

Pursuant to the Texas Radiation Control Act (Chapter 401, Health and Safety Code) and the Texas Commission on Environmental Quality (TCEQ, or commission) regulations on radioactive materials, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to possess radioactive material listed herein and to use such radioactive material for the purpose(s) and at the place(s) designated herein. This license is subject to all applicable rules, regulations, and orders of the TCEQ now or hereafter in effect and to any conditions specified herein. The license will be in effect for ten years from the date of approval or until amended or revoked by the commission. If this license is appealed and the licensee does not commence any action authorized by this license during judicial review, the term will not

begin until judicial review is concluded.

Licensee	1. Licensee	2. Licensee	This license	3.	Amendment	This license	4. License
Customer	Name	Address	amendment is	License	Number	supersedes	Expiration
Number			issued in	Number		and replaces	Date
			response to an			the license	
			application(s)			issued on	
CN600616890	Waste Control	P.O. Box	<b>Dated February</b>	R04971	53; issued on	October 9,	November
	Specialists	1129	22, 2013,		May 30, 2013	2012	30, 2004
	LLC ATTN:	Andrews,	March 1, 2013,			(Amendment	
	Jay Cartwright	Texas 79714	and March 14,			No. 52)	
			2013, signed by				
			J. Scott Kirk,				
			CHP				

The Licensee requested renewal of the license prior to the expiration date. This license shall not expire until the commission has made a final determination on the request to renew the license.

#### **Radioactive Material Authorized**

5. Radioisotope	6. Form of Material	7. Maximum Activity*	8. Authorized Use
A. Radioactive waste, by-product material as defined at Texas Health and Safety Code Section (§) 401.003(3)(B), uranium ore received as waste, NORM waste, and/or oil and gas NORM waste	A. Solid or liquid	A. Activities per category group as specified under Title 30 of the Texas Administrative Code (30 TAC) Section (§) 336.1207(a), not to exceed the following: Category I: 2,000 Curies (Ci); Category II: 20,000 Ci; Category IV: 2,000,000 Ci	A. Receipt, processing of radioactive material received as waste, in-house decontamination, interim storage, and transfer to licensed radioactive waste disposal sites, the licensed generator, or return to an authorized federal agency
B. Any radioactive material	B. Sealed sources	B. Total activity not to exceed 150,000 Ci.	B. Receipt, interim storage, and transfer to licensed radioactive waste disposal sites, other licensed recipients, or return to an authorized federal agency.
C. Any radioactive material	C. Solid	C. Activity for Category I as specified under 30 TAC §336.1207(a), not to exceed 33,000 Ci.	C. Receipt, interim storage, of pre- packaged, stabilized dry-active waste from an authorized federal agency, and transfer to licensed radioactive waste disposal sites, or return to an authorized federal agency.

<sup>\*</sup> Ci - Curies mCi - Millicuries μCi – Microcuries



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9. Radioactive material shall be used only at:

Regulated
Entity
Entity
Andrews One mile north of State Highway 176, 250 feet east of the Texas and New Mexico State Line (30 miles west of Andrews, TX)

- 10. Copies of all active documents and records required by this license shall be maintained for review by the executive director at the Andrews site.
- 11. The Licensee shall comply with the provisions (as amended) of 30 TAC Chapters 25 (Environmental Testing Laboratory Accreditation and Certification); 35, Subchapter H (Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions pertaining to Radioactive Substances and Materials); 39, Subchapters A (Applicability and General Provisions), H (Applicability and General Provisions) and M (Public Notice for Radioactive Material Licenses); 50 (Action on Applications and Other Authorizations); 55, Subchapter G (Requests for Contested Case Hearing and Public Comment on Certain Applications); 60 (Compliance History); 70 (Enforcement); 80 (Contested Case Hearings); 281, Subchapter A (Application Processing); 305, Subchapters A (General Provisions), B (Emergency Orders, Temporary Orders, and Executive Director Authorizations), C (Application for Permit or Post-Closure Order), D (Amendments, Renewals, Transfers, Corrections, Revocation, and Suspension of Permits), and F (Permit Characteristics and Conditions); 327 (Spill Prevention and Control); and 336, Subchapters A (General Provisions), B (Fees), C (General Disposal Requirements), D (Standards for Protection), E (Notices, Instructions and Reports, and Inspections), G (Decommissioning Standards), and M (Licensing of Radioactive Substances Processing and Storage Facilities).
- 12. The individual designated to perform the functions of Radiation Safety Officer (RSO) for activities covered by this license is Jay Cartwright.
- 13. Radioactive material shall be used by individuals designated by the RSO only after each worker has successfully completed the training specified in the Radiological Training Program. Documentation verifying the successful completion of the training for each user shall be maintained by the Licensee for inspection by the executive director. All training shall be supervised by the RSO.
- 14. The Licensee shall submit a current resume listing all pertinent education, training and experience for any individual who replaces the following positions: Corporate RSO, General Manager, Laboratory Manager, and/or Environmental Health &



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Safety Director. The Licensee shall maintain organizational reporting for radiation safety specialist in accordance with letter dated November 18, 2005.

- 15. For the purposes of this license, the following definitions apply:
  - 15.(A) Appropriately authorized: the activity has been formally authorized by the State or Federal agency, which has jurisdiction over the issue.
  - 15.(B) Authorized federal agency: the United States Department of Energy (DOE) or the United States Department of Defense (DOD) without limited purpose, or the United States Environmental Protection Agency (EPA) for the limited purpose of the material derived from the decommissioning of the Gulf Nuclear of Louisiana, Inc. facilities at 202 Medical Center Boulevard in Webster, Texas and 9320 Tavenor Street in Houston, Texas, upon written, executed agreement with the Licensee that specifies that the authorized federal agency will take back and assume responsibility for all of its waste currently maintained at the Licensee's facility within 30 days of written notification by the executive director that the waste is ready for removal, and that all associated expenses for such will be borne by the authorized federal agency to the extent that they are not covered by the Licensee's financial assurance. These provisions will only apply if the Licensee has failed to properly decontaminate and decommission the facility or otherwise failed to comply with an order of the commission or executive director.
  - 15.(C) Interim storage: Waste packaged in accordance with Title 49 Code of Federal Regulations (CFR), (as amended), and that meets current or stated acceptance requirements for an authorized disposal facility or an authorized federal agency
  - 15.(D) Waste: Radioactive waste, by-product material as defined in Section 401.003(3)(B) of the Health and Safety Code (as amended), uranium ore, Naturally Occurring Radioactive Material (NORM) waste, and/or oil and gas NORM waste.
  - 15.(E) Permacon: refers to the east end of the stabilization building modified in accordance with the references specified in Condition 31.A of this license.
- 16. Copies of authorized federal agency agreements specified in License Conditions 15.B, 17.C, and 21.D, shall be mailed within 7 days of execution and prior written approval of the agreement must be granted by the executive director prior to receipt of the waste. The written agreement shall be mailed to

#### ATTN:

Division Director Radioactive Materials Division Texas Commission on Environmental Quality P.O. Box 13087, Mail Code-233 Austin TX 78711



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- 17. In accordance with the Order (Docket No. 70-7005), dated October 26, 2009, issued by the United States Nuclear Regulatory Commission (NRC), the Licensee may possess special nuclear material (SNM) within the restricted area of the Licensee's facility provided that
  - 17.A.(1) Concentrations of SNM in individual waste containers and/or during processing shall not exceed the following values:

SNM Radionuclide	Operational Limit	Measurement Uncertainty
	(gram SNM/gram waste)	(gram SNM/gram waste)
U-233	4.7 E - 4	7.1 E - 5
U-235	9.9 E - 4	1.5 E - 4
(10 percent enriched)		
U-235	6.2 E - 4	9.3 E - 5
(100 percent		
enriched)		
Pu-239	2.8 E - 4	4.2 E - 5
Pu-241	2.2 E - 4	3.2 E - 5

When mixtures of these SNM radionuclides are present in the waste, the sum-of-the-fractions rule, as illustrated below, should be used.

$$\frac{U-233conc}{U-233\lim} + \frac{100wt\%U-235conc}{100wt\%U-235\lim} + \frac{10wt\%U-235conc}{10wt\%U-235\lim} + \frac{Pu-239conc}{Pu-239\lim} + \frac{Pu-241conc}{Pu-241\lim} \leq 1$$

The measurement uncertainty values in column 3 above represent the maximum one-sigma uncertainty associated with the measurement of the concentration of the particular radionuclide.

The SNM must be uniformly distributed throughout the waste, such that the limiting concentrations must not be exceeded on average in any contiguous mass of 600 kilograms

17.A.(2) The mass concentration of carbon, fluorine, and bismuth in the waste must be limited as follows

SNM Isotope	Carbon	Fluorine	Bismuth
U-233	28 wt%	34 wt%	34 wt%
U-235 (10 percent enriched)	25 wt%	35 wt%	31 wt%
U-235 (100 percent enriched)	41 wt%	42 wt%	33 wt%
Pu-239	43 wt%	43 wt%	34 wt%
Pu-241	37 wt%	39 wt%	32 wt%



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For waste containing mixtures of C, F, and Bi, the sum of the weight fractions of C, F, and Bi shall be compared to the most restrictive maximum allowable weight fractions for any one of those elements. Similarly, where mixtures of radionuclides are present in the waste, the limiting maximum allowable weight fraction of C, F, and Bi shall be applied. The presence of the above materials will be determined and documented by the generator, based on process knowledge or testing

- 17.A.(3) Waste accepted shall not contain total quantities of beryllium, hydrogenous material enriched in deuterium, or graphite above one tenth of one percent of the total weight of the waste. The presence of the above materials will be determined and documented by the generator, based on process knowledge, or testing
- 17.A.(4) Possession of highly water soluble forms of SNM shall not exceed the amount of SNM of low strategic significance defined in 10 CFR 73.2. Highly soluble forms of SNM include, but are not limited to: uranium sulfate, uranyl acetate, uranyl chloride, uranyl formate, uranyl fluoride, uranyl nitrate, uranyl potassium carbonate, uranyl sulfate, plutonium chloride, plutonium fluoride, and plutonium nitrate. The presence of the above materials will be determined and documented by the generator, based on process knowledge or testing
- 17.A.(5) Processing of mixed waste containing SNM will be limited to chemical stabilization (i.e., mixing waste with reagents). For batches with more than 600 kilograms of waste, the total mass of SNM shall not exceed the concentration limits in Condition 17.A.1, times 600 kilograms of waste.
- 17.A.(6) Prior to shipment of waste the Licensee shall require generators to provide a written certification containing the following information for each waste stream:
  - 17.A.6(a) Waste Description. The description must detail how the waste was generated, list the physical forms in the waste, and identify uranium chemical composition.
  - 17.A.6(b) Waste Characterization Summary. The data must include a general description of how the waste was characterized (including the volumetric extent of the waste, and the number, location, type, and results of any analytical testing), the range of SNM concentrations, and the analytical results with error values used to develop the concentration ranges.



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- 17.A.6(c) Uniformity Description. A description of the process by which the waste was generated showing that the spatial distribution of SNM is homogeneous or other information supporting spatial homogeneity.
- 17.A.6(d) Manifest Concentration. The generator must describe the methods to be used to determine the concentrations on the manifests. These methods could include direct measurement and the use of scaling factors. The generator must describe the uncertainty associated with sampling and testing used to obtain the manifest concentrations.

The Licensee shall review the above information and, if adequate, approve in writing this pre-shipment waste characterization and assurance plan before permitting the shipment of a waste stream. This will include statements that the Licensee has a written copy of all the information required above, that the characterization information is adequate and consistent with the waste description, and that the information is sufficient to demonstrate compliance with subparts (1) through (4) of this condition. Where generator process knowledge is used to demonstrate compliance with subparts (1), (2), (3), or (4), the Licensee shall review this information and determine when testing is required to provide additional information in assuring compliance with the subparts. The Licensee shall retain this information as required by the State of Texas to permit independent review

At the time the waste is received, the Licensee shall require generators of SNM waste to provide a written certification with each waste manifest that states that the SNM concentrations reported on the manifest do not exceed the limits in subpart (1) of this condition and that the waste meets subparts (2) through (4) of this condition

The Licensee shall require generators to sample and determine the SNM concentration for each waste stream, not to include sealed sources, at a frequency of once per 600 kg if the concentrations are above one-tenth the SNM limits of subpart (1) of this condition. The measurement uncertainty shall not exceed the uncertainty value in subpart(1) of this condition and shall be provided on the written certification

17.A.(7) The Licensee shall sample and determine the SNM concentration for each waste stream, not to include sealed sources, at a frequency of once per 600 kg if the concentrations are above one tenth the SNM limits of subpart(1) of this condition. This confirmatory testing is not required for waste to be disposed of at the United States Department of Energy's Waste Isolation Pilot Project facility located near Carlsbad, New Mexico.



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- 17.A.(8) The Licensee shall notify the NRC, Region IV office and the inspector for the TCEQ, Critical Infrastructure Division, within 24 hours if any of the above subparts of this condition are violated. A written notification of the event must be provided within 7 days to both agencies
- 17.A.(9) The Licensee shall obtain NRC approval and secure an amendment to this license prior to changing any activities associated with the subparts of this condition.
- 17.(B) The Licensee shall manage waste containing SNM in accordance with the order from the NRC, as specified in Condition 17.A of this license, and the Licensee's operational procedures titled "SNM Exemption" designated OP-1.2.22, Revision 6
- 17.(C) Notwithstanding the Licensee's procedures, the Licensee is authorized to possess transuranic waste (waste generated by USDOE containing alpha emitting nuclides with an atomic number greater than 92) in concentrations greater than 100 nanocuries per gram (nCi/g) and greater than a 20 year half-life. Prior to receipt of transuranic waste with concentrations exceeding 100 nCi/g, the Licensee shall obtain an executed, written agreement from an authorized federal agency. The agreement shall meet the terms of the agreement specified in Condition 15.B of this license. Furthermore, in no respect shall this authorization be construed as to allow the limitations specified in Part A of this condition to be exceeded or violated.
- 18. The Licensee is authorized to perform in-house decontamination of surface contaminated objects, contaminated through the course of the Licensee's authorized activities or as a consequence of shipment of radioactive waste to the Licensee's facility (e.g., containers, coverings, bracing, etc.), and/or surface contaminated objects received in waste streams, in the confines of the "Permacon" portion of the Stabilization Building, in accordance with the following.
  - 18.(A) utilizing the PlasBlast Model 5050, or equivalent, in accordance with procedures submitted in the application dated January 24, 1997; or
  - 18.(B) utilizing the methods and procedures identified in "Decontamination of Material", OP-1.4.8, issue date April 25, 1999.
- 19. Radioactive material described in Parts A and B of Conditions 5, 6, 7 and 8 shall only be transferred to the initial generator, to an appropriately authorized waste disposal facility, or to an appropriately authorized waste processor. Documentation of recipient's authorization shall be maintained for inspection for a minimum of 5 years.



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- 20. The Licensee is authorized to process waste. Such processing shall be performed in accordance with the procedures and representations submitted in the application dated January 24, 1997, or new or modified procedures specified in Condition 58 of this license, and are limited to the following:
  - 20.(A) Receipt and survey;
  - 20.(B) Repackaging;
  - 20.(C) Compaction and consolidation utilizing a Model 55R RAMFLAT or a Container Products Corporation Model B-1000 Box Compactor (CPC compactor). This use is restricted to the Mixed Waste Treatment Facility. Where applicable for waste with hazardous constituents, the Licensee shall also comply with the applicable requirements specified in the hazardous waste permit number 50358 for construction, installation, and operations of the CPC compactor as well as this license. The Licensee shall not place wastes containing free or absorbed liquids, compressed gases, or other media that may cause an unsafe or abnormal condition into any compactor.
    - 20.C.(1) The licensee shall ensure that the EF-1 exhaust blower is interlocked with the exhaust blower from the CPC compactor, in a fail-safe mode, such that the CPC compactor exhaust blower automatically shuts-off when the EF-1 blower is not operating.
    - 20.C.(2) Operations and procedures of the CPC compactor require:
      - 20.C.2(a) Contamination surveys of the outer surface of the compactor and of the floor near the compactor door shall be taken periodically during compactor operations. The surveys will include analysis for gamma, beta, and alpha radiation
      - 20.C.2(b) Schedule, triggering conditions, and methodology for replacement of the HEPA filter for the compactor; and
      - 20.C.2(c) A description of how the proper waste batch size is determined, as required in procedure OP-1.4.23, to prevent waste from extruding from within during compaction.
    - 20.C.(3) The Licensee shall inspect the CPC compactor daily and maintain records of inspections. The Licensee must notify the Executive Director immediately in the event of 1) deformation of the compactor mounting bolts; 2) deformation of the compactor mounting frame; 3) stress crack formation in the concrete floor surrounding the compactor; or 4) any abnormal condition which may impact operations.
  - 20.(D) Processing and/or treatment of waste in the following methods:



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- 20.D.(1) Solidification/stabilization, chemical fixation, oxidation, reduction, and/or pH adjustment of liquid or solid radioactive waste using media acceptable to low-level waste disposal sites utilizing the following:
  - 20.D.1(a) a 55-gallon Enrico Barrel Mixer, or equivalent;
  - 20.D.1(b) a Prentice Arm, or equivalent, in accordance with OP-1.4.11, Revision 0, Issue Date 8/18/00, titled "Prentice Arm Operations";
  - 20.D.1(c) a 450-gallon paddle blender in accordance with OP-1.4.16, Revision 0, Issue Date 5/7/04, titled "Operation of the Marion Paddle Mixer, Model #3061"; and/or
  - 20.D.1(d) an absorbent delivery system in accordance with OP-1.4.10, titled "Solidification and Void Space Verification at the LSA Pad" on the LSA pad.

Unless stated otherwise in the license, the use of these methods is restricted to the Mixed Waste Treatment Facility.

- 20.D.(2) Treatment of cesium-137 contaminated electric arc furnace dust (United States Environmental Protection Agency designation KO61) and incident related material utilizing the procedure described in module OP-1.4.7, issue date of September 18, 1998, revision 1, titled "KO61 And Incident Related Material Stabilization Process." In addition to the procedures described in OP-1.4.7, all doors to the stabilization building shall be closed and remain closed during the processing of the waste.
- 20.D.(3) Solvated Electron Technology (SET) of mixed-waste using the Commodore D/2 unit for pilot testing in accordance with the commitments made in the letters dated September 9, 1999 (with attachments), October 6, 1999 (with attachments, including the procedures identified as wCs Work Instruction for the Commodore D/2 Unit, WI99-1.16), and October 7, 1999 (with attachments). This treatment method is restricted to the following waste matrices and radionuclides:

Waste Matrix	Radionuclides
Soil (degreaser sludge)	U-234, U-235, U-238, Cs-137, K-40
Moist solids, water on top	U-234, U-235, U-238, Cs-137
Oil/Freon	U-234, U-235, U-238, K-40, Co-57, Co-60,
	Cs-134, Cs-137, Ce-144, Eu-152, Eu-156, Rb-106,
	Sb-125, Zn-65, Pb-212
Freon soaked soil	U-234, U-235, U-238, Cs-137, K-40
Sodium contaminated metals	Co-60
Floor removal wastes	Ag-116, Co-58, Co-60, Cs-137



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Waste Matrix	Radionuclides
Thinners and solvents	Co-60, Cs-137, Ce-144, H-3, C-14, Tc-99, I-129
Spill Cleanup Material	Co-60, Sb-125, Cs-134, Cs-137
Sludge	K-40, Co-60, Sb-125, Cs-134, Ra-226, Cs-137
Waste grease	Co-60, Cs-134, Cs-137
Compactor Sludge	Ag-110, C-14, Co-58, Cs-134, Cs-137, Fe-55,
	Sb-125, H-3, Mn-54, Ni-63, Sr-90, Tc-99, U-234,
	U-238, Zn-65
Sludge	Co-60, Cs-134, Cs-137, Eu-154, Eu-155, Mn-54,
	Sb-125, Zn-65

- 20.D.(4) Solvated Electron Technology (SET) using the Commodore SL2 unit for pilot testing in accordance with the commitments made in the letter dated December 22, 2000 (with attachments), (with attachment titled "SL2 Description and Information" consisting of seven (7) pages).
- 20.(E) Interim storage of radioactive waste in the Bin Storage Unit 1, Container Storage Area, LSA Storage Area, Container Storage Building and the Stabilization Building.
- 20.(F) Research and development in the treatment of radioactive waste using the Commodore Mobile Demonstration Unit as described in and in accordance with the limitations and specifications contained in the letters dated February 3, 1999 and April 23, 1999, and attachments and enclosures, including WCS Work Instructions for CMDU2, dated April 9, 1999, WI99-1.2 and Attachment A to WI99-1.2.
- 20.(G) Shredding, in accordance with OP-1.4.12, Revision 0, Issue Dated August 18, 2000, titled "Shredder Operations."
- 20.(H) Demonstration of the In Container Vitrification Process in accordance with document titled "In-Container Vitrification Treatability Demonstration of Mixed TSCA Low Level Radioactive Waste" dated April 2004 (revision 6); drawing titled "Wall Penetration at Permacon for AMEC/Geomelt Melt Cables" date issued 03-25-2003; drawing titled "Wall Penetration at Permacon for AMEC/Geomelt Vent Pipe" date issued 03-25-2003; document titled "Intermediate Scale Geomelt System; Safe Operating Procedure (SOP)" dated May 7, 2003; and responses made in the letter dated May 23, 2003, signed by Stephen L. Cook, P.E.

In spite of the procedures titled "Intermediate Scale Standard Operating Procedures (SOP)" Revision 2, dated May 7, 2003, all components of the In Container Vitrification Process shall meet the criteria for release of equipment to unrestricted use as specified at 30 TAC § 336.364 when the equipment is released from the Licensee's facility for unrestricted use. The Licensee shall



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make a record of the surveys made to demonstrate that the release criteria has been met and retain the record of those surveys for inspection by the executive director, or if transferred as radioactive material, the Licensee shall retain a copy of the recipient's radioactive material license for inspection by the executive director.

- 20.(I) Void filling and/or solidification of containerized waste inside a Modular Concrete Canister (MCC) on the LSA pad for disposal in the Compact Waste Facility or the Federal Waste Facility in accordance with applicable procedures, including OP-1.2.39 and OP-1.4.10. The integrity of the container and the MCC shall be protected from any operation that may cause damage or otherwise impact the integrity of the container or of the MCC. Should such damage to the integrity occur, the Licensee shall notify the TCEQ and take necessary remedial measures. Void filling and solidification shall not be performed during rain or snow.
- 20.(J) Receipt of containerized radioactive waste by rail at the Railcar Pedestal Unloading Building (RPUB) in accordance with applicable procedures, including OP 1.2.40, and transfer of the containerized radioactive waste from the train to a truck for final delivery to the respective facility. The Licensee shall ensure that the train is not contaminated before releasing it and to perform contamination surveys of the RPUB weekly if waste was received at the RPUB that week. Contamination found in a railcar may be decontaminated at the RPUB according to procedures. The Licensee shall not open the waste container or packaging or repackage the containerized waste at the RPUB.
- 21. In addition to the limits specified by Conditions 5, 6, 7 and 8, the Licensee shall restrict possession of waste to the following conditions.
  - 21.(A) The total volume physically present shall not exceed 1,802,865 cubic feet and shall be further limited to the following building limitations:
    - (1) Bin Storage Unit 1: 87,480 cubic feet.
    - (2) Container Storage Building: 36,750 cubic feet
    - (3) Stabilization Building: 8,000 cubic feet
    - (4) LSA Storage Area: 1,500,000 cubic feet
    - (5) Container Storage Area: 174,960 cubic feet
  - 21.(B) Any waste container shall be counted as a full container in the volume inventory unless it can be readily verified as empty.
  - 21.(C) Waste stored in the Bin Storage Unit 1, Container Storage Area, or LSA Storage Area that is not contained within a High Integrity Container will be restricted to Low Specific Activity or Surface Contaminated Object, as defined by Title 10 of the Code of Federal Regulations (CFR) Part 71 (as amended), or



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- depleted uranium. Waste that meets the requirements of Condition 15.B of this license may also be stored in a U. S. Department of Transportation Type B container, or a Dufrane Secure Environmental Container, or the equivalent.
- 21.(D) The volume authorized in License Condition No. 21.A shall be further limited in accordance with the amount of Financial Assurance in place with the Commission:
  - 21.D.(1) Financial Assurance = \$18,467,478. No more than 1,039 cubic feet of waste that has a current commercial disposal option, 58,320 cubic feet of cesium-137-contaminated electric arc furnace dust (U. S. Environmental Protection Agency designation KO61) or waste from authorized federal agencies, and 1,743,506 cubic feet of waste from authorized federal agencies; or
  - 21.D.(2) Financial Assurance = \$32,881,617. No more than 19,211 cubic feet of waste that has a current commercial disposal option, 58,320 cubic feet of cesium-137-contaminated electric arc furnace dust (U. S. Environmental Protection Agency designation KO61) or waste from authorized federal agencies, and 1,725,334 cubic feet of waste from authorized federal agencies
  - 21.D.(3) The volume of waste that has a current commercial disposal option authorized in License Condition Nos. 21.D.1 and 21.D.2 may include up to 2,700 cubic feet of commercial mixed waste that cannot be processed into a form that has a current disposal option.
- 22. All waste not in storage shall be physically restricted in the following ways:
  - 22.A.(1) waste meeting the requirements of low specific activity group I radioactive material, as specified in Title 49 of the CFR (as amended), shall be processed within the confines of the Stabilization Building; and
  - 22.A.(2) all other waste shall be processed within the confines of a PERMACON, or equivalent, structure; or
  - 22.(B) waste shall be packaged in accordance with Title 49 of the CFR (as amended) requirements while in transit between the Bin Storage Unit 1, Container Storage Area, LSA Storage Area, Container Storage Building, Stabilization Building, or offsite.
- 23. All waste holding times shall be limited to the following:
  - 23.(A) All waste received for purposes of processing, shall be initially processed within 30 days of placement within the Stabilization Building. All waste shall be transferred out of the Stabilization Building within 90 days of placement within the Stabilization Building;



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- 23.(B) Except for approximately 2,592 cubic feet of low-level mixed waste generated at the Safety Light Superfund Site which must be transferred to an authorized recipient or disposed of at an authorized facility by June 30, 2014, all waste shall be placed into interim storage or transferred to an authorized recipient within 365 days of the initial date of receipt; and
- 23.(C) All waste authorized under License Condition No. 21.D.3 shall be returned to the generator or an appropriately authorized waste processor within 180 days of determining the waste is subject to License Condition No. 21.D.3.
- 23.(D) Regardless of the holding time limits, waste with hazardous constituents requiring a permit issued by the TCEQ to possess, treat, and store, that is mixed waste, shall meet the conditions for treatability studies in 40 CFR 261.4(f)(5) or the conditions for accumulation of adequate quantities in 40 CFR 268.50. Holding times will be consistent with that permitted under the provisions of the Licensee's permit issued by the TCEQ.
  - 23.D.(1) Containers of such waste shall be clearly identifiable and each container shall bear legible and unique identification.
  - 23.D.(2) Records shall be maintained that identify the containers and their contents in terms of radionuclides, activity and volume for inspection by the executive director.
  - 23.D.(3) Written notifications of intent submitted to TCEQ for each treatability study and/or any requested extensions for holding times for specific containers or batches of mixed waste shall be maintained for inspection by the executive director to document that the waste in question is subject and in compliance with the holding time provisions.
  - 23.D.(4) Quarterly reports documenting compliance with this condition shall be made available during inspections.
- 23.(E) The Licensee is authorized interim storage of waste materials as defined by Texas Health and Safety Code Section 401.003(3)(B) from Silos 1 and 2 located at the DOE Fernald Closure Project, Fernald Ohio, ("Fernald waste") as set forth in Items A, B and C of Conditions 5, 6, 7, and 8, for a period ending October 31, 2009, and shall then transfer the Fernald waste to an authorized facility as described in Condition 23F. No later than 30 days prior to the receipt of the Fernald waste, the Licensee shall obtain a written commitment from the DOE that it: 1) retains title to the Fernald waste, and 2) that it will store or dispose of the Fernald waste at another authorized facility within six months of a request to do so by the executive director. The Licensee shall obtain the written approval of the executive director for the DOE commitment prior to receipt of the Fernald waste. Financial assurance held by the Commission under Condition 21 may be



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used by the executive director to transfer the Fernald waste for storage or disposal at an authorized facility should the Licensee or DOE fail to do so by the prescribed dates. The Licensee shall be required to comply with any standards, taxes, and fees applicable to the activities authorized by this license that may be imposed by law after the amendment date.

- 23.(F) In the event the Licensee has received into interim storage by-product material as defined by Texas Health and Safety Code Section 401.003(3)(B) from Silos 1 and 2 located at the Department of Energy Fernald site in Ohio, the Licensee shall, no later than October 31, 2009, transfer the by-product material to:
  - 23.F.(1) a site licensed by the TCEQ for the disposal of by-product material;
  - 23.F.(2) a site licensed for the disposal of by-product material by the Texas Department of State Health Services in coordination with and with input from the TCEQ on binding license conditions for the technical requirements for the disposal of by-product material;
  - 23.F.(3) another facility licensed to receive or dispose of by-product material outside the State of Texas;
  - 23.F.(4) an authorized federal agency outside the State of Texas.

In accordance with Health and Safety Code §401.381 and §401.384, the commission shall assess the Licensee an administrative penalty of up to \$10,000 a day or the Licensee shall be liable for a civil penalty of up to \$25,000 a day if the Fernald Silos 1 and 2 by-product material is stored by Licensee under this license in violation of this Condition. Condition 25.F. shall not apply and Licensee shall have no liability under this Condition contingent upon the passage of legislation during the Regular Session of the 79th Texas Legislature that:

- 23.F.4(a) transfers jurisdiction over this license and any new or pending radioactive waste and by-product material as defined by Texas Health and Safety Code Section 401.003(3)(B) storage, processing, and disposal licenses by Licensee to the TCEQ;
- 23.F.4(b) creates state revenue measures for the disposal of by-product material as defined by Texas Health and Safety Code Section 401.003(3)(B); and
- 23.F.4(c) is made effective by September 1, 2005.
- 24.(A) No waste shall be commingled with material requiring a separate disposal methodology.



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- 24.(B) In spite of the Licensee's procedures, no waste from an authorized Federal agency shall be commingled with waste from another generator.
- 25. The Licensee shall maintain for inspection by the executive director an inventory of all waste possessed under this license. The inventory shall show the radionuclide, date received, from whom received, amount of activity, physical form, date processed, original and reassigned drum or container number, and the date transferred for disposal. In addition, the Licensee shall at least monthly generate a cumulative inventory that demonstrates compliance with License Condition Nos. 17, 21, and 23 (including waste form requirements for interim storage), and the appropriate processing category limits of 30 TAC § 336.1207. The Licensee shall maintain a copy of the inventories, for a minimum of five (5) years from the date of generation, for inspection by the executive director.
- 26. A summary of all waste processing activities for the preceding calendar year shall be generated no later than March 1 of each year and maintained for inspection until disposition is authorized by the executive director. This report shall include total throughput for each individual process; all material received; all material transferred; all spills outside of primary containment; and a current inventory at the end of the report. Material transferred and received shall also be listed by Licensee. All categories shall include activity by isotope and total volume.
- 27.(A) Waste containers containing radioactive waste meeting the requirements of low specific activity material, group I (LSA-I), as specified in Title 49 of the Code of Federal Regulations, Section 173.403, may be opened for sampling of the contents or container maintenance or repair in an approved, enclosed structure.
- 27.(B) All other waste containers shall only be opened in PERMACON or equivalent structures.
- 28. The licensee must conduct an internal monitoring program for intakes of radionuclides as follows:
  - 28.(A) The licensee must conduct a bioassay (in vivo and/or in vitro) for all employees or workers including but not limited to WCS employees and TCEQ Resident Inspectors prior to their initial entry into the restricted areas. Employees or workers entering the restricted areas are also required to have a whole body count annually and for-cause. WCS shall also make every reasonable attempt to perform a whole body count for employees or workers that have entered any restricted area upon termination of employment. The whole body counts shall be conducted at the Carlsbad Environmental Monitoring and Research Center (CEMRC) facility at New Mexico State University (NMSU) in Carlsbad, New Mexico or equivalent facility.



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- 28.(B) The Licensee must conduct confirmatory whole body counts annually on a representative sample group of site workers that are not monitored for intakes as part of the normal monitoring program. The whole body counts shall be conducted at the CEMRC facility at NMSU in Carlsbad, New Mexico or equivalent facility.
- 28.(C) The Licensee must rely on engineering controls to the extent practicable to minimize the levels of airborne radioactivity released to work areas within the restricted areas.
- 28.(D) Personal air monitoring (personal air samplers) must be provided by the Licensee for each individual who is admitted into any area for which respiratory protection is required. This monitoring shall be supplemented as appropriate with other air monitoring techniques, including but not limited to high-volume grab samples, portable samplers, and stationary, continuous air samplers.
- 28.(E) Respiratory protection must be provided by the Licensee as prescribed by 30 TAC §336.321 for individuals admitted into any area for which respiratory protection is required. The respiratory protection program shall also include the following procedures:
  - 28.E.(1) Air monitoring;
  - 28.E.(2) Personnel breathing zone monitoring;
  - 28.E.(3) Medical surveillance;
  - 28.E.(4) Respiratory protection program audits;
  - 28.E.(5) Maintaining breathing quality;
  - 28.E.(6) Training on the use of respirators;
  - 28.E.(7) Fit testing;
  - 28.E.(8) Respirator selection;
  - 28.E.(9) Inventory and control;
  - 28.E.(10) Storage and issuance;
  - 28.E.(11) Maintenance, repair, testing, and quality assurance;
  - 28.E.(12) Record keeping; and
  - 28.E.(13) Period of respirator use and relief from respirator use
- 28.(F) For any individual who performs work (including inspections) within any area for which respiratory protection is required, the Licensee must conduct bioassays (in-vivo and/or in-vitro) within one month following the donning of the respirator. An analysis or evaluation of these bioassay data and measurements shall be required for the radionuclides known or suspected to be present in the waste streams encountered since any previous bioassay was performed.



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- 28.(G) The Committed Effective Dose Equivalent assigned to individuals by the Licensee shall be based on the concentrations of radioactive materials in the air, the quantity of radionuclides in the body or excreted from the body, or a combination following written procedures and as specified in 30 TAC §336.308.
- 28.(H) The Licensee must conduct a verification study on the effectiveness of using personal lapel air monitors by analyzing the filter media using alpha spectrometry and gamma spectrometry to identify individual radionuclides and confirm that using the most limiting Derived Air Concentration (DAC) value is appropriate. The study shall be performed once a quarter for a year on individuals with the greatest likelihood to receive intakes. The results shall be included in the annual report summarizing internal monitoring results as required by subpart I of this license condition.
- 28.(I) The Licensee must submit an annual report by March 31st of each year for the previous year summarizing monitoring results for all individuals including, but not limited to, site workers, contractors, and TCEQ staff, as applicable. If any bioassay result exceeds ten percent (10%) of the occupational dose limit provided in 30 TAC Chapter 336, the Licensee shall notify the executive director within 30 days of receiving the results.
- 29.(A) The Licensee shall notify the executive director in writing or via facsimile at least 3 working days in advance of shipping its low-level radioactive waste to a commercial treatment, storage, or disposal site.
- 29.(B) The Licensee shall notify the executive director in writing or via facsimile at least 3 working days in advance of initial receipt of waste pursuant to this license.
- 30.(A) In accordance with the application dated January 24, 1997, the Licensee may only modify the following procedures: Operations Procedures; Occupational Health and Safety Procedures; Quality Assurance Procedures; Emergency Procedures; Laboratory Procedures and/or Radiation Safety Procedures. All modifications shall provide at least equivalent levels of radiation safety and administrative control. Documentation of all modifications, and the corresponding internal review, shall be maintained for inspection for a minimum of 5 years.
- 30.(B) In the radiation safety procedure RS-3.3.62, wherever Form RS 3.3.61-1 is referenced, it shall be understood that Form RS 3.3.62-1 is meant.
- 31. Modification of the facility or the processes described in the documents listed in License Condition No. 58 is prohibited except as authorized pursuant to amendment of this license.



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- 31.(A) The Licensee may modify the facility as requested in the Licensee's letter dated August 21, 2000 regarding the Permacon and shall construct the loading bay and employee center attached to or abutting the Permacon in accordance with the following:
  - 31.A.(1) Drawing titled "Loading Bay & Employee Center Addition", Sheet A1, dated July 10, 2000, Rev. 1 dated July 10, 2000, depicting Floor Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(2) Drawing titled "Loading Bay & Employee Center Addition", Sheet A2, 4 of 9, dated July 10, 2000, Rev 1 dated July 20, 2000, depicting Enlarged Partial Floor Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(3) Drawing titled "Loading Bay & Employee Center Addition", Sheet A3, 5 of 9, dated July 10, 2000, Rev 1 dated July 20, 2000, depicting (1) North, (2) East, (3) South and (4) West Exterior Elevations, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(4) Drawing titled "Loading Bay & Employee Center Addition", Sheet A4, 6 of 9, dated July 10, 2000, Rev 1 dated July 20, 2000, depicting (1) Enlarged Partial Building Section and (2) Building Section, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(5) Drawing titled "Loading Bay & Employee Center Addition", Sheet A5, 7 of 9, dated July 10, 2000, Rev 1 dated July 20, 2000, depicting (1) Enlarged Partial Building Section, (2) Enlarged Partial Building Section, and (3) wall section, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(6) Drawing titled "Loading Bay & Employee Center Addition", Sheet S1, 1 of 2, dated July 10, 2000, Rev 1 dated July 20, 2000, identified as Foundation Plan depicting (1) Bollard Detail and (2) Column Tie Footing, (3) Grade Beam Footing @ Door, (4) Grade Beam Footing, and (5) Main Frame Footing, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
  - 31.A.(7) Drawing titled "Loading Bay & Employee Center Addition", Sheet S2, 2 of 2, dated July 10, 2000, Rev 1 dated July 20, 2000, identified as



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Foundation Plan and Framing Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;

- 31.A.(8) Drawing titled "Loading Bay & Employee Center Addition", Sheet M101, dated July 19, 2000, identified as Plumbing Plan, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 31.A.(9) Drawing titled "Loading Bay & Employee Center Addition", Sheet M201, dated July 19, 2000, depicting (1) HVAC Plan and (2) Enlarged Mechanical Plan, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 31.A.(10) Drawing titled "Loading Bay & Employee Center Addition", Sheet M401, dated July 19, 2000, depicting (1) Filtered Exhaust System Control Diagram, (2) Breathing Air Alarm System, and (3) Air Handling Unit Detail, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 31.A.(11) Drawing titled "Loading Bay & Employee Center Addition", Sheet M501, dated July 19, 2000, depicting (1) Gooseneck Detail, (2) Holding Tank Detail, (3) Exhaust Fan EF-3 Support, (4) Valve Box Detail, (5) Vent Thru Roof Detail, (6) Water Heater Detail, (7) Flue Thru Roof Detail, and (8) Clean Out Detail, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 31.A.(12) Drawing titled "Loading Bay & Employee Center Addition", Sheet M602, dated July 19, 2000, depicting the Equipment Schedule, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 31.A.(13) Attachment B titled "Submittals of Ventilation Equipment Specifications", to the August 21, 2000 letter;



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- 31.A.(14) Attachment C titled "Map of Equipment Locations", to the August 21, 2000 letter;
- 31.A.(15) Letter dated October 19, 2000 pertaining to the operation of the Permacon ventilation system and the oversight of the Permacon modification and addition of the loading bay and employee center;
- 31.A.(16) The responses to items 6, 7, 8, 9, 10, 12, 13, and 14 in the Licensee's letter dated October 6, 2000 pertaining to the facility modifications (i.e., Permacon) and additions (i.e., loading bay and employee center);
- 31.A.(17) The air effluent monitoring system for the Permacon shall conform to the description provided in the letter dated October 10, 2000, including the attachments titled "Waste Control Specialists Stack Sampling Configuration" and "Generic Stack Schematic"; and
- 31.A.(18) The term "air lock" used in the Licensee's submissions describing this facility modification shall be understood to refer to the feature identified as "loading bay" on the submitted drawings.
- 31.(B) All waste (liquid and solids) in the holding tank receiving waste from the decontamination area of the Employee Center shall be disposed of as radioactive waste.
- 31.(C) The Licensee may modify the bin storage area as described in the letters dated January 14, 1998 and May 3, 1999.
- 31.(D) The Licensee may modify the Stabilization Building as described in the letter dated January 14, 1998 and May 3, 1999.
- 31.(E) The Licensee may construct and utilize for storage, Container Storage Area and LSA Storage Area pads for interim waste storage in accordance with inspection frequencies and design criteria specified in letters dated May 19, 2004, August 12, 2004, October 28, 2004, and June 15, 2006. Waste container types for the Container Storage Area pad, their placement and content characterization shall be in accordance with Item 2 of letter dated July 27, 2004.
- 31.(F) The Licensee may modify the Mixed Waste Treatment Facility as described in the letters dated November 16, 2007 (with attached report *WCS Project #0703 MWTF Ventilation Upgrades, Waste Control Specialists LLC, RPS Project No. 07.0109, Revision 2* dated August 19, 2007), April 24, 2008, and June 4, 2008.
- 31.(G) The Licensee may modify the ventilation of the Mixed Waste Treatment Facility consistent with the conditions of this license and as described in the application dated July 15, 2011.



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- 31.(H) The Licensee may modify the LSA pad as described in the amendment application dated May 4, 2012 and the drawings submitted electronically June 7, 2012.
  - 31.H.(1) The Licensee shall retain a geotechnical engineer for construction activities of the LSA pad. The geotechnical engineer shall review final design plans and specifications; implement the geotechnical investigation into design plans and specifications; provide geotechnical observation and testing services during the project construction phase; and certify completion of the construction.
  - 31.H.(2) The loads on the LSA pad shall not exceed the load values in the report prepared by Terracon Consultants, Inc. in Attachment 3 of the May 4, 2012 amendment application.
  - 31.H.(3) The licensee shall inspect the caliche surface monthly for aggregate base loss and rutting and assess the serviceability of the caliche surface. If rutting or aggregate loss is observed to be greater than 3 inches, the licensee shall place additional crushed caliche; re-grade the caliche surface; and compact the caliche to improve the serviceability of the surface.
  - 31.H.(4) The licensee shall submit record (as-built) drawings to the Executive Director for the construction described herein sixty days after completion of the construction.
- 31.(I) The Licensee may modify the Railcar Pedestal Unloading Building consistent with the conditions of this license and as described in the application dated April 30, 2012 and letters dated July 11, 2012, July 13, 2012, July 20, 2012, and July 24, 2012.
- 31.(J) Waste streams containing free standing liquids may be stored before and/or after the solidification process described in the license amendment application dated September 26, 2012 for a period no greater than 90 days. These waste streams are approved for storage within an MCC, SEC, or equivalent on the LSA pad.
- 32. The Licensee must secure all applicable licenses, permits, and/or authorizations from the appropriate regulatory authorities before engaging in the authorizations granted by this license.
- 33. The Licensee is relieved of the requirements of Conditions 15.C and 22.B of this license, for no more than 23,590 cubic feet of waste that requires additional packaging/overpacks to meet US DOT, that is, 49 CFR, requirements. Such waste may be packaged in metal or polyethylene containers that meet the requirements for a strong, tight container in 49 CFR when in storage or in transport between the Bin Storage Unit 1, Container Storage Area, LSA Storage Area, Container Storage



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Building, and Stabilization Building at the Licensee's facility. All other waste shall be packaged to meet US DOT transportation requirements when in storage or in transit between the Bin Storage Unit 1, Container Storage Area, LSA Storage Area, Container Storage Building, and Stabilization Building at the Licensee's facility.

- 34. The Licensee is authorized to dispose of certain radioactive material authorized in Conditions 5, 6, 7 and 8 and listed in 30 TAC §336.365, whose half lives do not exceed 300 days, in accordance with the provisions of 30 TAC §336.225 (c) (g) and procedures dated November 13, 2003, May 17, 2004 and July 26, 2004.
  - 34.(A) The waste authorized for disposal is limited to that generated by customers under specific radioactive material licenses issued by the Department of State Health Services in accordance with 25 TAC §289.252.
  - 34.(B) Changes in the Licensee's contractor who analyzes radiochemical samples from this waste stream must be addressed through a license amendment.
  - 34.(C) Disposal is authorized in a Type I municipal solid waste facility permitted by the TCEQ, unless the generator's waste also contained hazardous waste when presented that would allow for burial in a hazardous waste site, also permitted by TCEQ.
  - 34.(D) The records for annual activity and container concentration limits shall reflect the ratios for radionuclide mixtures and these limits shall apply only once, regardless of the number of original generators.
- 35. The Licensee shall implement the Emergency Plan enclosed with correspondence dated March 11, 2004, and additional correspondences dated July 27, 2004 and August 31, 2004. Execution of the plan shall include records of any required training, quarterly communication checks at intervals not to exceed three months and biennial onsite exercises. Critiques of exercises shall evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques shall be corrected, and copies of those changes retained for executive director inspection.
- 36. The Licensee has a duty to comply with all license conditions. Failure to comply with any license condition is a violation of the license and statutes under which the license is issued and is grounds for enforcement action, for license amendment, revocation, or suspension, or for denial of a license renewal application or an application for a license or permit for another facility.
- 37. The Licensee must apply for an amendment or renewal before the expiration of the existing license in order to continue storage and processing of radioactive material after the expiration of the license. Authorization to continue such activity terminates upon the effective denial of said application. Obligations or requirements for



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decommissioning, environmental monitoring, financial assurance, radiation safety, and control of entry to restricted areas continue in effect beyond the expiration date of this license until the executive director notifies the Licensee in writing that the provisions of the license are no longer binding.

- 38. It is not a defense in an enforcement action that it would have been necessary to halt or reduce the licensed activity to maintain compliance with the license conditions.
- 39. The Licensee shall take all reasonable steps to minimize or prevent any discharge, disposal, or other license violation which has a reasonable likelihood of adversely affecting human health or the environment.
- 40. The Licensee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the Licensee to achieve compliance with the license conditions.
- 41. The Licensee shall furnish to the executive director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending, or terminating the license, and copies of records required to be kept by the Licensee.
- 42. The Licensee shall give notice to the executive director before physical alterations or additions to the licensed facility if such alterations or additions would require a license amendment or result in a violation of license requirements.
- 43. Authorization from the commission is required before beginning any change in the licensed facility or activity that would result in noncompliance with other license requirements.
- 44. Unless subject to a different reporting requirement in this license or under 30 TAC Section 336.335 (Reporting Requirements for Incidents), the Licensee shall report any noncompliance to the executive director which may endanger human health or safety or the environment. Such information must be provided orally within 24 hours from the time the Licensee becomes aware of the noncompliance. A written submission must also be provided within five days of the time the Licensee becomes aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- 45. Inspection and entry by the executive director to the licensed site must be allowed under Texas Water Code, Chapters 26 28 and 32, Texas Health and Safety Code, §§361.032, 361.033, 361.037, 401.057(a), and 401.063, and 40 CFR §122.41(i). The



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statement in Texas Water Code, §26.014, that commission entry of a facility shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

- 46. This license may not be transferred except on approval of the commission.
- 47. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC §305.128 (Signatories to Reports).
- 48. This license may be amended, suspended and reissued, or revoked for cause. The filing of a request by the Licensee for a license amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any license condition.
- 49. This license does not convey any property rights of any sort, or any exclusive privilege.
- 50. Where the Licensee becomes aware that it failed to submit any relevant facts in a license application, or submitted incorrect information in an application, or in any report to the executive director, the Licensee shall promptly submit such facts or information.
- 51.(A) The Licensee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - 51(A)(1) The Licensee;
    - 51(A)(2) An entity (as that term is defined in 11 USC, §101(14)) controlling the Licensee or listing the licensee or Licensee as property of the estate; or
    - 51(A)(3) An affiliate (as that term is defined in 11 USC, §101(2)) of the Licensee.
- 51.(B) This notification must indicate:
  - 51(B)(1) The name of the Licensee:
  - 51(B)(2) The license number(s);
  - 51(B)(3) The bankruptcy court in which the petition for bankruptcy was filed; and 51(B)(4) The date of filing of the petition.
- 52. At any time before termination of the license, the Licensee shall submit written statements under oath upon request of the commission or executive director to enable the commission to determine whether or not the license should be modified, suspended or revoked.



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- 53. The Licensee shall be subject to the applicable provisions of Texas Health and Safety Code, Chapter 401, also known as the Texas Radiation Control Act (TRCA) now or hereafter in effect and to applicable rules and orders of the commission. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to the TRCA or other applicable law, or by reason of rules and orders issued in accordance with terms of the TRCA.
- 54. Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the TRCA, or because of conditions revealed by any application or statement of fact or any report, record, or inspection or other means that would warrant the commission to refuse to grant a license on the original application, or for failure to operate the facility in accordance with the terms of the license, or for any violation of or failure to observe any of the terms and conditions of the TRCA or other applicable law or the license or of any rule or order of the commission.
- 55. The commission may incorporate in this license at the time of issuance, or thereafter, by appropriate rule or order, additional requirements and conditions with respect to the Licensee's receipt, possession, and disposal of by-product material as it deems appropriate or necessary in order to: (1) protect the health and safety of the public and the environment; or (2) require reports and recordkeeping and to provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of the TRCA and rules thereunder.
- 56. In accordance with the commitments and procedures submitted in the letters dated February 6, 2006 and October 27, 2006 (with attachments), the Licensee shall ensure liquids discharged from the chemistry laboratory operations shall be directed into a dedicated laboratory sump system or into containers within the laboratory to prevent discharges of contaminated water into the environment. The sump system shall be inspected and monitored regularly. Fluids removed from the sump shall be analyzed for radiological and hazardous chemical components. If contaminated, the fluids shall be treated and disposed in compliance with regulatory standards and requirements stipulated in this license.
- 57. The following conditions are to be maintained in Stabilization Room 101 of the Mixed Waste Treatment Facility:
  - 57.(A) A nominal (i.e.,  $\pm$  20%) minimum negative static pressure (SP) of 0.1 inches of water column, with respect to ambient outdoor conditions, shall be maintained at all times during waste processing operations. The negative SP requirement may be waived during maintenance and testing activities when no wastes are present and exposed to the room environment.



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- 57.(B) The management of waste materials, which are capable of producing a flammable or explosive atmosphere due to emitted gases, vapors, or particulates, is prohibited.
- 58. The Licensee may request a conditional exemption in accordance with 30 TAC \$336.5(a) for specific waste whose waste form, physical properties, volume, and concentration values have been demonstrated in a radiological impact assessment not to result in a significant risk to public health and safety or the environment under the following process. Waste that meets these exemption criteria may be disposed of in the Licensee's RCRA disposal unit permitted by TCEQ under Permit #50358.
  - 58.(A) A 30 TAC §336.5(a) exemption may not be approved prior to the executive director's review of the radiological impact assessment or other similar analysis that is offered as part of the request. The radiological impact assessment or other similar analysis shall:
    - 58.A.(1) Include an assessment of the disposal of the waste in the Licensee's RCRA Permit #50358
    - 58.A.(2) Demonstrate how the radionuclide concentration, total activity, and volume values will not result in a radiation dose that could exceed 1 mrem/year to appropriate critical groups (e.g., inadvertent intruder or future site resident) for up to a thousand years.
    - 58.A.(3) Assess radionuclides with half-life values over 300 years to evaluate peak doses above 1 mrem/year that occur after a thousand years.
  - 58.(B) The Licensee's application process for an alternative exemption under 30 TAC §336.5(a) shall include a demonstration of acceptable exemption criteria, the Licensee's request for exemption concurrence, and executive director approval or denial as follows:
    - 58.B.(1) The Licensee receives the radioactive materials, described in Part A of Conditions 5, 6, 7 and 8 of this License, either from commercial generators or the federal government, for receipt at the radioactive waste storage and processing facility authorized by this license.
    - 58.B.(2) The Licensee will perform confirmatory analytical measurements and/or radiation surveys as appropriate according to procedures approved by the executive director. The Licensee will explain how the results of the confirmatory analytical measurements and/or radiation surveys compare to the criteria established by the radiological impact assessment or other similar analysis as described in subpart A of this license condition.



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- 58.B.(3) If the results of the confirmatory analytical measurements and/or radiation surveys indicate that the waste shipment meets the exemption criteria, then the Licensee submits an exemption request letter, including the results of the sample analysis and other relevant data as applicable, to the executive director.
- 58.B.(4) The executive director will review the request and send the Licensee a letter either approving or denying the exemption request or requesting additional information within 21 days. If the request is denied, the Licensee is not authorized to exempt that waste under 30 TAC §336.5(a). The Licensee may reapply for the exemption at any time.
- 58.(C) Waste received by the Licensee will remain licensed radioactive material subject to all applicable regulations and license requirements until the Licensee receives the letter from the executive director concurring that this waste meets the exemption criteria. Waste that has been approved by the executive director as 30 TAC §336.5(a) exempt will not be counted towards any volume or activity limits in this license for radioactive material.
- 59.(A) Except as specifically provided otherwise by this license, the Licensee shall possess and use the radioactive material authorized by this license in accordance with statements, representations, and procedures contained in the following:
  - 59(A)(1) application dated January 24, 1997 and amendment dated May 2, 1997, including Appendices Volume I-V, Site and Facility Drawings, and Drawing Specification;
  - 59(A)(2) amendment applications dated July 15, 2011, May 4, 2012, April 30, 2012, September 26, 2012, and February 22, 2013;
  - 59(A)(3) letters dated January 14, 1998 (signed by Allen Messenger); March 5, 1998 (with Andrews Site Organizational Chart and vice president operations/facility manager, radiation safety officer, and operations manager position descriptions attachments) and October 6, 1998 (with attachments); February 3, 1999; and April 23, 1999 (with attachments and enclosures, including WCS Work Instructions for CMDU2, dated April 9, 1999, WI99-1.2 and Attachment A to WI99-1.2); May 3, 1999 (signed by Allen Messenger); September 9, 1999 (with attachments), October 6, 1999 (with attachments, including wCs Work Instruction for the Commodore D/2 Unit, WI99-1.16) and October 7, 1999 (with attachments); August 21, 2000 (with attachments); October 6, 2000 (with attachments); October 10, 2000 (with enclosures titled "Waste Control Specialists Stack Sampling Configuration" and "Generic Stack Schematic"); December 22, 2000



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(with enclosure titled "SL2 Description and Information" consisting of 7 pages); May 23, 2003 (signed by Stephen L. Cook, P.E.); October 28, 2004; February 6, 2006; October 27, 2006 (with attachments); November 16, 2007 (with attached report *WCS Project #0703 MWTF Ventilation Upgrades, Waste Control Specialists LLC, RPS Project No. 07.0109, Revision 2* dated August 19, 2007), April 24, 2008, June 4, 2008, June 12, 2012, June 28, 2012, July 10, 2012, and July 11, 2012;

- 59(A)(4) Drawing titled "Loading Bay & Employee Center Addition", Sheet A1, dated July 10, 2000, Rev. 1 dated July 20, 2000, depicting Floor Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(5) Drawing titled "Loading Bay & Employee Center Addition", Sheet A2, 4 of 9, dated July 10, 2000, Rev. 1 dated July 20, 2000, depicting Enlarged Partial Floor Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(6) Drawing titled "Loading Bay & Employee Center Addition", Sheet A3, 5 of 9, dated July 10, 2000, Rev. 1 dated July 20, 2000, depicting (1) North, (2) East, (3) South and (4) West Exterior Elevations, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(7) Drawing titled "Loading Bay & Employee Center Addition", Sheet A4, 6 of 9, dated July 10, 2000, Rev. 1 dated July 20, 2000, depicting (1) Enlarged Partial Building Section and (2) Building Section, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(8) Drawing titled "Loading Bay & Employee Center Addition", Sheet A5, 7 of 9, dated July 10, 2000, Rev. 1 dated July 20, 2000, depicting (1) Enlarged Partial Building Section, (2) Enlarged Partial Building Section, and (3) wall section, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(9) Drawing titled "Loading Bay & Employee Center Addition", Sheet S1, 1 of 2, dated July 10, 2000, Rev. 1 dated July 20, 2000, identified



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as Foundation Plan depicting (1) Bollard Detail and (2) Column Tie Footing, (3) Grade Beam Footing @ Door, (4) Grade Beam Footing, and (5) Main Frame Footing, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;

- 59(A)(10) Drawing titled "Loading Bay & Employee Center Addition", Sheet S2, 2 of 2, dated July 10, 2000, Rev. 1 dated July 20, 2000, identified as Foundation Plan and Framing Plan, from the firm of Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(11) Drawing titled "Loading Bay & Employee Center Addition", Sheet M101, dated July 19, 2000, identified as plumbing Plan, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(12) Drawing titled "Loading Bay & Employee Center Addition", Sheet M201, dated July 19, 2000, depicting (1) HVAC Plan and (2) Enlarged Mechanical Plan, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(13) Drawing titled "Loading Bay & Employee Center Addition", Sheet M401, dated July 19, 2000, depicting (1) Filtered Exhaust System Control Diagram, (2) Breathing Air Alarm System, and (3) Air Handling Unit Detail, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(14) Drawing titled "Loading Bay & Employee Center Addition", Sheet M501, dated July 19, 2000, depicting (1) Gooseneck Detail, (2) Holding Tank Detail, (3) Exhaust Fan EF-3 Support, (4) Valve Box Detail, (5) Vent Thru Roof Detail, (6) Water Heater Detail, (7) Flue Thru Roof Detail, and (8) Clean Out Detail, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;



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- 59(A)(15) Drawing titled "Loading Bay & Employee Center Addition", Sheet M602, dated July 19, 2000, depicting the Equipment Schedule, from the firms of Smith Engineering Company of Albuquerque, NM, James O. Coupland, and Nesser, Prestidge, Smith, Razloznik Architects, Inc. of Carlsbad, NM, received in the Bureau of Radiation Control on October 10, 2000;
- 59(A)(16) Drawing titled "Wall Penetration at Permacon for AMEC/Geomelt Melt Cables" date issued March 25, 2003;
- 59(A)(17) Drawing titled "Wall Penetration at Permacon for AMEC/Geomelt Vent Pipe" date issued March 25, 2003;
- 59(A)(18) Procedure titled "Processing Mixed Waste," Issue Date: September 18, 1998, Rev. 1 (replaces Rev. 0);
- 59(A)(19) Procedure titled "Receipt and Storage of Radioactive and Mixed Waste," Issue Date: September 18, 1998, Rev. 1 (replaces Rev. 0);
- 59(A)(20) Procedure titled"KO61 and Incident Related Material Stabilization Process," reference no.: OP-1.4.7, Issue Date: September 18, 1998, Rev. 1 (replaces Rev. 0);
- 59(A)(21) Procedure titled "Survey Sample Analysis and Activity Calculation," reference no.: RS-3.3.62, Issue Date: June 23, 1998, Rev. 0.
- 59(A)(22) Procedure titled "Bulk Solidification/Stabilization Operations", reference no.: OP-1.4.10, Revision 0, Issue Date August 16, 2000;
- 59(A)(23) Procedure titled "Prentice Arm Operations", reference no.: OP-1.4.11, Revision 0, Issue Date August 18, 2000;
- 59(A)(24) Procedure titled "Shredder Operations", reference no.: OP-1.4.12, Revision 0, Issue Dated August 18, 2000;
- 59(A)(25) Procedure titled "Decontamination of Material", reference no.: OP-1.4.8, Revision 0, Issue Date April 25, 1999;
- 59(A)(26) Procedure titled "Release of Items from Controlled Areas and the Facility", reference no.: RS-4.4.1, Revision 1, Issue Date January 16, 2001 (excluding Section 3.7), new section 4.6 (see letter dated May 17, 2004), and Sampling Protocol reference no.: AL-2.0.1, Revision 0;
- 59(A)(27) Responses for TDH dated January 16, 2001 (enclosure of letter dated January 16, 2001);
- 59(A)(28) Procedure titled "Special Nuclear Material Exemption Certification", reference no.: OP-1.2.22, Revision 0 (With respect to



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special nuclear material, the provisions of this procedure will supercede any other procedures in which there is conflict, the word "should" in these procedures shall be interpreted as meaning "shall", and the title of the referenced procedure RS-1.4.2 is understood to actually be "Chain of Custody Record".);

- 59(A)(29) Procedure titled "Chain of Custody Record", reference no.: RS-1.4.2, Revision 5, Effective Date August 11, 2000;
- 59(A)(30) Document titled "In-Container Vitrification Treatability Demonstration of Mixed TSCA Low Level Radioactive Waste" dated April 2004 (revision 6);
- 59(A)(31) Document titled "Intermediate Scale Geomelt System; Safe Operating Procedure (SOP)" dated May 7, 2003; and responses made in the letter dated May 23, 2003, signed by Stephen L. Cook, P.E; and
- 59(A)(32) Procedure titled "Operation of the Marion Paddle Mixer, Model #3061", reference no.: OP-1.4.16 Revision O, Issue Date May 7, 2004.
- 59(A)(33) Procedure titled "Compactor Operations", reference no.: OP-1.4.23, Rev. 0 as revised in accordance with LC 20.
- 59(A)(34) Title 30 of the TAC Chapter 336 shall prevail over statements contained in the above documents, unless such statements are more restrictive than the regulations.
- 59.(B) The Licensee shall comply with the requirements described in the Department of State Health Services letter dated October 24, 2005, and attached document entitled "Increased Controls for Licensees that Possess Sources Containing Radioactive Material Quantities of Concern." The Licensee shall complete implementation of said requirements within 6 months from the issuance of license amendment 37 or the first day that radionuclides in quantities of concern are possessed at or above the limits specified in Table 1 of the attachment, whichever is later. Within 30 days after the implementation of the requirements of this condition, the Licensee shall notify the Radiation Safety Licensing Branch in writing that it has completed the requirements of this condition.
- 59.(C) The Licensee shall comply with the requirements described in the Nuclear Regulatory Commission Order EA-07-305 (the Order). The Licensee shall complete implementation of said requirements by October 1, 2008. The Licensee shall notify the executive director when the Licensee has achieved full compliance with the requirements described in the Order. The notification shall be made within 25 days after full compliance has been achieved. This notification shall



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include a certification that the Trustworthiness and Reliability (T&R) Official (and any subsequent T&R Official) have themselves been deemed trustworthy and reliable by the Licensee as required in paragraph B.2. of the Order. The Licensee shall notify the executive director within 24 hours if the results from a criminal history records check indicate that an individual is identified on the FBI's Terrorist Screening Data Base.

- 60. All written submissions to the executive director as required by this license shall be made to the following:
  - 60.(A) For submissions by U. S. Postal Service:

Attn:

Charles Maguire, Director
Radioactive Materials Division
Texas Commission on Environmental Quality
Mail Code – 233
P. O. Box 13087
Austin, Texas 78711-3087

- 60.(B) For Submissions by facsimile transmission, the transmission should be addressed to the attention of the Charles Maguire, Director, Radioactive Materials Division and sent to the following number: (512) 239-6464
- 60.(C) For submission of portable document file (pdf) documents by electronic mail, address to the following Charles.Maguire@ tceq.texas.gov

Issued and Effective on

Date: May 30, 2013 For the Commission