6. The accepted materials shall be processed in accordance with the *Operations Plan*, Site Plan, and Structures and Material Dimensions and Capacity Spreadsheets dated May 20, 2009, and approved subsequent submittals. Should there be any discrepancies between the submitted operations plan and these permit conditions these conditions will take precedence.

7. Storage of unprocessed and processed material shall be done in a safe and nuisance free manner, and in accordance with the submitted *Operations Plan*, Site Plan, and Structures and Material Dimensions and Capacity Spreadsheets dated May 20, 2009, and approved subsequent submittals, provided all other permit conditions are met, including vector, litter, and fire controls. The storage limits shall be as follows:

a.	Fiber materials unprocessed:	128 cubic yards
b.	HI 5 Items except glass:	within the HI 5 trailer and the storage warehouse
c.	Glass:	50 tons at both collection and processing areas
d.	Non-HI 5 plastic containers:	8 cubic yards
e.	Food cans:	8 cubic yards
e.	All baled or cubed materials:	120 bales
c.	Used Motor Oil:	up to 12 fifty-five gallon drums, and shipped out when 6 drums are filled
d.	Electronic Waste:	1 twenty-foot shipping/storage container

8. Processed materials shall be transported to DOH-permitted recycling facilities, out-of-state recycling facilities, or end-markets. If processed materials will no longer be accepted by these recycling facilities or end-markets, then no associated incoming waste stream shall be accepted. The storage limits stated in SPECIAL CONDITIONS II, Item 7, shall be maintained.

9. The facility shall be supervised, secured, and have a permanent sign identifying the facility, hours of operation, a contact in case of emergencies.

10. Scavenging at the facility by the general public is prohibited.

11. Adequate drainage shall be provided to prevent standing water inside the facility. Any discharges from the site shall be in accordance with applicable federal, state, and local laws and regulations.

12. Suitable means shall be employed to control visual and odor nuisances, prevent solid waste from scattering, control litter, and minimize dust and vectors (such as rodents and insects).

13. Suitable means shall be provided to prevent, control and extinguish fires. A water supply system and access lanes shall be provided to allow for fire response.

14. Records of all incoming and outgoing transactions shall be maintained for a minimum of five (5) years. Information shall include, but is not limited to, source and type of

materials received (name of person and company delivering recyclables, and location delivered from), date, and quantity received; type and quantity of material processed; final disposition of recyclables and waste; and disposal and/or transaction receipts. Copies shall be made available to the department upon request.

15. An **Annual Operating Report** shall be prepared and submitted to the department reviewing the past year's operations and detailing the total tonnage of each type of material received, processed, recycled, and disposed from the previous fiscal year (July 1 to June 30) by July 31 of each year. The destination of any material leaving the site shall also be noted. The report shall also include a summary of incidents outside of normal operations. Reports shall be submitted to:

    Department of Health
    Environmental Management Division
    Solid and Hazardous Waste Branch
    919 Ala Moana Blvd. Room 212
    Honolulu, Hawaii 96814

16. The permittee shall notify the department, in writing, of any operational changes (e.g., use of different processing methods and equipment, environmental controls, storage capacity, etc.). A revised operations plan reflecting these changes shall be submitted for the department's review and approval prior to implementation. Depending on the extent of the proposed changes, a modification to this permit may be required.

17. The permittee may accept other materials for recycling, provided that the permittee submits a revised operations plan and site plan, and that the DOH approve the plans. The DOH may issue additional conditions as a condition of approval. Depending on the proposed material and proposed management of such material, a permit modification may be required.

18. The permittee may operate a mobile redemption trailer that collects empty deposit beverage containers through out the island. The locations and hours of the operations and an agreement with the property owner using the property for the redemption activities at each location shall be submitted to the department prior to the commencement of the operations.

19 Additional source separated recyclables such used cooking oil, may be collected if a site-specific recycling plan, addressing nuisance controls, site holding capacity, removal frequency, and environmental controls, and an updated site plan are submitted and DOH-approved prior to accepting recyclables. Upon approval of the recycling plan, the plan shall become part of this permit. The department may issue additional conditions as necessary for the proposed recycling activity.

SPECIAL CONDITIONS III: Greenwaste Storage and Processing

1. This facility may accept and process clean greenwaste, as defined in HAR 11-58.1-03, and pallets. In this permit, the pallets are defined as untreated and unpainted wooden pallets. Treated lumber of any type is prohibited.

2. No hazardous waste, in accordance with 40 CFR Part 261, may be collected, transported, or disposed of at the facility.

3. The permittee shall implement a screening program, such that unacceptable materials are not accepted or processed at the facility. Should unacceptable material enter the facility, this material should be properly disposed of at permitted disposal facilities prior to causing or creating a nuisance condition, health, safety or environmental hazard.

4. The **Composting Operations Plan, Site Plan,** and **Materials Dimensions and Capacity Tables** dated August 19, 2009, and any approved subsequent submissions shall become part of this permit. A copy of the Composting Operations Plan, Site Plan, and Structures and Material Dimensions and Capacity Tables shall be maintained at or near the facility. Should there be any discrepancies between the submitted operations plan and these permit conditions these conditions will take precedence.

5. The permittee shall process the incoming greenwaste and pallets, on a continuous basis, while the permittee shall make efforts to process the backlog (the areas of GWS1, GWS2, and GWS3) of stockpiled greenwaste. Storage of the incoming material dropped off at the area of GW 1 is limited to 5000 cubic yards, and piles of the unprocessed greenwaste shall not exceed 10 feet in height.

6. Storage of the materials in the backlog areas shall be processed within eighteen (18) months after this permit is issued. A report showing processing progress on the backlog shall be submitted at the end of each of six-month periods. The report may include a revised operation plan and/or site plan for the necessary changes made in the six-month period.

7. Storage of stockpiled mulch (processed material) shall be in windrows (a long, relatively narrow and low pile), and shall not exceed 12 feet in width at the base and 5 feet in height, except freshly chipped mulch piles may be up to 10 feet in height during processing/chipping time. If a mulch storage pile exceeds 5 feet in height, daily temperature monitoring of the mulch pile with associated record keeping shall be conducted. If temperature measurements indicate potential fire condition of the mulch pile, the pile shall be turned as necessary.

8. Location of the processing equipment shall provide adequate separation between the processing area and drop-off/pick up areas to ensure a safety zone for the general public.

9. The facility shall be supervised, secure, and have a permanent sign identifying the facility, hours of operation, a contact in case of emergencies.

10. Scavenging at the facility by the general public is prohibited.

11. The subject site shall be provided with an all weather working surface and suitable surface water control. Adequate drainage shall be provided to prevent standing water inside the facility. Any discharges from the site shall be in accordance with applicable federal, state, and local laws and regulations.

12. Adequate measures shall be provided to control litter, scattering of wastes, dust, insects, odors and vectors. Unprocessed greenwaste and pallets shall be processed as soon as practicable to prevent a litter, fire, vector, or nuisance situation.

13. Suitable means shall be provided to minimize fire hazards and prevent fires. Adequate spacing shall be provided between all piles to provide firebreaks and to ensure access to the piles in case of an emergency. A twenty (20) foot buffer zone shall be provided between greenwaste operation boundary as defined by the submitted site plan dated August 19, 2009, and the other landfill/recycling operations.

14. Records of greenwaste operations shall be maintained for a minimum of five (5) years. Information shall include, but is not limited to, incoming greenwaste and pallets screening; date of greenwaste and pallets chipped; and weight or volume of mulch produced; daily temperature monitoring and pile-turning data; and date, time, and type of complaint and incidents. Weight or volume of incoming greenwaste and pallets shall be recorded as much as possible such that estimated quantity is acceptable. Copies of record shall be made available to the Department upon request.

15. An **Annual Operating Report** shall be prepared and submitted to the Department reviewing the past year's operations and detailing the quantities by weight or volume of greenwaste received, processed, distributed, and waste recycled or disposed from the previous fiscal year (July 1 to June 30) by July 31 of each year. The report shall also include a summary of incidents outside of normal operations. Reports shall be submitted to:

    Department of Health
    Environmental Management Division
    Solid and Hazardous Waste Branch

919 Ala Moana Blvd. Room 212
Honolulu, Hawaii 96814

16. The permittee shall notify the department, in writing, of any operational changes (e.g., use of a different equipment for processing, use of different nuisance control systems, etc.). A revised operations plan, reflecting these changes shall be submitted for the department's review and approval prior to implementation. Depending on the extent of the proposed changes, a modification to this permit may be required.

SPECIAL CONDITIONS IV: Salvage Yard
Section A. General Facility Conditions

1. The permittee shall comply with the facility's operational procedures provided in the Molokai Landfill Interim **Metal Recycling Plan** received April 9, 2008 and these conditions. Should there be any discrepancies between the submitted materials and these permit conditions, the permit conditions shall take precedence.

   a. The permittee shall submit a Permanent Molokai Landfill Metal Recycling Plan, including implementation schedule, by May 1, 2010.

   b. Upon department approval, the permittee shall comply with the Permanent Molokai Landfill Metal Recycling Plan and associated special conditions.

2. The permittee shall construct and operate this salvage facility in accordance with HAR 11-58.1-33, *Solid Waste Salvage Facilities*.

3. The facility may receive, store, and process the following waste streams:

   a. waste vehicles (i.e., accident, unwanted, derelict and/or abandoned vehicles as defined in accordance with HRS Chapter 290, Abandoned Vehicles),

   b. white goods,

   c. propane tanks,

   d. tires,

   e. lead-acid batteries, and

   f. uncontaminated ferrous and non-ferrous scrap metal.

4. Adequate measures shall be taken to prevent fluids and spills from being discharged or allowed to enter into sewers, drainage systems, surface or groundwater, water courses, marine waters, or onto the ground. Measures may include, but are not limited to, the use of EnviroRacks, spill pans, structural catchment systems, and/or absorbent materials. Discharges of washwater, stormwater and wastewater from the facility processes and cleaning operations shall be in accordance with all applicable federal, state and local rules and ordinances.

5. No regulated hazardous waste, in accordance with HAR Chapter 11-261, shall be accepted at this facility.

6. No radioactive wastes shall be accepted at this facility.

7. No polychlorinated biphenyls (PCB) wastes as defined in 40 CFR Part 761 shall be accepted at this facility.

8. No infectious waste, in accordance with HAR Chapter 11-104, shall be accepted at this salvage operation.

9. Appropriate engineering controls shall be instituted and implemented to prevent the scattering of litter and other solid wastes, and to provide adequate drainage of rainwater for the site and surrounding areas.

10. Suitable means shall be provided to prevent and control fires. Access lanes shall be provided and maintained to allow for fire response or vector control.

11. Suitable means shall be employed to control nuisances and minimize odors and vectors (such as rodents and insects). The facility shall maintain a neat and orderly appearance and shall be screened and buffered to minimize nuisances to neighboring properties.

12. Illegal dumping, especially of putrescible or combustible material, shall be removed immediately and properly managed and disposed.

13. Scavenging at the facility is prohibited.

Section B. Storage and Processing Requirements

1. All incoming waste materials shall be screened to maintain compliance with Special Conditions, Section IV, Items 3 and 5 through 8.

2. Individual waste streams shall be stored separately. Waste streams shall not be commingled or mixed with other solid waste or other materials, such as dirt, rocks, and vegetation.

3. All vehicles and white goods accepted at the facility shall be delivered to a storage or concrete-paved processing area. The storage capacity of unprocessed and processed vehicles shall be limited to 200 vehicle units, combined. The storage capacity of unprocessed and processed white goods shall be limited to 300 white good units, combined. Processing means preparing a waste vehicle/white good unit for recycling by removing parts and items identified in Special Conditions IV, Section B, No. 7, before sending the vehicle/white good unit to DOH-permitted metal recycling facility or out-of-state recycling facility.

   a. Accident/wrecked vehicles and vehicles with fluid-containing parts that are not intact shall be stored over portable secondary containment pans or concrete surfaces. These storage areas shall have containment measures to control any accidental release of fluids or other contaminants. If fluid or rainwater is found in the secondary containment pans or other containment measures, the fluid/rainwater shall be removed and properly disposed of.

   b. Intact (non-leaking, undamaged) vehicles and white goods may be stored on unlined storage areas.

   c. Stacking of unprocessed vehicles and white goods is not allowed.

   d. The processing area shall have a concrete surface with berms to prevent subsurface contamination and have adequate containment capacity to hold any accidental release of fluids and other contaminants. The permittee shall ensure that each unit has been drained completely prior to removal from the processing area to unpaved storage areas.

   e. Stacking of processed vehicles and white goods is allowed, provided that the height does not give rise to the collapse of the pile, release of residual fluids and other contaminants, or injury to workers.

   f. The processed vehicles and white goods shall be transported to a DOH-permitted facility allowed to accept processed vehicles and white goods or to an out-of-state recycling facility.

5. The maximum storage capacity for propane tanks shall be 300 units at any time.

a. Stacking of propane tanks is not allowed. Propane tanks shall be stored upright, in an open and well-ventilated area of the facility.

b. The permittee shall exercise proper precautions to reduce fire, explosion, or other safety concerns during the storage, processing, and management of propane cylinders.

c. The permittee shall perform processing and propane removal operations in an open and well-ventilated area of the facility. The permittee shall take measures to ensure that all residual propane has been removed from the cylinders and that the cylinders do not present an explosion or fire hazard.

d. The propane tanks shall be transported to a DOH-permitted facility allowed to accept processed propane cylinders or to an out-of-state recycling facility prior to causing a health, environmental, or nuisance problem.

6. The maximum storage capacity for ferrous and non-ferrous scrap metal (not including vehicles, white goods, and propane tanks) shall be limited to 20 tons, combined, at any time.

a. Stacking is allowed, provided that the height does not give rise to the collapse of the pile or injury to workers.

b. The ferrous and non-ferrous scrap metal shall be transported to a metal recycling facility permitted to accept scrap metal by the department or to an out-of-state recycling facility.

7. The following materials shall be removed from the vehicle and white goods and transported to a DOH-approved or permitted waste facility: used oil, brake fluid, radiator fluid, transmission fluid, power steering fluid, compressor oil, diesel, fluid-containing parts that are not intact, coolant/antifreeze, chlorofluorocarbons (CFCs), oil filters, lead acid batteries, tires, sodium azide-containing air bag modules, PCB-containing capacitors, and mercury-containing switches, lamps and controls. Should any of these materials become hazardous waste, the permittee shall comply with applicable storage, holding time and disposal requirements (HAR 11-260 through 280, *Hazardous Waste Management*).

8. Should unacceptable material enter the facility (including by-products or contaminants removed during screening, sorting, or processing), this material shall be properly stored, managed, and disposed of prior to causing or creating a nuisance condition, health, safety, or environmental hazard. If any of this waste or waste generated at the facility is

determined to be hazardous, the waste should be properly managed and disposed of in accordance with HAR Chapter 11-260 through 268.

9. The permittee shall not bale, crush, shear, or flatten white goods, ferrous and non-ferrous scrap metal. The permittee may flatten roofs of vehicles that have been processed in accordance with Special Condition No. 20, but shall not crush, bale, or flatten the entire vehicle. Flattening of vehicle roofs shall be located on a concrete surface with a perimeter berm to capture metal fragments and to prevent releases of residual fluids beyond the flattening area. Metal fragments that are captured in the bermed area shall be collected, contained, and removed for recycling/disposal. Releases that occur in the bermed area shall be removed immediately and disposed of properly.

10. The maximum on-site storage for other materials shall be limited to the following:

a. Waste gasoline	110 gallons
b. Waste diesel	110 gallons
c. Waste oil and other fluids	110 gallons
d. Antifreeze/radiator fluid	110 gallons
e. Lead acid batteries	One 20-ft container (see Special Condition No. 30)
f. Tires	One 20-ft container (see Special Condition No. 31)
g. Freon	30 pounds

11. The department may allow temporary exceedences of the maximum storage capacity limits.

    a. The permittee shall provide the department with written notification within twenty-four (24) hours of the exceedence. At a minimum, the written notification shall include the reason for noncompliance, identification of the type and quantity of materials, manner in which the situation will be corrected, and estimated schedule for correction.

    b. The permittee shall rectify the exceedence within thirty (30) days. The estimated schedule for correction shall not exceed thirty (30) days.

    Submission of written notification of noncompliance does not automatically constitute department approval for capacity exceedence.

12. Containers of fluids shall be clearly labeled with their contents. Containers used to store used oil must be labeled or marked clearly with the words, "Used Oil" (HAR 11-279, *Standards for the Management of Used Oil*).

13. Containers of used oil and other waste fluids shall be placed in a secondary containment that is capable of holding more than the contents of the largest container in the containment area. Such secondary containment may include dikes, berms, or retaining walls, and a liner or impervious floor, such as concrete. The secondary containment system shall not be used as fluid storage. The storage area shall be covered and prevent rainwater from accumulating in the secondary containment system. If fluid is found in the secondary containment system, the fluid shall be removed and the source of the fluid or leak determined and corrected. The storage area shall also comply with other applicable requirements of HAR 11-279, Subchapter C.

14. Oil filters shall be subjected to a proper oil removal step (i.e., 24 hour draining or crushing to release the oil). The recovered used oil shall be managed in accordance with Special Condition Nos. 25 and 26. The drained oil filter should be recycled for metal.

15. Motor vehicle air conditioners (MVACs) that enter the waste stream with the charge intact shall be subject to "safe disposal requirements" under EPA's Refrigerant Recycling rule. The permittee shall be responsible for ensuring that the refrigerant is recovered using EPA-approved recycling/recovery equipment with a certified technician, before final disposal to a permitted scrap metal recycler. Federal regulations prohibit venting of CFCs into the atmosphere.

16. Used antifreeze shall be managed and disposed of properly. Used antifreeze may be reused or recycled through a commercial recycling facility.

17. The permittee shall comply with the disposal, collection, and recycling requirements specified under HRS 342I *Lead Acid Battery Recycling*. Batteries shall be stored in an enclosed 20-foot container. Releases that occur shall be removed immediately and disposed of accordingly. Cracked or leaking batteries must be managed as hazardous waste, in accordance with applicable requirements of HAR 11-260 through 280, *Hazardous Waste Management*.

18. The permittee shall comply with the tire disposal requirements specified under HRS 342I for *Used Motor Vehicle Tire Recovery*. On-site storage shall meet all the relevant requirements of the local county fire code. Tire piles must be free of all contaminants such as oil, grease, gasoline, diesel, etc. that could create fire hazards. Waste tires shall be placed in enclosed 20-foot containers at the end of each day. No tires shall be left outside overnight. Tires shall be disposed of only at a DOH-permitted recycling facility allowed to accept waste tires or out-of-state recycling facility.

19. Mercury switches, lamps, relays, sensors, and controls; sodium azide-containing air bag modules; and PCB-containing capacitors shall be removed and disposed of properly.

20. If contamination of the environment resulting from the processing or storage of vehicles and fluids is detected, appropriate measures shall be taken to assess and mitigate the contamination.

21. The permittees shall conduct a Preliminary Environmental Investigation and associated remedial actions in accordance with an approved schedule. The investigation and remedial actions shall encompass the salvage operations area, including the concrete processing and storage area. The investigation and remedial action shall be completed prior to construction of any permanent environmental controls and/or ground surfacing that will also be used during the interim period, such as the concrete slab with berm. The investigation and remedial actions shall be approved by the Department.

    a. At a minimum, the investigation shall include an evaluation of past operations and activities at the site, identification of potential environmental impacts, and sampling and analysis to identify existing areas of concern.

    b. The investigation shall be performed by a qualified environmental professional.

    c. A sampling and analysis plan shall be submitted within ninety (90) days of receipt of these conditions. The permittee shall also submit an investigation report(s), recommendations, and remedial action report(s).

    d. An implementation schedule shall be submitted within ninety (90) days of receipt of these conditions. The schedule shall include, at a minimum, dates for field work, potential remedial action, potential confirmation sampling, construction of infrastructure, and report submissions. The schedule may propose incremental approaches for sampling, remedial action, confirmation sampling, construction, and report submissions, provided that the schedule shall not exceed one (1) year from the date of receipt of these conditions, to allow for implementation of the permanent plan in accordance with Special Conditions IV, No. 1.

Section C. Recordkeeping and Reporting Requirements

1. Records of screening and all transactions shall be kept a minimum of five years. Copies shall be made available to the department for its use upon demand. The record information shall include:

    a. monthly total number/tonnage of vehicles, white goods, propane tanks, ferrous and non-ferrous metal, tires, and batteries received and processed;

b. monthly total number of vehicles, white goods, propane tanks, tires, and batteries, onsite;

c. monthly total quantity of ferrous and non-ferrous metal, used oil, and other fluids and waste streams onsite;

d. waste acceptance dates, types, quantities, hauler/purchaser, and source;

e. waste disposal dates, types, quantities, hauler/purchaser, and destination;

f. quantity, type, and final destination of processing byproducts (tires, batteries, refrigerant, used oil, and other materials identified in Special Condition No. 21) removed from vehicles and white goods; and

g. copies of receipts of sale, recycling, or disposal of material.

2. The permittee shall comply with the recordkeeping requirements relating to used motor vehicle tires as provided under the HRS Chapter 342I. The statute requires facilities that accept used tires to submit a summary of the following information by July 31 of each year:

a. the name, phone number, and address of the person, company, business, source, or entity from whom the used tires were received, if receiving used tires from entities other than the general public, such as tire retailers, wholesalers, transporters, collectors, and recyclers;

b. the date of receipt of used tires;

c. the quantity of used tires received; and

d. the record of shipment indicating:

i. ultimate destination of the used tires;
ii. identification of the transporter;
iii. date of shipment; and
iv. quantity of tires shipped.

3. An **Annual Operating Report** shall be prepared and submitted to the department, reviewing the past year's operations and detailing the final deposition, and total tonnage or volumes of each waste stream received, processed and recycled, including

processing by-products removed, recycled, or disposed for the previous fiscal year (July 1 to June 30) by July 31 of each year. Reports shall be submitted to:

Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Solid Waste Section
P.O. Box 3378
Honolulu, Hawaii 96801

APPENDIX A-2

SPECIAL USE PERMIT

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Order Granting Request for Time Extension of Condition No. 3 was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by certified mail:

CERT. BRIAN MISKAE, Planning Director
Planning Department, County of Maui
250 South High Street
Wailuku, Hawaii 96793

CERT. GUY A. HAYWOOD, ESQ.
Corporation Counsel
Office of the Corporation Counsel
County of Maui
200 South High Street
Wailuku, Hawaii 96793

CERT. DAVID WISSMAR, Chief
Solid Waste Division
Department of Public Works and Waste Management
200 South High Street
Wailuku, Hawaii 96793

DATED: Honolulu, Hawaii, this 1st day of March 1995.

ESTHER UEDA
Executive Officer

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI

This is to certify that this is a true and correct copy of the Decision and Order on file in the office of the State Land Use Commission, Honolulu Hawaii.

MAY 14 1993 by _____
Date Executive Officer

LAND USE COMMISSION
STATE OF HAWAII
MAY 14 1 28 PM '93

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

The Department of Public Works, County of Maui (hereinafter "Applicant") initiated this proceeding pursuant to Section 205-6, Hawaii Revised Statutes, and Sections 15-15-95 and 15-15-96 of the Hawaii Administrative Rules. The Land Use Commission (hereinafter "LUC"), having considered the entire record on this matter, hereby makes the following findings of fact, conclusions of law, and decision and order:

FINDINGS OF FACT

PROCEDURAL MATTERS

1. On December 7, 1992, the Special Permit Application (hereinafter "Permit") for establishment and operation of an Integrated Solid Waste Facility (hereinafter "Project") on approximately 40 acres at Naiwa, Molokai, was filed by the Applicant with the County of Maui Planning Department (hereinafter "Department").

2. On December 14, 1992, the Permit was certified as complete and ready for processing by the Applicant.

3. On December 16, 1992, the Molokai Planning Commission (hereinafter "Planning Commission") conducted a public workshop on the Permit.

4. The Planning Commission conducted a public hearing on the Permit on January 27, 1993.

5. On January 27, 1993, the Planning Commission recommended approval of the Permit to the LUC subject to twelve conditions. On March 24, 1993, the LUC received and accepted for consideration the complete record of the Planning Commission's proceedings on the Permit and the Planning Commission's decision.

6. On April 23, 1993, the LUC conducted a hearing to act upon the Applicant's petition.

7. On April 15, 1993 and April 21, 1993, the LUC received letters dated April 15, 1993 and April 20, 1993, respectively, from Ms. Sarah E. Sykes of Molokai. Said letters were admitted into evidence by the LUC, with no objections from the parties, on April 23, 1993.

8. On April 23, 1993, the LUC received a letter dated April 22, 1993 from Mr. John Harder, Coordinator of the Office of Solid Waste Management, State Department of Health. Said letter was admitted into evidence by the LUC, with no objections from the parties, on April 23, 1993.

9. On April 23, 1993, the Applicant orally amended its Permit by deleting the proposed access road and reducing the acreage of the Property to approximately 37.9 acres.

DESCRIPTION OF THE PROPERTY AND SURROUNDING AREA

10. The Special Permit area (hereinafter "Property") consists of approximately 37.9 acres located at Naiwa, Molokai, and is identified as Tax Map Key No.: 5-2-11: portion of 27.

11. The Property is located approximately 3.5 miles northwest of Kaunakakai and 3.5 miles southeast of Molokai Airport. The Property is owned by Molokai Ranch, Limited. The Applicant is in the process of obtaining the Property from Molokai Ranch, Limited.

12. Access to the Property is via a road off of Maunaloa Highway.

13. The originally proposed access road to the Property was to be shared with an existing quarry operation to the north of the Property. The proposal was not agreed upon by the quarry operator. Therefore, the Applicant has proposed a new access road south of the originally proposed access road.

14. The Property and surrounding areas are currently vacant and unimproved.

15. The slope of area in which the Property is situated varies from 3% to 40%.

16. Rainfall in the area is estimated to be approximately 15 inches annually.

17. The U.S. Department of Agriculture Soil Conservation Service classifies the Property as having two distinct types of soil series, Holomua Silt Loam (HvB3) and Very stony land (rVT2).

18. The Land Study Bureau's Detailed Land Classification Report designates the Property as Class "E" lands.

19. The Property is not classified under the State of Hawaii's Agricultural Lands of Importance to the State of Hawaii (ALISH) system.

20. According to the U.S. Army Corps of Engineers Flood Insurance Rate Map, the Property is within an area of minimal flooding (Zone C).

SUMMARY OF PROPOSED USE

21. The Applicant is requesting the Permit to establish and operate an Integrated Solid Waste Facility for the island of Molokai. This Project will include areas for a solid waste landfill, areas for composting and an area for recycling. Additionally, the Project will include other improvements including a scale house, employee facilities, an equipment maintenance building, administrative office space, and parking.

22. The Project is designed to meet the County of Maui Drainage Plan and the U.S. Environmental Protection Agency's "small landfill" criteria for municipal solid waste landfills (40 CFR 258, Subtitle D).

23. The Project is intended to replace the existing landfill at Kalamaula, Molokai, which is at capacity and is scheduled to be closed in the near future.

STATE AND COUNTY PLANS AND PROGRAMS

24. The State Land Use District Classification of the Property is Agricultural, as reflected on State Land Use District boundary maps MO-3 (Kaunakakai).

25. The Molokai Community Plan designates the area as Agricultural and the current zoning for the area is unzoned.

26. The Property is not located within the County of Maui Special Management Area.

SUMMARY OF STATE AND COUNTY AGENCIES COMMENTS

27. The County of Maui Department of Fire Control commented that the Project site would need an adequate water supply available. Specific requirements for the Project could not be provided without additional information.

28. The County of Maui Department of Water Supply (hereinafter "DWS") commented that there is no water system in the area. Furthermore, DWS commented that the Applicant will need to demonstrate that adequate water for fire protection and other uses can be provided. DWS encouraged the use of non-potable water and recommended that the landfill incorporate a low permeability bottom liner.

29. Maui Electric Company (hereinafter "MECO") commented that additional data is needed to determine probable electrical usage for the Project.

30. The County of Maui Police Department had no comments to offer.

31. The State Department of Health commented that a National Pollutant Discharge Elimination System permit would be required for any discharge to waters of the State.

32. The Office of Solid Waste Management, State Department of Health commented that clay liner (described as Alternative 1 in Parametric, Inc. memo dated January 4, 1993 to Dave Wissmar), with a lysimeter in place will provide adequate protection of contamination to groundwater sources.

33. The State Department of Transportation (hereinafter "DOT") commented that illegal trash dumping at the access road and the possibility of "wind-blown" trash from the landfill be examined. Additionally, DOT commented that intersection connections within the State right-of-way should be provided to DOT for approval.

34. The State Historic Preservation Division of the Department of Land and Natural Resources (hereinafter "HPD-DLNR") has determined that the Project will have "no effect" on significant historic sites.

35. The State Department of Accounting and General Services had no comments to offer.

36. The State Department of Agriculture had no objections to the Project.

SOCIO-ECONOMIC IMPACTS

37. The Project is not expected to impact the socio-economic environment of the island of Molokai. Because the Property is currently vacant and undeveloped, no disruption of businesses or residents exists.

38. The Project is not expected to have any significant adverse secondary impacts or effect on the population, future development, and public facilities on the island of Molokai.

IMPACTS UPON THE RESOURCES OF THE AREA

Agricultural Resources

39. The Project is not expected to have any impact on agricultural resources. The Property is currently vacant and undeveloped and is not classified by the ALISH system. Furthermore, the Property has poor suitability for most agricultural uses.

Flora

40. Vegetation on the Property and immediate surrounding area is dominated by kiawe and buffel grass. There are no rare, threatened, or endangered species of flora on the Property.

Fauna

41. The Property provides a limited range of habitats utilized by a typical range of exotic or introduced birds. However, none of the birds or mammals observed in the area are considered to be threatened or endangered species.

Scenic Resources

42. The Project is not fully visible to the passing motorist on Maunaloa Highway. A limited portion of the Project can be seen from Maunaloa Highway.

43. The landfill is not part of, nor does it overlook, any scenic corridor or aesthetic view plain.

Archaeological and Cultural Resources

44. An archaeological survey of the Property indicates that no archaeological surface remains or other significant cultural activities occur on the Property. The HPD-DLNR has concluded that the Project will have "no effect" on significant historic sites.

ADEQUACY OF PUBLIC FACILITIES AND UTILITIES

Highways and Roadway Facilities

45. A new permanent access road will provide access to the Project from Maunaloa Highway. The Applicant will obtain a road easement from the landowner, Molokai Ranch, Limited. The new access road is not a part of this Permit and will remain in the State Land Use Agricultural District.

Drainage

46. Manawainui Gulch, located 0.3 miles north of the Property, is a natural receptor for severe flooding or surface runoff in storms of 50-100 year event magnitude.

47. The Property and surrounding area are traditionally dry and arid. Therefore, the Property does not lend itself to local flooding conditions.

Air Quality

48. The Project will generate short-term fugitive dust which would exceed State standards. Mitigation measures will be incorporated by the Applicant into the operation of the Project.

Noise

49. Short-term noise is anticipated during the construction phase of the Project. It is estimated that the noise from the operation of the Project would not go beyond the boundaries of the Property. Mitigation measures will be incorporated by the Applicant in the operation of the Project.

Water

50. The Property is not serviced by the DWS. DWS has commented that the Applicant will be required to sign a private water system agreement and to demonstrate that adequate water for fire protection and other uses can be provided.

Electricity/Telephone Service

51. MECO has commented that additional information is required to determine electricity needs for the Project in a timely manner.

52. The Permit does not address the need for telephone service for the Project.

CONFORMANCE WITH SPECIAL USE PERMIT TESTS

53. The Planning Department, in its staff report to the Planning Commission dated January 27, 1993, provided the following comments related to the Permit's conformance with the

guidelines for "unusual and reasonable use" authorized by a Special Use Permit under Section 15-15-95(b) of the Commission's Rules:

(1) The use shall not be contrary to the objectives sought to be accomplished by Chapters 205 and 205A, Hawaii Revised Statutes, as amended, and the rules of the State Land Use Commission.

43. The objective of the State Land Use Law is "to preserve, protect, and encourage the development of lands on the State for those uses to which these lands are best suited in the interest of the public health and welfare of the people of the State of Hawaii.

44. The proposed project relates to the following policies in the 1990 Maui County General Plan Update (Liquid and Solid Waste, p. 11):

a. Explore new waste disposal methods that are safe, economical, environmentally sound, and aesthetically pleasing, and that minimize the disposal of wastes in landfills.
d. Develop comprehensive and publicly acceptable methods of recycling solid and liquid waste.
e. Encourage and promote public awareness to reduce, reuse, recycle, and compost waste materials."

45. The Special Use Permit policy in the Molokai Community Plan states that "Special Permits in the State Agricultural and Rural Districts may be approved only: ... (2) to permit a public facility use such as a sanitary landfill, sewer treatment plant, or utility installation whose location is determined by technical considerations....

The subject property is for a sanitary landfill whose location (sic) is determined by technical considerations as the County needs to comply with the new EPA standards for landfills.

46. The population of the island is expected to grow from 6,800 in 1990 to 10,000 in 2000 and 12,000 in 2010.

47. From Maunaloa Highway, the landfill site is not fully visible to the passing motorist, although a limited portion of the site can be seen from the highway. As it is sited, the landfill is not part of nor(sic) does it overlook any scenic corridor or aesthetic view plane.

48. The project will have "no effect" on significant historic sites.

49. Other landfills such as the Central Maui Landfill have been approved by the Land Use Commission Special Use Permit process.

(2) The desired use would not adversely affect surrounding property.

50. The project site is located adjacent to an active rock and aggregate quarry operation. Noise from the quarry operations is an occasional disturbance. The landfill is surrounded by open range.

51. Mitigative measures will be utilized during the construction phase to curb the impacts from noise and fugitive dust.

52. Leachate migration and other landfill related impacts will be designed so as to prevent infiltration or percolation into the basal aquifer. Mitigative measures will include reducing the total daily tonnage placed in the landfill by recycling and composting of selected material to no greater than 20 tons/day and using a lysimeter as a monitoring mechanism.

53. The project is located in Zone C, an area of minimal flooding.

(3) The use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection.

54. The project is a means of upgrading the Molokai infrastructure and comply with federal requirements.

55. The applicant's response comments have adequately addressed the concerns of the Department of Transportation.

56. More specific information needs to be provided to the Maui Fire Department on the types of materials to be stored and recycled so that the project can be more fully analyzed as far as fire protection is concerned.

57. Maui Electric Company needs more detailed information on the project.

(4) Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established.

58. The existing Kalamaula landfill is at capacity with no expansion capability. The federal standards regarding landfills have become more stringent.

(5) The land upon which the use is sought is unsuited for the uses permitted within the district.

59. The project site has a Land Study Bureau detailed land classification overall productivity rating of E, Poor suitability for most agricultural uses.

PLANNING COMMISSION RECOMMENDATION

54. At its meeting of January 27, 1993, the Planning Commission recommended approval of the Permit to the LUC, subject to the following conditions:

1. That appropriate monitoring of the quality of water to be discharged into neighboring gulches from drainage basins shall be undertaken to assure that toxic wastes are not part of the discharge.

2. That in preparation of the sanitary landfill, the landfill floor shall be further compacted and be made relatively impervious to water in order to contain leachates. Proper disposal methods of leachates shall be installed within the landfill.

3. That a traffic assessment shall be developed to determine the impact on Maunaloa Highway once the sanitary landfill is operating. This assessment shall be completed no later than one year after said landfill is in operation. Findings of the assessment shall be submitted to the State Department of Transportation, Highways Division and the Maui County Planning Department for review.

4. That the applicant shall stop work on the sanitary landfill and immediately contact the Department of Land and Natural Resources, Historic Sites Division, in the event that any previously unidentified historic, archaeological, or cultural sites are encountered.

5. That appropriate internal vehicle circulation patterns shall be designed so as not to cause confusion and congestion within the sanitary landfill.

6. That full compliance with the requirements of the State's Department of Health for sanitary landfill operation shall be rendered.

7. That appropriate rules shall be established to prohibit scavenging within the sanitary landfill operation shall be rendered.

8. That appropriate mitigative measures to control excessive dust generation shall be implemented.

9. That provisions shall be enacted to ensure emergency access to the sanitary landfill in case of fire or any other disaster.

10. That final architectural and landscape planting plans be submitted to the Planning Department for review and approval.

11. That full compliance with other applicable government requirements shall be rendered.

12. That alternative No. 3 of the geomembrane liner as found in the January 4, 1993 memo from Parametrix, Inc. to Dave Wissmar shall be used for Phase 1 of the project.

CONCLUSIONS OF LAW

The Special Permit request to allow establishment and operation of an integrated solid waste facility for the island of Molokai constitutes an "unusual and reasonable" use as defined in Section 205-6, Hawaii Revised Statutes, and the proposed use is not contrary to the objectives sought to be accomplished by the State Land Use Law to preserve, protect, and encourage development of lands in the State for those uses to which they are best suited in the interest of the public health and welfare.

ORDER

IT IS HEREBY ORDERED that the Special Permit Docket No. SP93-383 to allow establishment and operation of an integrated solid waste facility on approximately 37.9 acres of land designated within the State Land Use Agricultural District, Tax Map Key No.: 5-2- 11: portion of 27 at Naiwa, Molokai, and approximately identified on "Exhibit A" attached hereto and incorporated by reference herein, is hereby approved and subject to the following conditions:

1. That appropriate monitoring of the quality of water to be discharged into neighboring gulches from drainage basins shall be undertaken to assure that toxic wastes are not part of the discharge.

2. That in preparation of the sanitary landfill, the landfill floor shall be further compacted and be made

relatively impervious to water in order to contain leachates. Proper disposal methods of leachates shall be installed within the landfill.

3. That a traffic assessment shall be developed to determine the impact on Maunaloa Highway once the sanitary landfill is operating. This assessment shall be completed no later than one year after said landfill is in operation. Findings of the assessment shall be submitted to the State Department of Transportation, Highways Division, and the Maui County Planning Department for review.

4. That the applicant shall stop work on the sanitary landfill and immediately contact the Department of Land and Natural Resources, Historic Sites Division, in the event that any previously unidentified historic, archaeological, or cultural sites are encountered.

5. That appropriate internal vehicle circulation patterns shall be designed so as not to cause confusion and congestion within the sanitary landfill.

6. That full compliance with the requirements of the State's Department of Health for sanitary landfill operation shall be rendered.

7. That appropriate rules shall be established to prohibit scavenging within the sanitary landfill operation.

8. That appropriate mitigative measures to control excessive dust generation shall be implemented.

9. That provisions shall be enacted to ensure emergency access to the sanitary landfill in case of fire or any other disaster.

10. That final architectural and landscape planting plans be submitted to the Planning Department for review and approval. Upon approval by the Planning Department, a copy of the plans shall be submitted to the Land Use Commission.

11. That full compliance with other applicable government requirements shall be rendered.

12. That alternative No. 3 of the geomembrane liner as found in the January 4, 1993 memo from Parametrix, Inc. to Dave Wissmar shall be used for Phase 1 of the project.

13. The Applicant shall provide the County of Maui Planning Department and the Land Use Commission copies of the final approved metes and bounds map and description delineating the Permit Area of approximately 37.9 acres.

14. The Applicant shall commence operations of the Molokai Integrated Solid Waste Facility no later than six months from the date of filing of this Decision and Order by the Land Use Commission.

15. The Applicant shall provide annual reports to the County of Maui Planning Department and the Land Use Commission in connection with the status of the subject project and the Applicant's progress in complying with the conditions imposed herein.

DOCKET NO. SP93-383 - DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI

Done at Honolulu, Hawaii, this 14th day of May 1993, per motions on April 23, 1993 and May 13, 1993.

LAND USE COMMISSION
STATE OF HAWAII

By _____
ALLEN Y. KAJIOKA
Chairman and Commissioner

By _____
KAREN S. AHN
Vice Chairman and Commissioner

By _____
JOANN N. MATTSON
Vice Chairman and Commissioner

By _____
ALLEN K. HOE
Commissioner

By (absent)
EUSEBIO LAPENIA, JR.
Commissioner

By _____
RENTON L. K. NIP
Commissioner

By _____
TRUDY K. SENDA
Commissioner

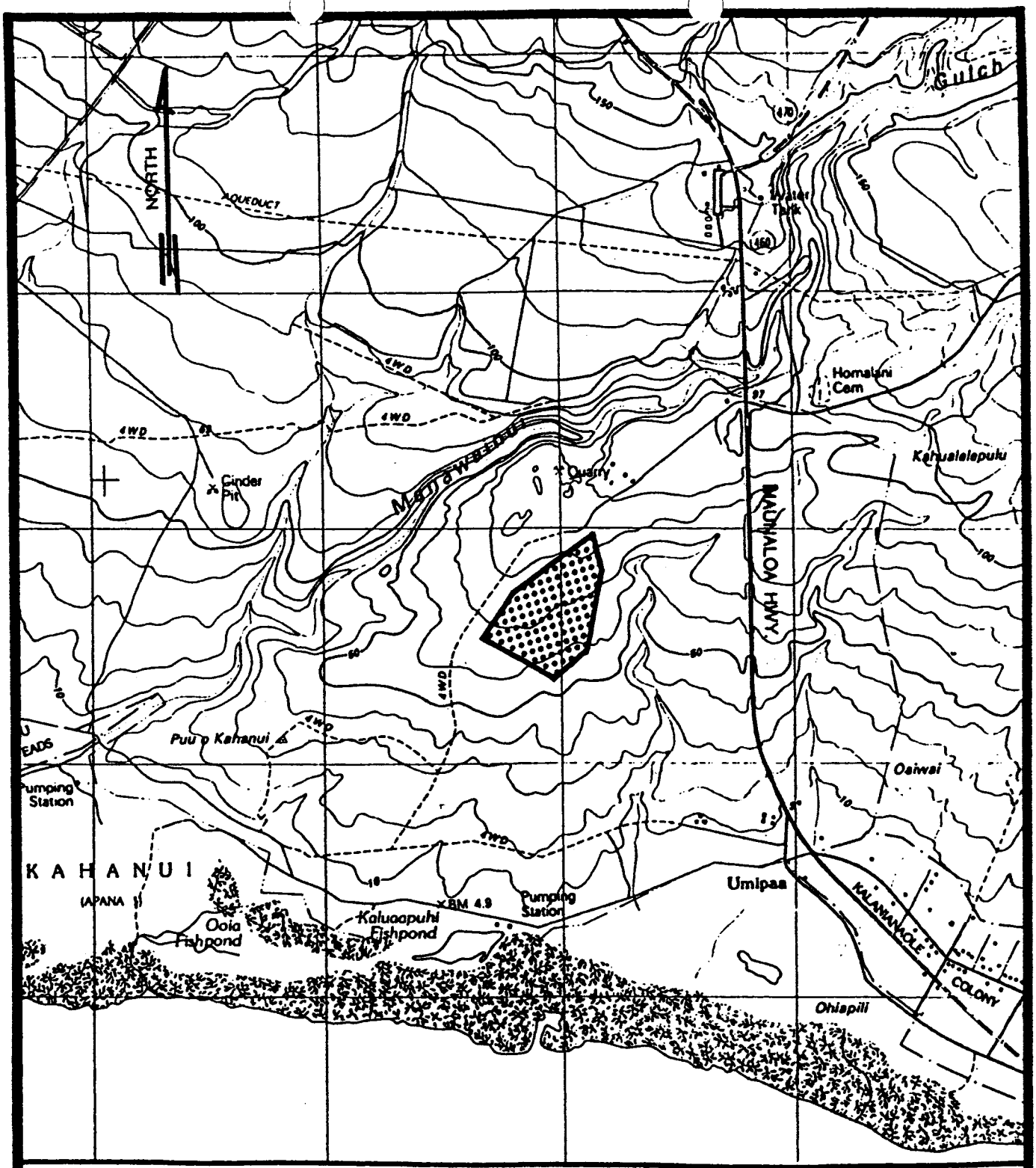
By _____
ELTON WADA
Commissioner

By _____
DELMOND J. H. WON
Commissioner

Filed and effective on
May 14, 1993

Certified by:

_____
Executive Officer



DOCKET NO. SP93 - 383 / DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI

LOCATION MAP

TAX MAP KEY: 5 - 2 - 11: por. 27

NAIWA, MOLOKAI, HAWAII

APPROVED AREA

SCALE: 1" = 2,000 ft. ±

MOLOKAI

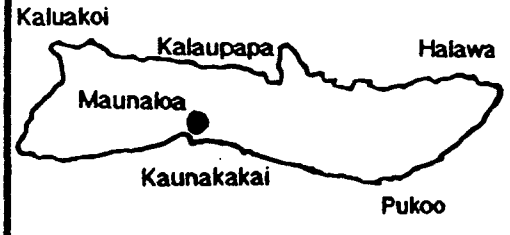


EXHIBIT "A"

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Findings of Fact, Conclusions of Law, and Decision and Order was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by certified mail:

BRIAN MISKAE, Planning Director
CERT. Planning Department, County of Maui
250 South High Street
Wailuku, Hawaii 96793

GUY A. HAYWOOD, ESQ.
Corporation Counsel
CERT. Office of the Corporation Counsel
County of Maui
200 South High Street
Wailuku, Hawaii 96793

GEORGE KAYA, Director
Department of Public Works
CERT. County of Maui
200 South High Street
Wailuku, Hawaii 96793

DATED: Honolulu, Hawaii, this 14th day of May 1993.

ESTHER UEDA
Executive Officer

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

This is to certify that this is a true and correct copy of the document on file in the office of the State Land Use Commission, Honolulu, Hawaii.

MAR - 1 1995 by
Date Executive Officer

ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

LAND USE COMMISSION
STATE OF HAWAII
MAR 1 10 00 AM '95

Post-it™ Fax Note 7671	Date 3/7/95 # of pages ▶ 6
To ANDY HIROSE	From KATHY YONAMINE
Co./Dept. SWD COUNTY	Co. LUC
Phone # 243-7875	Phone # 587-3822
Fax # 243-7843	Fax #

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

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MAR - 1 1995 by
Date Executive Officer

ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

LAND USE COMMISSION
STATE OF HAWAII
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BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of DEPARTMENT OF PUBLIC WORKS, COUNTY OF MAUI For a Special Permit to Establish an Integrated Solid Waste Facility on Approximately 37.9 Acres of Land Situated Within the State Land Use Agricultural District at Naiwa, Molokai, Tax Map Key Number: 5-2-11: Portion of 27	DOCKET NO. SP93-383 ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

ORDER GRANTING REQUEST FOR TIME EXTENSION OF CONDITION NO. 3

On October 4, 1994, the County of Maui Planning Department ("Planning Department") received a request from the County of Maui Department of Public Works and Waste Management ("Applicant") to amend Condition No. 3 of the Land Use Commission's ("Commission") May 14, 1993 Decision and Order issued under Docket No. SP93-383/Department of Public Works, County of Maui ("Permit"), by extending the time in which to submit a traffic assessment to determine the impacts on Maunaloa Highway from October 1, 1994 to June 8, 1995 ("Request").

In its Request, the Applicant represented that the opening of the access road that lead to the entrance of the Molokai Integrated Solid Waste Facility was delayed until June 8, 1994 because of a lengthy county approval process to review plans for the entrance and access road and additional time was needed

to obtain funds to pave the access road and thereby minimizing maintenance costs and improving driving conditions.

On October 26, 1994, the Molokai Planning Commission ("Planning Commission") conducted a public hearing on the Applicant's Request.

On October 26, 1994, after due deliberation, the Planning Commission recommended approval of the Applicant's Request to the Commission, subject to the following amendment to Condition No. 3 of the Permit:

Condition No. 3

That a traffic assessment shall be developed to determine the impact on Maunaloa Highway once the sanitary landfill is operating. This assessment shall be submitted by June 8, 1995. Findings of the assessment shall be submitted to the State Department of Transportation, Highways Division, and the Maui County Planning Department for review.

On December 23, 1994, the Commission received the entire record of the County's proceedings on the Request.

On February 2, 1995, at the Commission's hearing in Kailua-Kona, Hawaii, the Applicant represented that its request for an amendment to Condition No. 3 for a time extension was timely because the opening of the Molokai Integrated Solid Waste Facility was on October 7, 1993.

The Applicant's Request, having come on for hearing on February 2, 1995, at the Commission's meeting at Kailua-Kona, Hawaii, and the Commission having considered the arguments, both written and oral, from the respective parties, and for good cause shown,

HEREBY GRANTS Applicant's Request to amend Condition No. 3 by extending the time for a traffic assessment.

IT IS HEREBY ORDERED that Condition Nos. 3 and 15 of the Order granting a Special Use Permit that was issued on May 14, 1993, shall be amended to read as follows:

3. That a traffic assessment shall be developed to determine the impact on Maunaloa Highway once the sanitary landfill is operating. This assessment shall be completed and submitted by June 8, 1995. Findings of the assessment shall be submitted to the State Department of Transportation, Highways Division, and the Maui County Planning Department for review.

15. The Applicant shall timely provide, without any prior notice, annual reports to the County of Maui Planning Department and the Land Use Commission in connection with the status of the subject project and the Applicant's progress in complying with the conditions imposed herein. The annual report shall be submitted in a form prescribed by the Executive Officer of the Commission.

All other conditions to the Decision and Order dated May 14, 1993, are hereby reaffirmed and shall continue in effect.

DOCKET NO. SP93-383- COUNTY OF MAUI, DEPARTMENT OF PUBLIC WORKS

Done at Honolulu, Hawaii, this 1st day of March 1995, per motions on February 2, 1995 and February 23, 1995.

LAND USE COMMISSION
STATE OF HAWAII

By _____
ALLEN K. HOE
Chairperson and Commissioner

By _____
ALLEN Y. KAJIOKA
Vice Chairperson and Commissioner

By (absent)
EUSEBIO LAPENIA, JR.
Vice Chairperson and Commissioner

By _____
M. CASEY JARMAN
Commissioner

By _____
LLOYD F. KAWAKAMI
Commissioner

By _____
JOANN N. MATTSON
Commissioner

By (absent)
RENTON L. K. NIP
Commissioner

By _____
TRUDY K. SENDA
Commissioner

By _____
ELTON WADA
Commissioner

Filed and effective on
March 1, 1995

Certified by:

_____
Executive Officer

APPENDIX A-3

NPDES STORMWATER PERMIT

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
DOH/CWB

R50A626.FNL.13

December 9, 2013

Dear Permittee:

Subject: RENEWAL NOTICE OF GENERAL PERMIT COVERAGE (NGPC)
National Pollutant Discharge Elimination System (NPDES)
Molokai Integrated Solid Waste Management Facility
File No. HI R50A626

This letter is to notify you that your request for coverage under the new NPDES General Permit has been granted. **You are now covered under the new NPDES General Permit.** The administrative extension of your previous NGPC is hereby terminated. You shall continue any sampling required by the previous NGPC and the new NPDES general permit.

Hawaii Administrative Rules (HAR), Title 11, Chapter 55, Appendix B (NPDES General Permit Authorizing Discharges of Storm Water Associated with Industrial Activities) became effective on December 9, 2013. Please download a copy of HAR 11-55, Appendix B (the new NPDES General Permit), which includes Appendix A (Standard NPDES General Permit Conditions) from the Department of Health (DOH), Clean Water Branch (CWB) website located at: http://health.hawaii.gov/cwb/. You are required to read and understand the new NPDES General Permit and comply with every requirement. This renewal NGPC will take effect on the date of this notice, and it expires on December 8, 2017.

Failure to comply with the new NPDES General Permit is an enforceable violation and may result in your NGPC being terminated. If you violate Hawaii Revised Statutes, Chapter 342D, you may be subject to penalties of up to $25,000 per violation per day and up to two (2) years in jail.

All NGPC compliance submittals, including the Notice of Cessation shall be submitted on the CWB Compliance Submittal Form for Individual NPDES Permits and NGPCs. This form shall be completed on the e-Permitting Portal located at: https://eha-cloud.doh.hawaii.gov/epermit/.

The DOH-CWB website contains answers to Frequently Asked Questions regarding the new NPDES General Permits. Please visit the DOH-CWB website located at: http://health.hawaii.gov/cwb/.

If you have any questions, please contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

for LORETTA J. FUDDY, A.C.S.W., M.P.H
Director of Health

CHAPTER 11-55 APPENDIX B

NPDES GENERAL PERMIT
AUTHORIZING DISCHARGES OF STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITIES

This General Permit is effective on

DEC 0 6 2013

and expires four years from this date,
unless amended earlier.

1. Coverage under this General Permit

   (a) This general permit covers discharges composed entirely of storm water runoff associated with industrial activity, as defined in 40 CFR §§122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi).

   (b) This general permit covers all areas of the State except for discharges in or to state waters classified by the department as "class 1, inland waters," "class AA, marine waters," and areas restricted in accordance with the State's "No Discharge" policy in chapter 11-54 titled "Water Quality Standards."

2. Limitations on Coverage under this General Permit

   (a) This general permit does not cover the following:

      (1) Storm water discharges associated with industrial facilities which flow into a sanitary sewer system;

      (2) Storm water discharges in categories for which storm water discharge limitation guidelines have been promulgated by the EPA;

(3) Storm water discharges associated with construction activities;

(4) Storm water discharges from industrial facilities which initially enter separate storm water drainage systems, unless a permit, license, or equivalent written approval is granted by the owner(s) of the drainage system(s) allowing the subject discharge to enter their drainage system(s); except if the permittee is the owner of the drainage system;

(5) Storm water discharges for which the director has issued a notice of general permit coverage under another general permit specific to that type of industrial activity;

(6) Storm water discharges for which the director has received a "no exposure" certification for a conditional "no exposure" exclusion;

(7) Storm water discharges from municipal separate storm water drainage systems;

(8) Storm water discharges the director finds more appropriately regulated under an individual permit; and

(9) Storm water discharges where the circumstances have changed since the time of the request to be covered so that the permittee is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination

of the authorized discharge is necessary.

(b) The director may require any permittee authorized by this general permit to apply for and obtain an individual permit, in accordance with sections 11-55-34.05 and 11-55-34.10.

3. Term of General Permit

(a) This general permit becomes effective when section 11-55-34.02(b)(1) becomes effective ten days after filing with the office of the lieutenant governor. This general permit expires four years after the effective date or when amendments to section 11-55-34.02(b)(1) are adopted, whichever is earlier.

(b) A notice of general permit coverage under this general permit expires:

(1) Four years after the effective date of this general permit;

(2) When the notice of general permit coverage specifies; or

(3) When amendments to section 11-55-34.02(b)(1) are adopted,

whichever is earliest, unless the notice of general permit coverage is administratively extended under section 11-55-34.09(d).

4. Notice of Intent Requirements

(a) The owner or its duly authorized representative shall submit a complete

notice of intent no later than thirty days before the proposed starting date of the facility industrial activity or thirty days before the expiration date of the applicable notice of general permit coverage.

(b) The owner or its duly authorized representative shall include the following information in the notice of intent:

(1) Information required in section 34 of appendix A of chapter 11-55;

(2) List of up to four Standard Industrial Classification codes or North American Industrial Classification System codes that best represent the products or activities of the facility;

(3) Existing quantitative and qualitative data which describe the concentrations of pollutants in storm water discharges. In cases when this data is not available at the time of notice of intent submission due to lack of representative rainfall event for sampling, the permittee shall monitor the next representative rainfall event and submit the data to the director of health within sixty calendar days after sample collection;

(4) Facility site map; and

(5) Storm water pollution control plan, which meets the applicable requirements as specified in sections 6 or 7 or both of this general permit.

(A) The applicant for a proposed facility shall submit the storm water pollution control plan to the director within one hundred twenty days after the issuance date of the notice of general permit coverage or by the date the applicant claimed automatic coverage as specified in section 11-55-34.09(e)(2), or by the date the facility begins operations. The permittee for a proposed facility shall implement its storm water pollution control plan within one hundred eighty days after submittal to the director.

(B) The permittee for a facility which is currently covered by a notice of general permit coverage shall submit its existing or updated storm water pollution control plan, which meets the applicable requirements as specified in sections 6 or 7 or both of this general permit, with the notice of intent and shall continue to implement the storm water pollution control plan during the processing of the notice of intent.

(C) The applicant for an existing facility not currently covered by a notice of general permit coverage shall submit a storm water pollution control plan with the notice of intent, which meets the applicable requirements in sections 6 or 7 or both of this general

permit. If a storm water pollution control plan is not available at the time of the notice of intent submittal, the applicant may request that the storm water pollution control plan be submitted within one hundred twenty days after the issuance date of the notice of general permit coverage or by the date the applicant claimed automatic coverage as specified in section 11-55-34.09(e)(2). The permittee shall implement its storm water pollution control plan upon submittal to the director.

(c) The director may require additional information to be submitted.

(d) The owner or its duly authorized representative shall submit a complete notice of intent to the director at the following address or as otherwise specified:

Director of Health
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

5. Standard Conditions

The permittee shall comply with the standard conditions as specified in appendix A of chapter 11-55. In case of conflict between the conditions stated here and those specified in the standard general permit conditions, the more stringent conditions shall apply.

6. Storm Water Pollution Control Plan Requirements

(a) The permittee shall develop and implement a storm water pollution control plan to minimize the discharge of pollutants in storm water runoff and to maintain compliance with conditions of this general permit. The storm water pollution control plan shall include the following:

(1) Brief facility description;

(2) Site map identifying the locations of drainage structures; outline of each drainage area; paved areas and buildings and other ground cover within each drainage area; each past or present area for outdoor storage, industrial activities, or disposal of materials; each past or present area of a significant spill (as identified in sections 6(a)(5) and 6(a)(6) of this general permit); structural measures for the control of storm water; material loading and access areas; areas where pesticides, herbicides, soil conditioners and fertilizers are applied; hazardous waste storage or disposal areas or both; underground injection wells; sampling locations, outfall locations; and the nearest receiving state water(s);

(3) Pollutant control strategy identifying potential pollutants, pollutant sources, and control strategies used to minimize the discharge of pollutants. The permittee shall consider the use of containment structures, covering materials by roof or tarpaulin,

preventive maintenance, good housekeeping measures, waste minimization, removal of exposed pollutants, and spill prevention practices;

(4) Spill prevention and response plan that identifies spill prevention and response measures and facility personnel responsible for its implementation and conforms with the reporting requirements. Responsible personnel shall be available at all times when the facility is in operation;

(5) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the five years before the submittal of this storm water pollution control plan;

(6) Existing information regarding any discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required under 40 CFR §110.6 at anytime since November 16, 1987;

(7) Storm water monitoring plan that includes the following:

(A) Rationale for selecting sampling locations. Where two or more outfalls are expected, based on the features and activities within the drainage areas, to convey substantially similar storm water discharges, the permittee may

request to monitor only one of those outfalls. The director may approve the request if the permittee demonstrates that the outfalls monitored are representative for the overall storm water discharges from the facility. The justification for the outfall sampling locations chosen shall be incorporated into the monitoring plan. The permittee shall sample for all potentially present pollutants as identified in the notice of intent; as listed in Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; or the storm water pollution control plan;

(B) Sample collection methods, including quality assurance/quality control methods;

(C) List of parameters to be monitored;

(D) Type of sample to be taken for each parameter to be monitored;

(E) Test procedures to be used for each parameter to be monitored;

(F) Detection limit for each test procedure;

(G) Method to calculate storm water flow;

(H) Procedures to collect storm event information, including the date,

duration, and starting and ending times of the storm event, and the duration between the storm event and the end of the previous rainfall event with rainfall greater than 0.1 inches; and

(I) Procedures to inspect receiving state waters, storm water runoff, control measures, and best management practices to detect violations of the basic water quality criteria as specified in section 11-54-4;

(8) Procedures for implementing, reviewing, and updating the storm water pollution control plan including:

(A) Annual employee education or training program that ensures the storm water pollution control plan will be properly implemented;

(B) Protocol for inspections that ensures the pollutant control strategy and the spill prevention and response plan are being effectively carried out; and

(C) Documentation procedures for all inspections and reviews required in the storm water pollution control plan.

(b) The permittee shall retain the storm water pollution control plan, and all subsequent revisions, on-site or at a nearby office.

(c) The permittee shall conduct facility inspections as specified in Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; to ensure that the storm water pollution control plan remains effective. Otherwise, the permittee shall conduct facility inspections at least semi-annually. The permittee shall maintain a record of the following:

(1) Dates on which inspections were conducted;

(2) Inspection findings; and

(3) Corrective actions taken.

(d) The permittee shall review and update the storm water pollution control plan as often as needed to comply with the conditions of this general permit or conditions of the notice of general permit coverage, whichever is more stringent, or as required by the director. The permittee shall document and report any changes to the storm water pollution control plan to the director within thirty days of when the changes arise. The permittee shall retain the storm water pollution control plan and all accompanying records, reports, and changes, for a period of at least five years after the expiration of this general permit unless otherwise noted in section 13 of this general permit.

7. Additional Conditions for Facilities Subject to Superfund Amendments and Reauthorization Act Section 313 Requirements.

CHAPTER 11-55 APPENDIX B

The permittee for facilities subject to reporting requirements under Superfund Amendments and Reauthorization Act of 1986, Title III, Section 313, 42 U.S.C. §11023 for chemicals which are classified as "Section 313 water priority chemicals" in accordance with the definition in section 7(c) shall describe and ensure in the storm water pollution control plan the implementation of practices which are necessary to provide conformance with the following guidelines:

(a) In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, the permittee shall provide appropriate containment, drainage control or diversionary structures or both. At a minimum, the permittee shall use one of the following preventive systems or its equivalent:

(1) Curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water runoff to come into contact with significant sources of pollutants; or

(2) Roofs, covers or other forms of protection to prevent storage piles from exposure to storm water and wind.

(b) In addition to the minimum standards listed under section 7(a) above, the permittee shall include in the storm water pollution control plan a complete discussion of measures taken to conform with the following applicable guidelines, other effective storm water pollution control procedures, and applicable state rules, regulations, and guidelines:

(1) Liquid storage areas where storm water comes into contact with any equipment, tank, container, or other vessel used for Section 313 water priority chemicals.

(A) The permittee shall not use any tank or container for the storage of a Section 313 water priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(B) The permittee shall operate liquid storage areas for Section 313 water priority chemicals to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan or other equivalent measures or both.

(2) The permittee shall incorporate drainage or other control features which will minimize the discharge of Section 313 water priority chemicals from material storage areas for Section 313 water priority chemicals other than liquids which are subject to runoff, leaching, or wind.

(3) The permittee shall operate truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals to minimize discharges of Section 313 water priority chemicals. The permittee shall provide protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks as appropriate. Appropriate measures to minimize discharges of Section 313 chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; or other equivalent measures or any combination thereof.

(4) The permittee shall operate processing equipment and materials handling equipment in facility areas where Section 313 water priority chemicals are transferred, processed, or otherwise handled to minimize discharges of Section 313 water priority chemicals. Materials used in piping and equipment shall be compatible with substances handled. The permittee shall provide drainage from process and materials handling areas to minimize storm water contact with Section 313 water priority chemicals. The permittee shall provide additional protection such as covers or guards to prevent exposure to wind,

spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system as appropriate. The Permittee shall perform visual inspections or leak tests for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(5) Discharges from areas covered by section 7(b)(1), 7(b)(2), 7(b)(3), or 7(b)(4).

(A) The permittee shall prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals by restraining drainage from areas covered by section 7(b)(1), 7(b)(2), 7(b)(3), or 7(b)(4) by valves or other positive means. Where containment units are employed, the permittee shall manually activate pumps or ejectors to empty units.

(B) The Permittee shall not use flapper-type drain valves to drain containment areas. As much as practicable, the Permittee shall use manual valves designed to open-and-close.

(C) If facility drainage is not engineered as described above, the permittee shall equip all in-facility storm sewers with a diversion system that could, in the event of an uncontrolled spill

of Section 313 water priority chemicals, return the spilled material to the facility.

(D) The permittee shall keep records of the frequency and estimated volume (in gallons) of discharges from containment areas.

(6) The permittee shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed Section 313 water priority chemicals from other areas of the facility not addressed in sections 7(b)(1), 7(b)(2), 7(b)(3), or 7(b)(4) and ensure the mitigation of pollutants in runoff or leachate, from which runoff which may contain or spills of Section 313 water priority chemicals could cause a discharge.

(7) The permittee shall inspect all areas of the facility at specific intervals for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, the permittee shall examine facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas for any conditions or failures which could cause a discharge.

(A) The permittee shall include an inspection for leaks, areas affected by wind, corrosion,

support or foundation failure, or other forms of deterioration or noncontainment.

(B) The permittee shall specify inspection intervals in the storm water pollution control plan. The permittee shall base inspection intervals on design and operational experience where different areas may require different inspection intervals.

(C) Where a leak or other condition is discovered which may result in significant releases of Section 313 water priority chemicals to state waters, the permittee shall take immediate action to stop the leak or otherwise prevent the significant release of Section 313 water priority chemicals to state waters or immediately shut down the unit or process until such action can be taken.

(D) When a leak or noncontainment of a Section 313 water priority chemical has occurred, the permittee shall promptly remove and dispose contaminated soil, debris, or other material in accordance with federal, state, and local requirements and as described in the storm water pollution control plan.

(8) The permittee shall have the necessary security systems to prevent accidental or intentional entry which could cause

a discharge from the facility. The permittee shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings in the storm water pollution control plan.

(9) The permittee shall train and inform employees and contractor personnel (who work in areas where Section 313 water priority chemicals are used or stored) on preventive measures at the facility.

(A) The permittee shall conduct employee training at intervals specified in the storm water pollution control plan, but not less than once a year, in matters of pollution laws and regulations, and in the storm water pollution control plan and the particular features of the facility and its operation which are designed to minimize discharges of Section 313 water priority chemicals.

(B) The permittee shall designate and include in the storm water pollution control plan a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur.

(C) The permittee shall inform contractors or temporary personnel of plant operation and design features in order to prevent discharges or spills from occurring.

(10) The permittee shall have the storm water pollution control plan for a facility subject to Superfund Amendments and Reauthorization Act, Title III, Section 313 requirements for chemicals which are classified as "Section 313 water priority chemicals" reviewed and certified by a licensed professional engineer. The permittee shall have the licensed professional engineer recertify the storm water pollution control plan every three years thereafter or as soon as practical after significant modifications are made to the facility. The licensed professional engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the storm water pollution control plan has been prepared in accordance with good engineering practices. The certification shall in no way relieve the permittee of a facility covered by the storm water pollution control plan of their duty to prepare and fully implement the storm water pollution control plan.

(c) "Section 313 water priority chemical" means a chemical or chemical categories which:

(1) Are listed at 40 CFR §372.65 under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 also titled the Emergency Planning and Community Right-to-Know Act;

(2) Are present at or above threshold levels at a facility subject to Superfund Amendments and Reauthorization Act, Title III, Section 313 reporting requirements; and

(3) Meet at least one of the following criteria:

(A) Are listed in Appendix D of 40 CFR §122 on either Table II (organic priority pollutants), Table III (certain metals, cyanide, and phenols) or Table V (certain toxic pollutants and hazardous substances);

(B) Are listed as a hazardous substance under Section 311(b)(2)(A) of the Act at 40 CFR §116.4; or

(C) Are pollutants for which the EPA has published acute or chronic water quality criteria.

8. Storm Water Discharge Limitations and Monitoring Requirements

(a) The storm water discharge shall be limited and monitored by the permittee as specified in this section and in Table 34.1. (Daily maximum storm water discharge limitations

for saline water apply only when discharges to saline water occur and daily maximum storm water discharge limitations for fresh water apply only when discharges to fresh water occur.)

(1) Sampling Points

The permittee shall monitor the storm water outfalls, prior to mixing with receiving state water or entering separate storm water drainage systems, as identified in the storm water pollution control plan.

(2) Collection of Samples

(A) The permittee shall collect samples from a discharge resulting from a representative storm event as defined in section 11-55-01.

(B) The permittee shall take samples and measurements for the purposes of monitoring which are representative of the volume and nature of the total discharge.

(3) Types of Samples

Definitions for grab sample and composite sample are in note {2} of Table 34.1.

(4) Test Procedures

(A) The permittee shall use test procedures for the analysis of pollutants which conform with

regulations published under Section 304(h) of the Act.

(B) Unless otherwise noted in this general permit, the permittee shall measure all pollutant parameters in accordance with methods prescribed in 40 CFR Part 136, promulgated under Section 304(h) of the Act. The permittee may submit applications for the use of alternative test methods in accordance with 40 CFR §136.4.

(C) The permittee shall use test methods with detection limitations that reflect the applicable numerical limitations as specified in chapter 11-54. If the test result is not detectable, indicate that the test result is "less than #," where the # is the lowest detection limit of the test method used.

(5) Recording of Results

The permittee shall comply with section 14(c) of appendix A of chapter 11-55 for each measurement or sample taken under the requirements of this general permit.

(6) Quantity of Flow

The permittee shall estimate or calculate the quantity of storm water discharged and submit the calculations.

(b) Non-numeric Technology-Based Effluent Limitations. The permittee shall comply with Section 2.1.2 and applicable sector-specific requirements in Part 8 of the EPA's 2008 Multi-Sector General Permit.

(c) Basic Water Quality Criteria and Inspections

(1) The permittee shall not cause or contribute to a violation of the basic water quality criteria as specified in section 11-54-4.

(2) The permittee shall timely inspect the receiving state waters, storm water runoff, control measures, and best management practices to detect violations of and conditions which may cause violations of the basic water quality criteria as specified in section 11-54-4. (e.g., the permittee shall look at the storm water discharge and receiving state waters for turbidity, color, floating oil and grease, floating debris and scum, materials that will settle, substances that will produce taste in the water or detectable off-flavor in fish, and inspect for items that may be toxic or harmful to human or other life.)

(d) Storm Event Information. The permittee shall collect the following information for the storm event monitored:

(1) Date, duration (in hours), and starting and ending times of the storm event; and

(2) Duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch) rainfall event.

9. Corrective Action

The permittee shall immediately stop, reduce, or modify the discharge as needed to stop or prevent a violation of the basic water quality criteria as specified in section 11-54-4.

10. Reporting Requirements

(a) Reporting of Monitoring Results

(1) The permittee shall report monitoring results on a discharge monitoring report form (EPA No. 3320-1) or other form as specified by the director. The permittee shall submit results of all monitoring required by this general permit in a format that demonstrates compliance with the limitations in Table 34.1 and other requirements of this general permit.

(2) The permittee shall submit monitoring results at least annually and the results shall be postmarked or received by the department no later than sixty calendar days after sample collection. The first monitoring year shall start on January 1st of the year of the issuance date of the notice of general permit coverage or other date specified by the director in written correspondence to the permittee and end on December 31st. The subsequent

monitoring years shall be calendar years.

(3) The permittee shall also submit the monitoring results with laboratory reports, including quality assurance/quality control data; storm water flow calculations; date, duration, starting and ending times of the storm event; date of the previous 0.1 inch rainfall event; and any additional pollutant control strategies to be implemented based on monitoring results.

(4) Should there be no discharges during the monitoring period, the discharge monitoring report form shall so state.

(b) Additional Monitoring by the Permittee

(1) If the permittee monitors any pollutant at location(s) designated herein more frequently than required by this general permit, using approved analytical methods as specified in section 8(a)(4)(B) of this general permit, the permittee shall include the results of this monitoring in the calculation and reporting of the values required in the discharge monitoring report form. The permittee shall also indicate the increased frequency.

(2) If the permittee exceeds any limitation, the permittee shall comply with section 10(c) of this general permit, and continue to monitor every representative storm until limitations

are met, unless as otherwise informed by the director.

(c) Reporting of Noncompliance, Unanticipated Bypass, or Upset

(1) The permittee or its duly authorized representative shall orally report any of the following when the permittee or its duly authorized representative becomes aware of the circumstances:

(A) Violation of a storm water discharge limitation specified in Table 34.1 or a basic water quality criteria specified in section 8(b) of this general permit;

(B) Discharge or noncompliance with storm water discharge limitations which may endanger health or the environment; or

(C) Unanticipated bypass or upset.

(2) The permittee shall make oral reports by telephone to the Clean Water Branch at (808) 586-4309 during regular office hours which are Monday through Friday (excluding holidays) from 7:45 a.m. until 4:15 p.m. or the Hawaii State Hospital Operator at (808) 247-2191 outside of regular office hours.

(3) The permittee shall provide a written report within five days of the time the permittee or its duly authorized representative becomes aware of the

circumstances. The written report shall include the following:

(A) Description of the noncompliance, unanticipated bypass, or upset and its cause;

(B) Period of noncompliance, unanticipated bypass, or upset including exact dates and times;

(C) Estimated time the noncompliance, unanticipated bypass, or upset is expected to continue if it has not been corrected; and

(D) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance, unanticipated bypass, or upset.

(4) The director may waive the written report on a case-by-case basis if the oral report has been received within twenty-four hours.

(d) Planned Changes

The permittee shall report any planned physical alterations or additions to the permitted facility, not covered by 40 CFR §122.41(l)(1)(i), (ii), and (iii) to the director on a quarterly basis.

11. Submittal Requirements

(a) The owner or its duly authorized representative shall submit signed copies of monitoring and all other reports required by this general permit to the director at the following address or as otherwise specified:

Director of Health
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

(b) The owner or its duly authorized representative shall include the following certification statement and an original signature on each submittal in accordance with section 11-55-34.08(e) or (f):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations."

(c) The owner or its duly authorized representative shall include the notice of

general permit coverage file number on each submittal. Failure to provide the assigned notice of general permit coverage file number for this facility on future correspondence or submittals may be a basis for delay of the processing of the document(s).

12. Additional Conditions

The director may impose additional conditions under section 11-55-34.09(b).

13. Record Retention

The permittee shall retain all records and information resulting from the monitoring activities required by this general permit including all records of analyses performed and calibration and maintenance of instrumentation for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation or administrative enforcement action regarding the discharge of pollutants by the permittee or when requested by the director or Regional Administrator.

14. Falsifying Report

Knowingly making any false statement on any report required by this general permit may result in the imposition of criminal penalties as provided for in Section 309 of the Act and in section 342D-35, HRS.

CHAPTER 11-55 APPENDIX B

TABLE 34.1

LIMITATIONS AND MINIMUM MONITORING REQUIREMENTS FOR STORM WATER DISCHARGES

Storm Water Discharge Parameter	Storm Water Discharge Limitation (1)	Minimum Monitoring Frequency	Type of Sample (2)
Quantity of Discharge (gallons)	(3)	Annually	Calculated or Estimated
Biochemical Oxygen Demand (5-day) (mg/l)	(3)	Annually	Composite (4)
Chemical Oxygen Demand (mg/l)	(3)	Annually	Composite (4)
Total Suspended Solids (mg/l)	(3)	Annually	Composite (4)
Total Phosphorus (mg/l)	(3)	Annually	Composite (4)
Total Nitrogen (5) (mg/l)	(3)	Annually	Composite (4)
Nitrate+Nitrite Nitrogen (mg/l)	(3)	Annually	Composite (4)
Oil and Grease (mg/l)	15	Annually	Grab (6)
pH (standard units)	(7)	Annually	Grab (8)
Toxic Pollutants (mg/l) (9)	(10)	Annually	(11)

mg/l = milligrams per liter

NOTES:

(1) Pollutant concentration levels shall not exceed the storm water discharge limits or be outside the ranges indicated in the table. Actual or measured levels which exceed those storm water discharge limits or are outside those ranges shall be reported to the director as required in section 10(c) of this general permit.

(2) The permittee shall collect samples for analysis from a discharge resulting from a representative storm. A representative storm means a rainfall that accumulates more than 0.1 inch of rain and occurs at least seventy-two hours after the previous measurable (greater than 0.1 inch) rainfall event.

"Grab sample" means a sample collected during the first fifteen minutes of the discharge.

"Composite sample" means a combination of at least two sample aliquots, collected at periodic intervals. The composite shall be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to the total flow of storm water discharge flow since the collection of the previous aliquot. The permittee may collect aliquots manually or automatically, unless otherwise stated.

Samples for analysis shall be collected during the first fifteen minutes of the discharge and at fifteen-minute intervals thereafter for the duration of the discharge, as applicable. If the discharge lasts for over an hour, sample collection may cease.

(3) The value shall not exceed the applicable not to exceed the given value more than ten per cent of the time wet or dry season limit as specified in chapter 11-54 for the applicable classification of the receiving state waters. If no limitation is specified in chapter 11-54, then the permittee shall monitor and report the analytical result. The department may include discharge limitations specified in section 11-55-19 and discharge limitations based on Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008.

(4) If the duration of the discharge event is less than thirty minutes, the sample collected during the first fifteen minutes of the discharge shall be analyzed as a grab sample and reported toward the fulfillment of this composite sample specification. If the duration of the discharge event is greater than thirty minutes, the Permittee shall analyze two or more sample aliquots as a composite sample.

(5) The total nitrogen parameter is a measure of all nitrogen compounds in the sample (nitrate, nitrite, ammonia, dissolved organic nitrogen, and organic matter present as particulates).

(6) Oil and Grease shall be measured by EPA Method 1664, Revision A.

(7) The pH value shall not be outside the range as specified in chapter 11-54 for the applicable classification of the receiving state waters.

(8) The pH shall be measured within fifteen minutes of obtaining the grab sample.

(9) The permittee shall measure for toxic pollutants, as identified in Appendix D of 40 CFR Part 122; in the Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; or in section 11-54-4. The permittee shall measure for the total recoverable portion of all metals. If monitoring results indicate that the discharge limitation was equaled or exceeded, the storm water pollution control plan shall be amended to include additional best management practices targeted to reduce the parameter which was in excess of the discharge limitation.

(10) Storm water discharge limitations are the acute water quality standards established in section 11-54-4, for either fresh or saline waters. For pollutants which do not have established acute water quality standards, the permittee shall report any detected concentration greater than 0.01 µg/l.

(11) The permittee shall measure for cyanide and the volatile fraction of the toxic organic compounds using a grab sample. The permittee shall measure for all other pollutants, as identified in Appendix D of 40 CFR Part 122; in Federal Register, Vol. 73, No. 189, pages 56572-56578, dated September 29, 2008; or in section 11-54-4 using a composite sample.

CHAPTER 11-55 APPENDIX A

DEPARTMENT OF HEALTH
STANDARD GENERAL PERMIT CONDITIONS

DEC 0 6 2013

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Note: All references to Title 40 of the Code of Federal Regulations (40 CFR) are to regulations that are in effect on July 1, 2012 unless otherwise specified. The Clean Water Act (Act) is also known as the Federal Water Pollution Control Act, as amended by the Clean Water Act, and appears at 33 U.S.C. §§1251 to 1387.

The permittee shall comply with the following standard conditions.

1. Basic water quality criteria (section 11-54-4)

   a. The permittee shall not cause or contribute to a violation of the basic water quality criteria specified in section 11-54-4(a) which states:

      "(a) All waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including:

         (1) Materials that will settle to form objectionable sludge or bottom deposits;

         (2) Floating debris, oil, grease, scum, or other floating materials;

(3) Substances in amounts sufficient to produce taste in the water or detectable off-flavor in the flesh of fish, or in amounts sufficient to produce objectionable color, turbidity or other conditions in the receiving waters;

(4) High or low temperatures; biocides; pathogenic organisms; toxic, radioactive, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water;

(5) Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life; and

(6) Soil particles resulting from erosion on land involved in earthwork, such as the construction of public works; highways; subdivisions; recreational, commercial, or industrial developments; or the cultivation and management of agricultural lands."

b. The discharge shall not cause or contribute to a violation of the basic requirements of section 11-54-4(b).

2. Onshore or offshore construction

The applicable general permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any state waters.

3. Sampling requirements and definitions

(a) Sampling Points

All samples shall be taken at the monitoring points specified in the applicable general permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the director. No discharge is authorized which does not totally pass through the final monitoring point.

(b) Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than plus or minus ten per cent from the true discharge rates throughout the range of expected discharge volumes. Once-

through condenser cooling water flow which is monitored by pump logs or pump hour meters as specified in the applicable general permit based on the manufacturer's pump curves shall not be subject to this requirement. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references:

(1) "A Guide of Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD catalog No. C13.10:421.) (Also available from National Technical Information Service (NTIS). Order by NTIS No. COM-7510683.)

(2) "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Third Edition, Revised Reprint, 2001, 485 pp. (Available from the U.S. Government Bookstore. Order by Stock No. 024-003-00186-4 and ISBN 0-16-061763-4.) (Also available from National Technical Information Service (NTIS). Order by NTIS No. PB2002-100323.)

(3) "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy

or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

(4) "NPDES Compliance Flow Measurement Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-77, EPA No. 832B81102, September 1981, 149 pp. (Available from the National Technical Information Service (NTIS). Order by NTIS No. PB82-131178.)

(c) Calibration

The permittee shall periodically calibrate and perform maintenance on all monitoring and analytical equipment used to monitor the pollutants discharged under the applicable general permit, at intervals which will ensure the accuracy of measurements, but no less than the manufacturer's recommended intervals or six-month intervals (whichever comes first). Records of calibration shall be kept under section 14.

(d) pH Effluent Limitations Under Continuous Monitoring

If the permittee continuously measures the pH of the effluent under a requirement or option in the applicable general permit, excursions from the range provided in the general permit or as specified in chapter 11-54 are permitted, provided:

(1) The pH limitation in the general permit is based upon a requirement imposed under 40 CFR Subchapter N, Effluent Guidelines and Standards;

(2) The total time during which the pH values are outside the required range of pH values shall not exceed four hundred forty-six minutes in any calendar month;

(3) No individual excursions from the range of pH values shall exceed sixty minutes; and

(4) For purposes of this section, an "excursion" is an unintentional and temporary incident in which the pH value of the effluent exceeds the range set forth in the applicable general permit. The number of individual excursions exceeding sixty minutes and the total accumulated excursion time in minutes occurring in any calendar month shall be reported in accordance with the applicable general permit.

(e) Average

As used in the applicable general permit, unless otherwise stated, the term "average" means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For fecal coliform, enterococcus, or *clostridium perfringens*, the "average" shall be the geometric mean. For total coliform, the "average" shall be the median.

(f) Mass/Day Measurements

(1) The "daily discharge" is the total mass (weight) of a pollutant discharged during a calendar day. The daily discharge shall be determined by using the following equations:

Daily Discharge(lbs/day) = 8.34 x Q x C;

Daily Discharge(kg/day) = 3.785 x Q x C; and

where "C" (in mg/l) is the measured daily concentration of the pollutant and "Q" (in million gallons per day) is the measured effluent flow rate for the same calendar day.

If only one sample is taken during any calendar day, the mass (weight) of pollutant discharged that is calculated from it is the "daily discharge."

(2) The "average monthly discharge" is defined as the total mass of all daily discharges sampled or measured or both during a calendar month on which daily discharges are sampled and measured, divided by the number of daily discharges sampled or measured or both during such month. It is, therefore, an arithmetic mean found by adding the weights of the pollutant found each day of the month and then dividing this sum by the number of days. This limitation is identified as "Monthly Average" in

the applicable general permit and the average monthly discharge value is reported in the "Average" column under "Quantity" on the discharge monitoring report form.

(3) The "average weekly discharge" is defined as the total mass of all daily discharges sampled or measured or both during the calendar week in which daily discharges are sampled or measured or both. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the week and then dividing this sum by the number of days. This limitation is identified as "Weekly Average" in the applicable general permit and the average weekly discharge value is reported in the "Maximum" column under "Quantity" on the discharge monitoring report form.

(4) The "maximum daily discharge" is the highest daily discharge value recorded, sampled, or measured during the reporting period. This limitation is identified as "Daily Maximum" in the applicable general permit and the maximum daily discharge value is reported in the "Maximum" column under "Quantity" on the discharge monitoring report form.

(g) Concentration Measurements

(1) The "daily concentration" is the concentration of a pollutant discharged

during a calendar day. It is equal to the concentration of a composite sample or in the case of grab samples, it is the arithmetic mean (weighted by flow value) of all samples collected during that calendar day. If only one sample is taken during any calendar day, it represents the "daily concentration."

(2) The "average monthly concentration," other than for fecal coliform, enterococcus, *clostridium perfringens*, or total coliform, is the sum of the daily concentrations sampled or measured or both divided by the number of daily discharges sampled or measured or both during such month (arithmetic mean of the daily concentration values). The average monthly count for fecal coliform, enterococcus, or *clostridium perfringens* is the geometric mean of the counts for samples collected during a calendar month. The average monthly count for total coliform is the median of the counts for samples collected (not less than five discrete samples) during a calendar month. This limitation is identified as "Monthly Average" or "Daily Average" under "Other Limits" in the applicable general permit and the average monthly concentration value is reported under the "Average" column under "Quality" on the discharge monitoring report form.

(3) The "average weekly concentration," other than for fecal coliform,

enterococcus, or *clostridium perfringens*, or total coliform, is the sum of the concentrations of all daily discharges sampled or measured or both during a calendar week on which daily discharges are sampled and measured divided by the number of daily discharges sampled or measured or both during such week (arithmetic mean of the daily concentration values). The average weekly count for fecal coliform, enterococcus, or *clostridium perfringens* is the geometric mean of the counts for samples collected during a calendar week. The average weekly count for total coliform is the median of the counts for samples collected during a calendar week. This limitation is identified as "Weekly Average" under "Other Limits" in the applicable general permit and the average weekly concentration value is reported under the "Maximum" column under "Quality" on the discharge monitoring report form.

(4) The "maximum daily concentration" is the highest daily concentration value recorded, sampled, or measured during the reporting period. This limitation identified as "Daily Maximum" under "Other Limits" in the applicable general permit and the maximum daily concentration is reported under the "Maximum" column under "Quality" on the discharge monitoring report form.

(h) The effluent flow expressed as cubic meters per day or million gallons per day (MGD), is the twenty-four-hour average flow averaged monthly. It is the arithmetic mean of the total daily flows recorded during the calendar month. Where monitoring requirements for flow are specified in the applicable general permit, the flow rate values are reported in the "Average" column under "Quantity" on the discharge monitoring report form.

(1) An "instantaneous flow measurement" is a measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

(2) Where monitoring requirements for pH, dissolved oxygen or fecal coliform, enterococcus, or *clostridium perfringens* are specified in the applicable general permit, the values are generally reported in the "Quality or Concentration" column on the discharge monitoring report form.

(i) The "arithmetic mean" of any set of values is the summation of the individual values divided by the number of individual values.

(j) The "geometric mean" of any set of values is the Nth root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of

calculating the geometric mean, values of zero shall be considered to be one.

(k) "Weighted by flow value" means the summation of each concentration times its respective flow divided by the summation of the respective flows.

(l) The "median" of any set of ordered values is the value below and above which there is an equal number of values or which is the arithmetic mean of the two middle values if there is no one middle number.

(m) A calendar day is defined as the period from midnight of one day until midnight of the next day. However, for the purposes of the applicable general permit, any consecutive twenty-four-hour period that reasonably represents the calendar day may be used for sampling.

(n) "Removal efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using the average monthly concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

$$\text{Removal Efficiency (per cent)} = 100 \times \left(1 - \frac{C_{effluent}}{C_{influent}}\right)$$

4. Duty to reapply

   If the permittee wishes to continue an activity regulated by the applicable general permit after the expiration of the notice of general permit coverage or in the case of automatic coverage, the expiration of the general permit itself, the permittee shall follow the procedures as specified in sections 11-55-34.08 and 11-55-34.09.

5. Applications (comply with 40 CFR §122.22)

6. Duty to comply (comply with 40 CFR §122.41(a))

7. Need to halt or reduce activity not a defense (comply with 40 CFR §122.41(c))

8. Duty to mitigate (based in part on 40 CFR §122.41(d))

   The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of the applicable general permit or applicable law.

9. Proper operation and maintenance (comply with 40 CFR §122.41(e))

10. Permit actions (comply with 40 CFR §122.41(f))

11. Property rights (comply with 40 CFR §122.41(g))

12. Duty to provide information (comply with 40 CFR §122.41(h))

13. Inspection and entry (comply with 40 CFR §122.41(i))

14. Monitoring and records (based in part on 40 CFR §122.41(j))

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

As used in this section, a representative sample means that the content of the sample shall:

(1) Be identical to the content of the substance sampled at the time of the sampling;

(2) Accurately represent the monitored item (for example, sampling to monitor final effluent quality shall accurately represent that quality, even though the sampling is done upstream of the discharge point); and

(3) Accurately represent the monitored item for the monitored time period (for example, sampling to represent monthly average effluent flows shall be taken at times and on days that cover significant variations). Representative sampling may include weekends and storm events and may mean taking more samples than the minimum number specified elsewhere in the applicable general permit. The burden of proving that sampling or monitoring is representative is on the permittee.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the applicable general permit, and records of all data used to complete the application for the applicable general permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the director at any time.

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) the analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of the analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part

503, unless other test procedures have been specified in the applicable general permit.

(e) The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained by the applicable general permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, the person is subject to a fine of not more than $20,000 per day of violation, or by imprisonment for not more than four years, or both. (Updated under the Water Quality Act of 1987)

15. Signatory requirement (comply with 40 CFR §§122.22 and 122.41(k))

16. Reporting requirements (comply with 40 CFR §122.41(l))

17. Bypass (based in part on 40 CFR §122.41(m))

(a) Definitions

(1) "Bypass" means the intentional diversion of any waste streams from any portion of a treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and

permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Prohibition of bypass. Every bypass is prohibited, and the director may take enforcement action against a permittee for bypass, except as provided in section 17(c).

(c) Exceptions to bypass prohibition

(1) Bypass not exceeding limitations. A bypass is allowable under this paragraph only if it does not cause any effluent limitation to be exceeded, and only if the bypass is necessary for essential maintenance to assure efficient operation.

(2) Bypass unavoidable to prevent specified harm. A bypass is allowable under this paragraph if:

(A) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up

equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(C) The permittee submitted notices as required under section 17(d).

(3) Approved anticipated bypass. An anticipated bypass is allowable if the director approves it. The director shall approve the anticipated bypass only if the director receives information sufficient to show compliance with section 17(c)(2), including information on the potential adverse effects with and without the bypass, and information on the search for and the availability of alternatives, whether the permittee ultimately considers the alternatives feasible or not.

(d) Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, the permittee shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall report unanticipated bypasses.

(A) Reports required by the reporting requirements of the applicable general permit shall be made in accordance with that section. If the permittee questions whether the reporting requirements of the applicable general permit applies, it shall follow the reporting requirements of the applicable general permit;

(B) For all other bypasses, reports shall be made orally within twenty-four hours from the time the permittee becomes aware of the bypass. Written reports may be required on a case-by-case basis.

(e) Burden of proof. In any enforcement proceeding the party seeking to establish that any exception to the bypass prohibition applies has the burden of proof. Proof that effluent limitations were met requires effluent monitoring during the bypass.

18. Upset (based in part on 40 CFR §122.41(n))

(a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment

facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with the technology based permit effluent limitations if the requirements of section 18(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee submitted within twenty-four hours a notice of any upset which exceeded any effluent limitation in the applicable general permit; and

(4) The permittee complied with any remedial measures required under 40 CFR §122.41(d).

d. Burden of proof. In any enforcement proceeding, any person seeking to establish the occurrence of an upset has the burden of proof.

19. Existing manufacturing, commercial, mining, and silvicultural dischargers (comply with 40 CFR §122.42(a))

20. Publicly owned treatment works (comply with 40 CFR §122.42(b))

21. Reopener clause (comply with 40 CFR §122.44(c) and 40 CFR §125.123(d)(4))

22. Privately owned treatment works (The following conditions were established by EPA Region 9 to enforce applicable requirements of the Resource Conservation and Recovery Act and 40 CFR §122.44(m))

This section applies only to privately owned treatment works as defined at 40 CFR §122.2.

(a) Materials authorized to be disposed of into the privately owned treatment works and collection system are typical domestic sewage. Unauthorized materials are hazardous waste (as defined at 40 CFR Part 261), motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers, industrial wastes, or other materials not generally associated with toilet flushing or personal hygiene, laundry, or food preparation, unless specifically listed under "Authorized Non-domestic Sewer Dischargers" elsewhere in the applicable general permit. The Domestic

Sewage Exclusion (40 CFR §261.4) does not apply to hazardous wastes mixed with domestic sewage in a sewer leading to a privately owned treatment works.

(b) It is the permittee's responsibility to inform users of the privately owned treatment works and collection system of the prohibition against unauthorized materials and to ensure compliance with the prohibition. The permittee must have the authority and capability to sample all discharges to the collection system, including any from septic haulers or other unsewered dischargers, and shall take and analyze such samples for conventional, toxic, or hazardous pollutants when instructed by the permitting authority or by an EPA or state inspector. The permittee must provide adequate security to prevent unauthorized discharges to the collection system.

(c) Should a user of the privately owned treatment works desire authorization to discharge non-domestic wastes, the permittee shall submit a request for permit modification and an application, under 40 CFR §122.44(m), describing the proposed discharge. The application shall, to the extent possible, be submitted using forms provided by the Administrator, unless another format is requested by the permitting authority. If the privately owned treatment works or collection system user is different from the permittee, and the permittee agrees to allow the non-domestic discharge, the user shall submit

the application and the permittee shall submit the applicable general permit modification request. The application and request for modification shall be submitted at least six months before authorization to discharge non-domestic wastes to the privately owned treatment works or collection system is desired.

23. Transfers by modification (comply with 40 CFR §122.61(a))

24. Automatic transfers (comply with 40 CFR §122.61(b) and section 11-55-34.08(i)(2))

25. Minor modification of permits (comply with 40 CFR §122.63)

26. Termination of permits (comply with 40 CFR §122.64)

27. Removed substances (under Sections 301 and 405 of the Act and 40 CFR §125.3(g))

    Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner which prevents any pollutant from the materials from entering state waters.

28. Availability of reports (under Section 308 of the Act)

    Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of the applicable general permit shall be available for public inspection at the offices of the director. As required by the Act, permit applications,

permits, and effluent data shall not be considered confidential.

29. Civil and criminal liability (under Section 309 of the Act)

Except as provided in the applicable general permit conditions on "Bypass" (section 17) and "Upset" (section 18), nothing in the applicable general permit shall be construed to relieve the permittee from civil or criminal penalties or remedies for noncompliance.

30. Oil and hazardous substance liability (under Section 311 of the Act)

Nothing in the applicable general permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

31. Federal facility construction (under Section 313(b) of the Act)

Construction shall not be initiated for facilities for treatment of wastewater at any federal property or facility if alternative methods for wastewater treatment at the property or facility utilizing innovative treatment processes and techniques, including, but not limited to, methods utilizing recycle and reuse techniques and land treatment are not utilized, unless the life cycle cost of the alternative treatment works exceeds the life cycle cost of the most effective alternative by more than fifteen per cent.

32. State law (under Section 510 of the Act)

Nothing in the applicable general permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established under any applicable state law or regulation.

33. Severability (under Section 512 of the Act)

The provisions of the applicable general permit are severable and if any provision of the applicable general permit, or the application of any provision of the applicable general permit to any circumstance, is held invalid, the application of the provision to other circumstances, and the remainder of the applicable general permit, shall not be affected thereby.

34. Notice of Intent Requirements (comply with section 11-55-34.08)

The owner or its duly authorized representative shall include the following information in the notice of intent (NOI):

(a) Legal name(s), street address, contact person's name and position title, and telephone and email address of the owner, operator, except for Appendix C and duly authorized representative, if applicable;

Note: For a construction activity, the operator is usually the general contractor.

(b) Ownership status as federal, state, private, public or other entity;

(c) Name, street address, island, tax map key number(s), contact person's name and position title, and telephone and email address of the facility or project for which the notice of intent is submitted;

(d) Name(s) of the receiving state water(s) that the effluent enters or will enter, the latitude and longitude of each outfall or discharge point to the nearest receiving state water(s), and the classification of the receiving state water(s).

If the effluent initially enters a separate storm water drainage system, the owner or its duly authorized representative shall provide the following information:

(1) Name of the owner of the drainage system; and

(2) Copy of the permit, license, or equivalent written approval granted by the owner(s) of the drainage system(s) allowing the subject discharge to enter their drainage system(s).

(e) Type of general permit required for the proposed discharge;

(f) Quantity of discharge; the source of the discharge; and the period of discharge, i.e., continuous, seasonal, occasional, or emergency;

(g) Topographic map or maps of the area extending at least one mile beyond the property boundaries of the site which clearly show the following:

(1) Legal boundaries of the site;

(2) Location and an identification number for each of the site's existing and proposed intake and discharge structures; and

(3) Receiving state water(s) or receiving storm water drainage system(s) identified and labeled. If the receiving state water is a wetland, submit a map showing the delineated wetland.

(h) Flow chart or line drawing showing the general route taken by the discharge from the intake or source to the discharge point, except for Appendices B, C, and K. The owner or its duly authorized representative shall show any treatment system(s) or erosion control(s) used or to be used for new discharges. The flow contributed by each source may be estimated if no data is available;

(i) List of existing or pending permits, licenses, or approvals and corresponding file numbers; and

(j) Certifying person's name and position title, company name, and telephone and fax numbers.