

TECHNICAL SUMMARY

License No. R04100 Amendment No. 41

Description of Application

Applicant: Waste Control Specialists LLC (WCS)
License No. R04100
Customer Number: CN600616890
Regulated Entity Number: RN101702439

Action: Minor Amendment No. 41 of License No. R04100 for low-level radioactive waste (LLRW) disposal and storage and processing of radioactive substances.

Location: WCS is located at 9998 State Highway 176, 30 miles west of Andrews, in Andrews County, Texas 79714, near the Texas-New Mexico state line.

General: WCS currently holds License No. R04100 for a LLRW land disposal facility and for a radioactive substance storage and processing facility.

Request: WCS submitted a minor amendment application to the Texas Commission on Environmental Quality (TCEQ), received July 19, 2024, to reduce the concrete strength requirement for the Modular Concrete Canisters (MCCs) from 5,000 psi to 4,000 psi and the 2,000 psi grout void-fill material requirement with 200 psi controlled low-strength material (CLSM); modify the requirement that 2,000 psi concrete be used for backfill of rubble and debris bulk waste to authorize the use of 200 psi CLSM; construct a new cask off-load facility; authorize that in-situ red bed clay is a material “technologically equivalent or superior” to the material applied to the disposal facility liner for temporarily sealing the catch basins; modify the requirements for the catch basins and ledge ditches such that an unlined gravel subsurface drain and sump does not need to have an automatic pumping system or an extra foot of freeboard if it is designed for the 100-year, 24-hour storm event; revise procedure EV-1.0.0, *Consolidated Radiological Environmental Monitoring Program* (REMP), to update the list of monitoring wells, remove C-14, I-129, and Kr-85 as key radionuclide monitored for several media, and remove the use of cartridges for low volume air sampling; consolidate two license conditions into one license condition with no modification to requirements; remove the requirement for an investigation on whether the Ranch House Draw is integrated with the Monument Draw since this was fulfilled in 2011; remove a requirement regarding a small playa located on the eastern edge of the Compact Waste Disposal Facility (CWF) since this playa was removed during construction of the Phase 2a expansion of the CWF; remove the requirement to install two wells for the 225 foot layer if the thickness of the 225 foot layer at that location is less than 15 feet or is absent; remove the requirement to install a 180 foot well if the 125 foot well becomes saturated; change the requirement for the annual and for-cause internal contamination surveys from whole body counts to bioassay; change the due date for the annual dose report from March 31st to April 10; modify the requirement that the laboratory conducting the bioassay submit their Quality Assurance (QA) program to the executive director to a requirement that they submit it upon request of the executive director; removed the requirement that step-off pads be located outside posted contamination areas and/or high contamination areas if these areas are located outdoors; modify from “area” to “restricted area” for the requirement that workers be surveyed when exiting an “area” where contact with radioactive material is possible; change the due date for the annual REMF report from May 31 to June 30; and authorize the use of native red bed clays to replace the concrete

layer in the cover and caliche gravel to replace the concrete layer in the floors and sidewalls of the CWF and the Federal Waste Facility (FWF) as materials that are “technologically equivalent or superior” to concrete. A modification to the application, dated January 14, 2025, was received to replace the prentice arm with a mobile excavator for waste processing. A modification to the application, dated April 4, 2025, was received to remove the requirement that tier 1 and 2 waste containing depleted uranium received under license condition 192 be classified as Tier 3 regardless of the sum of fractions or concentration value. A modification to the application, dated July 15, 2025, was received to decrease the sampling frequency of 225-foot zone groundwater wells. WCS submitted additional information to support the amendment application on September 25, 2024, December 20, 2024, January 20, 2025, March 18, 2025, April 3, 2025, April 4, 2025, April 10, 2025, April 30, 2025, June 9, 2025, June 13, 2025, and July 28, 2025.

Authority: A TCEQ radioactive material license for the receipt and disposal of LLRW and for the storage and processing of radioactive substances is required by Chapter 401 of the Texas Health and Safety Code. An amended license has been prepared in accordance with the applicable requirements of Title 30, Texas Administrative Code (TAC) Chapters 281, 305, and 336.

Administrative Information

At the time of this review, WCS did not have any delinquent fees.

The regulated entity, WCS, has a compliance history classification of high, with a rating of 0.

The WCS site has a compliance history classification of high, with a rating of 0.

Technical Information:

This minor amendment has been reviewed in accordance with applicable rules and statutes, including 30 TAC Chapter 336 (Radioactive Substance Rule) and Chapter 401 of the Texas Health and Safety Code. Review of the amendment included an assessment of the radiological and non-radiological effects of the license changes on the public health and safety.

License Condition (LC) 60.B was modified to waive the extra foot of freeboard requirement for ledge ditches if the ledge ditch is hydraulically connected to an unlined gravel subsurface drain, sump, and is designed for the 100-year, 24-hour precipitation event or if hydraulically connected to an unlined gravel subsurface drain and sump with an automated pumping system but not designed for the 100-year, 24-hour precipitation event.

LC 73.A was modified by removing the requirement for an investigation on whether the Ranch House Draw is integrated with Monument Draw since this investigation was completed in 2011.

LC 73.C was modified to state that in-situ red bed clay is a material equivalent or superior to the material applied to the disposal facility liner for the catch basin on the bench of the disposal unit and for temporarily sealing exposed portions of the Ogallala-Antlers-Gatuña formation or Dockum sandstone/siltstone within the drainage channel created by the bench of the disposal unit. Additionally, LC 73.C was modified to waive the requirement for an automated pumping system for a catch basin on the bench of the disposal unit if the catch basin is designed for the 100-year, 24-hour precipitation event.

LC 87 was replaced with “reserved” to remove the requirement that the Licensee design and construct the CWF to minimize groundwater infiltration and mitigate impact from the remaining portion of the small playa located on the eastern edge of the CWF since this playa has been removed when construction of the phase 2a expansion of the CWF was completed.

LC 104.G was modified to add the authorization to use Controlled Low Strength Material (CLSM) for filling in empty space for pipes and rubble bulk waste in the CWF and FWF.

LC 106 was modified to authorize the use of CLSM to fill in voids in debris and rubble bulk waste in the FWF IC NCDU and CWF IC NCDU and that the CLSM mix shall have a minimum compressive strength of 200 psi. The CLSM strength shall be tested and confirmed for each lift using ASTM D4832.

LC 108.F was modified to authorize the use of CLSM with a minimum compressive strength of 200 psi for backfilling voids in every lift of debris and rubble waste.

LC 119.A was modified to change “whole body count” to “bioassay (in vivo and/or in vitro)” for the annual and for-cause internal contamination monitoring of workers.

LC 120 was modified to change the due date for the annual dose report from March 31 to April 10.

LC 123 was modified to change the requirement that the laboratory conducting the bioassays submit to the executive director their quality assurance program for review to that they must submit it only upon request.

LC 129 was modified to add that step-off pads are not required in contamination areas and/or high contamination areas if these areas are located outside of buildings that are exposed to wind and other weather events.

LC 131 was modified to change “areas” to “restricted areas” for the requirement that each employee who works in “areas” where contact with low-level radioactive waste or other radioactive material is possible must be surveyed before leaving the work site.

LC 158 was modified by adding the requirements of LC 167 with no change to the requirements of both license conditions. LC 167 was subsequently replaced with “reserved.”

LC 158.F was modified by removing the requirement that two monitoring wells be installed in the 225-foot layer if the 225-foot layer in that location is fifteen feet thick or less, in which case only one monitoring well needs to be installed.

LC 158.H.4 was modified to change the due date for the annual REMP report from May 31 to June 30.

LC 158.I was replaced with “reserved” to remove the requirement that in the event the 125-foot zone becomes saturated, the Licensee notify the executive director within ten days and install monitoring wells in the 180-foot zone because all operable 125-foot zone wells have been dry since installed over 15 years ago, existing 180-foot zone wells confirms stable conditions in the 180-foot zone, and the 180-foot zone does not exist continuously across the site.

LCs 187.C and D were modified to increase the final decommissioning cost for the financial assurance for the storage and processing facility by \$169,267 from \$5,793,504 to \$5,962,771 in 2018 dollars to account for the Cask Off-Load Facility. The total financial assurance cost for the storage and processing facility is not modified.

LC 188.D.1.b was modified to replace the prentice arm or equivalent with a mobile excavator and change the operating procedure from OP-1.4.11 to OP-1.4.33.

LC 192.B.1.d was deleted to remove the requirement that tier 1 and 2 waste containing depleted uranium, received under license condition 192 to be disposed in their RCRA disposal facility, be classified as Tier 3 regardless of the sum of fractions or concentration value.

LC 192.B.4.c was modified by removing “containing depleted uranium” so that the executive director reserves the right to deny any exemption request instead of any exemption request containing depleted uranium.

LC 203.N was added to authorize the modification of the Mixed Waste Treatment Facility to replace the prentice arm with the mobile excavator.

LC 203.O was added to authorize the construction of the Cask Off-Loading Facility.

LC 207.A was modified to add as a tie down document the application for minor amendment dated July 19, 2024 with subject *Request for Minor Amendment Application for Approval of Amendment 41 for Updated Concrete Barrier Requirements, Cask Off-Load Facility, Environmental Updates, and Radiological Safety Updates*, which included a request to 1) modify the concrete strength requirement for MCCs from 5,000 psi to 4,000 psi, 2) add CLSM with a minimum strength of 200 psi as a material to be used for void filling in the MCC, 3) revise procedure EV-1.0.0, and 4) modify the disposal facility design to replace the concrete layer with native red bed clays for the cover and with caliche gravel for the floors and sidewalls of the CWF and the FWF as technologically equivalent to reinforced concrete in accordance to 30 TAC §336.730(b)(1). Additionally, the following documents were added: letter dated December 20, 2024 with the subject *WCS Response to Technical Notice of Deficiency for Minor Amendment Application for Approval of Amendment 41*, letter dated April 30, 2025 with subject *WCS response to Second Technical Notice of Deficiency for Minor Amendment Application 41 for License R04100*, and modification to the application dated July 15, 2025.

LC 207.B was modified to add as tie down documents the application for minor amendment dated July 19, 2024 with subject *Request for Minor Amendment Application for Approval of Amendment 41 for Updated Concrete Barrier Requirements, Cask Off-Load Facility, Environmental Updates, and Radiological Safety Updates* and modification to the amendment application dated January 14, 2025 with subject *Request to Modify Minor Amendment Application for Approval of Amendment 41 Regarding Updated Concrete Barrier Requirements, Cask Off-Load Facility, Environmental Updates and Radiological Updates dated July 19, 2024*.

LC 208 was modified by the initiative of the Executive Director to update the language and to update the contact information.