

APPLICATION FOR RENEWAL OF NPDES PERMIT NO. WA-002515-1

Attachment C

Page 1 of 5

Attachment C – Solid Waste Control Plan
(4 pages)

SOLID WASTE CONTROL PLAN

COLUMBIA GENERATING STATION (CGS)

(Rev. 5, October 2010)

The operation of CGS results in the generation of several waste streams that may be characterized as solid, semisolid, or liquid. A revision of the Solid Waste Control Plan is provided in accordance with Condition S6.C of the CGS NPDES permit (No. WA-002515-1 effective July 1, 2006). The plan identifies the wastes and methods of treatment or disposal. It does not address dangerous or radioactive wastes. Aqueous wastes, which are addressed in the plan, are disposed of per the NPDES permit and applicable EFSEC resolutions.

General Refuse

Routine office, shop, and warehousing activities in the site industrial area generate quantities of paper, cardboard, wood, and plastic which are collected in small two or three cubic yard dumpsters. Dry compactable waste from the plant power block is monitored for radiological contamination, bagged, and also collected in these dumpsters. The dumpsters are emptied approximately three times per week, compacted, and the refuse is transported to the City of Richland Municipal Landfill approximately 8½ miles south of the station. The quantity of general refuse generated at CGS facilities in 2009 was approximately 206 tons. This amount has decreased from previous years due to increased emphasis on recycling.

Approximately 6 ½ tons of paper, 2 tons of cardboard, 143 lbs of aluminum cans, and 132 lbs of plastic bottles are recycled monthly by a local recycling company. These recycle programs are supported by CGS participation in the Energy Northwest's ISO 14001-based Environmental Management System.

A naturally occurring waste that is common onsite is tumbleweed. Tumbleweed accumulation presents a problem with respect to fire hazard, security considerations, and aesthetics. Disposal may be by chopping, burning, or collection and release in downwind areas.

Demolition and Construction Debris

Bulk solid waste material that results from demolition and construction activities is usually delivered to the City of Richland Municipal Landfill for disposal. This waste includes wood, asphaltic roofing material, and concrete rubble. If small

scale demolition or construction results in the generation of inert waste (e.g., asphalt, concrete, brick, masonry, ceramic, glass) it may be disposed in the onsite inert waste landfill.

Scrap Metal

Recyclable scrap metal is collected in dumpsters and transferred to trailers parked onsite. A local metal recycling company removes the trailer(s) when filled. Amounts collected vary considerably depending upon CGS activities. Approximately 14 tons are recycled per month. Pieces of metal that may be unsuitable for recycling are disposed in the City of Richland Municipal Landfill.

Metal and Polyurethane Drums

Metal and polyurethane drums that are not useable are collected and disposed by a waste disposal contractor. Pickup occurs when a sufficient quantity has been accumulated. The generation rate is approximately 30 drums per year.

Sanitary Wastes

Sanitary waste from lavatories, wash rooms, and showers in the plant and surrounding buildings is piped to the sanitary waste treatment system (facultative stabilization lagoons) located 2,500 feet southeast of the plant. Also, sanitary waste is pumped from onsite holding tanks by a sewage pump truck and transported to the central collection lift station for the sanitary waste treatment system. Wastes from these sources average approximately 20,000 GPD. The plant also receives wastes from the Washington Nuclear Project (WNP) 1/4 and the US Department of Energy (USDOE) 400 Area located approximately 2½ miles to the southwest.

Petroleum Products

Used oil and hydraulic fluid from maintenance of motor vehicles, pumps, turbines, and rotating machinery is collected in drums until recyclable quantities are accumulated. Approximately 3,000 to 4,000 gallons per year are transported offsite by a company engaged in used oil recycling and fuel blending. Another petroleum waste is the residue resulting from cleanup of occasional spills. These petroleum-contaminated soils are typically land-farmed at the City of Richland Municipal Landfill or transported to a hazardous waste landfill.

Worn Vehicle and Equipment Tires

Vehicle and equipment tires are replaced by an offsite service vendor who disposes of the worn tires. The generation rate is approximately 140 tire carcasses per year.

Storm Water Runoff

Plant roof drains are routed by pipe and channel to a small, unlined evaporation/percolation pond located 1,500 feet northeast of the plant (NPDES Permit Outfall No. 002). Runoff from other portions of the site, including building roofs and paved areas, is routed to dry wells or enters the soil directly.

Water Treatment Wastes

The in-plant makeup water treatment system has been inactive since June 1993. Since then, plant process water has been provided by a contractor-supplied demineralizer/reverse osmosis (RO) unit. The demineralizer resin is regenerated or disposed offsite. When operating, the RO unit discharges a reject stream of approximately 30 GPM of concentrated makeup water to Outfall No. 002.

Backwashing of the potable water treatment flocculator/filter (located 400 feet north-northeast of the plant) is required multiple times per week. Each backwash requires approximately 20,000 gallons of potable water that has been treated with chlorine, polymer, and polyaluminum chloride. Wash water and entrained settleable solids are routed to Outfall No. 002.

Cooling System Sediments

Operation of the circulating water cooling system results in the entrainment and deposition of dirt from the air and material suspended in the makeup water. Algal growths also result in undesirable deposits that must be removed. This accumulation of organic and inorganic sludge is removed approximately once per year from the cooling tower decks and the tower basins. Cleaning operations result in approximately 72 yd³ per year of sediment that is placed in a disposal cell located to the south of the cooling towers after removal of as much water as practicable (per EFSEC Resolution No. 299 dated August 13, 2000). During the cooling tower cleaning operation fragments of the asbestos cement tower fill material are picked up and bagged for offsite disposal. CGS has removed the asbestos fill material from several cooling towers and ultimately will replace all the asbestos fill material.

Similar sediments must be periodically removed from the service water spray ponds. This material may be piped as slurry to a depression 500 feet south of the spray ponds (NPDES Permit Outfall No. 003). Alternatively, the spray pond sediment may be removed by vacuum truck or front-end loader and placed in the cooling tower sediment disposal cells.

Miscellaneous Aqueous Wastes

Water from washing, equipment leakage, and special maintenance activities (such as condenser draining) may be routed to Outfall No. 002 after it has been sampled and verified to be nonradioactive. Normal alignment of the nonradioactive sumps is to the radwaste system. Other sources of water discharges to the storm water system are drainages from Heating Ventilation Air Conditioning (HVAC) components and intake air washers. Floor drains in the Diesel Generator Building also direct any water leakage to the storm drain system, as does a sump in the basement of the General Services Building when it is pumped.

Occasional cleaning, testing, and draining of plant components results in releases to Outfall No. 002. An example is the Diesel Cooling Water System. Draining of the emergency diesel engine cooling jackets results in a discharge to the storm water system of approximately 3,800 gallons of water which is treated with a nitrite-based (NO_2) corrosion inhibitor. Periodic testing of the fire suppression system also requires that water be released to the storm water system or directly to the ground.