

INFORMATION SHEET

ORDER NO. R5-2014-XXXX
PACTIV LLC
CLASS III SOLID WASTE LANDFILL
TEHAMA COUNTY

Pactiv LLC owns and operates a Class III Solid Waste Landfill (Landfill) located approximately one mile south of the City of Red Bluff and ¼ mile west of the Red Bluff Diversion Dam (RBDD) on the Sacramento River in Tehama County. The Landfill has no base liner or leachate collection and removal system and is used exclusively for disposal of paper pulp sludge generated from the wastewater treatment plant used during the manufacture of paper plates at the adjacent Pactiv LLC molded pulp processing plant. The entire Pactiv LLC facility covers approximately 100 acres. The Pactiv LLC facility includes the molded pulp processing plant, wastewater treatment ponds, and the Landfill.

Industrial and manufacturing activities have been conducted by various companies at the present day Pactiv LLC site for over 100 years. The Pactiv LLC property and the adjacent Meyers Motel property were previously owned and operated as a saw mill by the Sierra Lumber Company. In 1907, Diamond Match Company acquired the saw mill as part of a larger purchase. Saw mill operations ended in 1911. In 1956, Diamond International Corporation re-opened the mill and operated a molded products facility at the site. In 1983, the molded products portion of the facility was sold to Pactiv LLC (known then as Packaging Company of America). The mill portion of the site (west of the present day property line) was sold to Roseburg Forest Products Company in 1988. Sierra Pacific Industries bought the saw mill in 1993, and then sold the property to Meyers Motel in 1995.

The landfill at Pactiv LLC was first operated by Diamond International Corporation in 1957 as an open burn dump. During construction of the RBDD in 1964, the Department of Interior, Bureau of Reclamation installed a levee system separating the north and east sides of the landfill from the adjacent Sacramento River and Red Bank Creek, respectively. After construction of the levee system, Diamond International Corporation continued using the burn dump area for on-site disposal of dried paper pulp. It is reported (*Environmental Evaluation Report, CH2MHILL, August 2002*) that Roseburg Forest Products Company “may have” removed other residual burn material from the saw mill property and added it to the present day Pactiv LLC Class III landfill. Pactiv LLC continues to operate the landfill for disposal of dried paper pulp from its wastewater treatment plant.

The paper pulp sludge that Pactiv LLC produces consists of recycled cellulose paper fiber from the manufacture of paper plates. The paper pulp sludge is classified as non-hazardous solid waste. This paper pulp sludge is generated through operation of the on-site wastewater treatment system. Cellulose paper fibers that are not captured during the manufacture of paper plates are separated through flotation in a series of ponds. Water effluent from the treatment ponds is further treated through the operation of an aeration basin and a clarifier. Treated

wastewater effluent is discharged through a buried process line that runs through the west side of the landfill Unit south to north and discharges into the Sacramento River under authority of National Pollutant Discharge Elimination System (NPDES) Permit No. CA0004821. Surface water monitoring of the Sacramento River is also conducted in accordance with NPDES Permit No. CA0004821. Solids removed from the operation of the clarifier are redirected to the treatment ponds for additional separation and removal. Once a pond reaches capacity, it is taken out of service to allow the paper pulp sludge to dry in the sun until the moisture content is below 50%. Once dried, the sludge is excavated from the pond and transported to the on-site landfill for disposal. In general, the sludge takes approximately two years to dry. On average, Pactiv LLC produces approximately 154 tons of pulp waste each year. Disposal occurs infrequently on an as needed basis.

The Pactiv LLC Class III Landfill is located on relatively flat ground at elevations ranging from 275 feet msl at the southwestern part of the Unit to 265 feet msl at the northeastern part of the Unit. Geologic deposits beneath the Pactiv LLC Class III Landfill consist of unconsolidated Quaternary river deposits, alluvial fan deposits, and loosely-consolidated Pliocene age river deposits.

During 2010 and 2011, the Bureau of Reclamation purchased the northern portion of the landfill abutting the Sacramento River on the north and the mouth of Red Bank Creek on the east to allow for construction of the Fish Passage Improvement Project (FPIP), which enables water diversion from the Sacramento River into conveyance structures operated by the Tehama-Colusa Canal Authority (TCCA). TCCA distributes water to agricultural lands in the northern Sacramento Valley. Prior to 2011, historical operation of the RBDD caused the surface water elevation of the Sacramento River to rise upstream of the dam creating Lake Red Bluff which allowed for gravity flow of river water into the TCCA conveyance system. However, operation of the RBDD with gates-in created an impediment to salmonids and green sturgeon fish passage, so the dam began periodically operating with the gates-out. By July 2008, operation of the RBDD was in the control of the federal court in Fresno and the gates-in operating period had been reduced to approximately 15 June through 31 August annually. Gates-in operation of the RBDD ended as of 1 September 2011, which required construction and operation of the FPIP. The FPIP consists of a fish screen structure abutting the Sacramento River, a forebay, pumping plant, electrical switchyard, an open canal with a siphon below Red Bank Creek for conveyance of water into existing TCCA infrastructure, and a roadway access bridge over Red Bank Creek. Construction of the FPIP required clean-closure of approximately 2.1 acres of the northern portion of the Pactiv LLC Class III Landfill.

The partial clean-closure of the northern portion of the Pactiv LLC Landfill was conducted in accordance with approved work plans and included waste excavation and removal actions, waste characterization to determine disposal options, and confirmation sampling of the area that was clean-closed to ensure that residual waste constituents no longer pose a threat to water quality and beneficial uses. Approximately 59,500 cubic yards of wastes, cover soil, and native soil beneath the waste pile were excavated during the clean-closure project. Wastes other than paper pulp wastes, including several metal drums and burn ash were also encountered during

clean-closure activities. Excavated materials were transported to Stockpile Management Areas for characterization purposes. With the exception of cover soil and some native soil from the bottom of the excavations, all materials excavated from Parcel A and Parcel B2 were disposed at authorized off-site landfill facilities. Materials determined to be non-hazardous solid waste were disposed at either Anderson Landfill in Shasta County or Tehama County Landfill west of Red Bluff. Materials classified as hazardous waste were transported to Clean Harbors Buttonwillow Landfill. Prior to the clean-closure project, the landfill area covered approximately 12.3 acres. After completing the project, the landfill area now covers approximately 10.2 acres.

Prior to the FPIP, operation of the Red Bluff Diversion Dam caused the Sacramento River elevation, and in turn the groundwater elevation in the vicinity of the landfill, to rise approximately 10 feet seasonally during periods when the dam gates were lowered. When the dam gates were lifted, groundwater elevations quickly returned to a normal elevation of approximately 242 feet msl. This seasonal rise and fall of the groundwater elevation affected the groundwater flow direction as observed in landfill monitoring wells. Before clean-closure of the northern portion of the landfill during the FPIP, waste material was present in the landfill at elevations as low as approximately 243 feet msl, resulting in some waste being saturated during gates-down operation of the Red Bluff Diversion Dam. Since August 2009, the Red Bluff Diversion Dam has been operated with gates out, keeping surface water elevations around 242 feet msl with groundwater elevations stabilizing at an elevation below the surface water elevation. Following completion of the FPIP, the lowest waste elevation in the landfill is estimated to be approximately 247 to 249 feet msl.

Since completion of the FPIP in September 2012, groundwater elevations as observed in landfill monitoring wells range from approximately 248.69 feet msl at the southeast end of the Unit to 244 feet msl at the northern portion of the Unit. The direction of groundwater flow is generally toward the west and an area of unconsolidated alluvial deposits in the Riverbank Formation. This area directly west of the Unit has hydraulic connection with the deeper Tehama Formation. A downward vertical gradient exists in this area which may be influenced by pumping of production and agricultural wells screened in the deeper Tehama Formation. The estimated average groundwater gradient is approximately 0.0156 feet per foot. The estimated average groundwater velocity is 60.7 feet per year.

Five monitoring wells make up the groundwater detection monitoring system. Monitoring data collected since completion of the FPIP indicates background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 238 and 278 micromhos/cm, with total dissolved solids (TDS) ranging between 139 and 555 milligrams per liter (mg/L).

Pactiv LLC currently operates the Class III landfill in accordance with Waste Discharge Requirements Order No. 91-064. These revised waste discharge requirements continue to classify the landfill Unit as a Class III Unit and implement applicable provisions of California Code of Regulations, Title 27.

