

## INFORMATION SHEET

ORDER NO. R5-2016-XXXX  
ANDERSON LANDFILL, INC.  
ANDERSON LANDFILL  
CLASS III MUNICIPAL SOLID WASTE LANDFILL AND CLASS II SURFACE IMPOUNDMENTS  
OPERATION AND PARTIAL CLOSURE  
SHASTA COUNTY

Anderson Landfill, Inc. (ALI), hereafter Discharger, owns and operates a Class III landfill and Class II surface impoundments approximately 3.5 miles southwest of the City of Anderson in Shasta County. The total permitted area of the site is 246 acres. Waste disposal is allowed on 130 acres. Currently the site consists of three unlined units covering approximately 53 acres, three compositely lined units covering approximately 39 acres, and two surface impoundments covering approximately 7 acres. An additional lined disposal unit is planned.

Unlined Unit 1 covering 39.7 acres has received municipal solid waste (MSW) and wood waste in the past, and is near capacity. It is scheduled for final closure in 2024. Unlined Units 2A and 2B, cover 4.7 acres and 6.8 acres, respectively. Units 2A and 2B have been used for disposal of various inorganic wastes including asbestos, cogeneration ash, and byproducts of titanium dioxide manufacturing. Unit 2B was final closed in 2008. Another approximately two acre unlined, unclassified unit located across Cambridge Road (North of Cambridge Road Unit) was used for disposal of petroleum contaminated wastes and wood wastes. This Unit was final closed in 2007.

The first lined Unit, 5.8 acre Unit 2Ba, was constructed in 2002 over existing inorganic wastes in Unit 2B. The liner for this Unit consists of, in ascending order, a one foot thick low permeability layer with a hydraulic conductivity of  $1 \times 10^{-6}$  cm/sec, a geocomposite clay liner, and a 60-mil high density polyethylene (HDPE) geomembrane. A leachate collection and removal system (LCRS) is constructed over the liner system. In 2004, the Discharger constructed the 7.0 acre South Canyon Unit, wholly within the permitted footprint of Unit 1. Wastes at the southern toe of unlined Unit 1 were excavated and relocated to the upper north portions of Unit 1 to make room for the new lined Unit. The liner system for South Canyon Unit is similar to the liner system in Unit 2Ba. Unit 2Ba and South Canyon Unit received MSW exclusively. Unit 2Ba and the South Canyon Unit were final closed in 2008. Unit 4 began construction in 2005, with construction of sub-unit 4A. The liner system for Unit 4 sub-units 4A and 4B are similar to the liner systems used in Unit 2Ba and the South Canyon Unit. After completion and filling of Unit 4A, Unit 4B was constructed and filled. The Discharger recently constructed the base-liner system for subunit 4C and 4C Extension and is presently filling this unit. After construction of subunit 4C and 4C Extension, the discharger proposed a new engineered alternative liner system, as they had exhausted all available clay material reserves on site during the construction of the previous

units. The new engineered alternative liner system consists of, in ascending order, prepared subgrade, a geosynthetic clay liner, an 80-mil double-sided textured HDPE geomembrane, a 1-ft thick blanket granular layer with minimum hydraulic conductivity of 0.3 cm/sec and 6 inch diameter HDPE perforated collection piping (floor only), an 8 oz/sy non-woven geotextile filter layer (floor only) and a 1.5-ft thick operations layer on the floor and 1.5-ft select operations layer on sideslopes. This engineered alternative liner system was approved by the Central Valley Water Board in 2014. One additional planned unit is proposed for the facility, Unit 5. Unit 5 will use the same engineered alternative liner system as sub-unit 4C.

Leachate that collects in the LCRSs of the lined Units has historically been stored in above ground storage tanks and used for dust control over the lined Units during periods of dry weather. The Discharger constructed two Class II surface impoundments for storage and evaporation of leachate. A leachate conveyance pipe has been installed to transmit leachate directly from the LCRS sump of Unit 4 to the Class II surface impoundments. Leachate collected in the Unit 2Ba LCRS is directly connected to the main leachate conveyance pipe in Unit 4 for direct discharge to the Class II surface impoundments. Leachate generated in South Canyon Unit is stored in above ground tanks and eventually trucked to the Class II surface impoundments by the Discharger.

Precipitation that falls on the site is handled in one of two ways. Undiverted precipitation that contacts waste is collected on-site and conveyed to the Class II surface impoundments. All other precipitation is diverted away from waste areas and off-site by means of conveyance structures and holding ponds. This precipitation, also known as storm water, eventually enters an unnamed tributary to Cottonwood Creek to the south and another unnamed tributary to Anderson Creek to the north. Both Cottonwood Creek and Anderson Creek are tributaries of the Sacramento River. ALI is under a statewide general permit for discharge of industrial storm water (No. 2014-0057-DWQ/NPDES CAS000001). Day-to-day management of storm water is done in accordance with an approved Storm Water Pollution Prevention Plan, last updated in September 2015.

The site is in the southwestern part of the Redding groundwater basin and is underlain by the Red Bluff and Tehama Formations. The Red Bluff Formation outcrops on the north edge of the site and ranges from 2 to 40 feet in thickness. The Tehama Formation underlies the majority of the filled areas. It consists of dense silt and clay interbedded with sand and gravel. Older (and deeper) pre-Tertiary units have not been encountered while drilling at the site.

Two water bearing zones are known to occur at the site. First groundwater is found from 55 to 70 feet below the ground surface and is thought to be perched and not laterally continuous. The first groundwater zone known to be laterally continuous is encountered from 270 to 300 feet below the ground surface and is confined. The quality of confined groundwater is good, has a total dissolved solids content of about 150 mg/L, and is used regionally as a groundwater production zone. Confined groundwater flows to the northeast. The shallow perched groundwater flows northeast also, with a northwest flow direction observed near the northwest corner of the facility.

Shallow and deep groundwater is sampled through a system of seven groundwater monitoring wells screened in the shallow and confined water-bearing zones and two gas monitoring wells that are screened across the shallow water bearing formation. An additional monitoring well will be installed for Unit 5. Water quality in both the shallow and deeper water bearing zones is monitored semiannually under a detection monitoring program.

An unsaturated zone detection monitoring system is also in place at the landfill. The unsaturated zone monitoring system consists of pan lysimeters beneath LCRS sumps in Unit 4, and the Class II surface impoundments. Additional pan lysimeters will be installed beneath the future LCRS sump in Unit 5. Additional facilities that are or will be monitored at the site include the Class II surface impoundments leak detection systems and the Unit 1 leachate toe drain system. A landfill gas perimeter extraction system is also in place at the site to control gas migration. An infill gas extraction system has been installed as units close, with the first phase occurring during closure of Units 1, 2Ba, and the South Canyon Unit in 2007.

This Order revises existing Waste Discharge Requirements Order No. R5-2005-0118 to incorporate the construction design of the remainder of Unit 4 and the entirety of Unit 5, approve the use of bottom ash as an alternative daily cover, allow an increased maximum permitted elevation to 769.5 ft MSL within an approximate 12-acre area of Unit 1, extend the final closure date of Unit 1 until 2024, allow an approximate 200-ft shift of the Unit 5 eastern boundary to add approximately 6 acres, and provide for final closure of the South Canyon Unit, Unit 2B, Unit 2Ba, and the North of Cambridge Road Unit.