

The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts the amendment to §336.702 and adopts new §336.745 and §336.747.

Sections 336.702 and 336.745 are adopted *with changes* to the proposed text as published in the December 23, 2011, issue of the *Texas Register* (36 TexReg 8725).

Section 336.747 is adopted *without change* to the proposed text and will not be republished.

### **Background and Summary of the Factual Basis for the Adopted Rules**

The changes to this chapter will revise the commission's radiation control rules to implement certain provisions of Senate Bill (SB) 1504, 82nd Legislature, 2011 and its amendments to Texas Health and Safety Code (THSC), Chapter 401, also known as the Texas Radiation Control Act (TRCA). This rulemaking establishes provisions for incidental commingling of low-level radioactive waste (LLRW) accepted for disposal at the Texas Compact LLRW disposal facility. This rulemaking also adds new definitions and implements the statutory prohibition on the acceptance of waste of international origin. An additional rulemaking is anticipated to implement other provisions of SB 1504 and THSC at a later date.

The commission recognizes that the revisions in THSC, §401.207(k) address the legislature's attempt to reconcile the goal to assure that there is adequate capacity in the

compact waste disposal facility for party state compact waste and to accommodate current commercial waste processing techniques that may result in the incidental commingling of party state compact waste with some waste from other sources. THSC, §401.207(k) requires the commission, in coordination with the Texas Low-Level Radioactive Waste Disposal Compact Commission (TLLRWDC), to adopt rules establishing criteria and thresholds by which incidental commingling of party state compact waste and waste from other sources at a commercial processing facility is considered and reasonably limited. The criteria and thresholds for commingling established by the commission are binding on any criteria and thresholds that may be established by the TLLRWDC.

### **Section by Section Discussion**

#### *Subchapter H, Licensing Requirements for Near-Surface Land Disposal of Low-Level Radioactive Waste*

##### *§336.702, Definitions*

The commission adopts additional definitions to §336.702. The definition of "Commercial processing" is adopted to implement THSC, §401.207(k). The definition of processing is consistent with the definition of processing in §336.1203 and includes processing activities that occur outside the State of Texas. The commission adopts the definition of "Commingling" which was not defined in SB 1504. The commission adopts the definition of "Incidental" which was not defined in SB 1504. Because new THSC,

§401.207(k) applies to incidental commingling of party state compact waste with waste from other sources, the commission has defined what makes commingling incidental. The adopted definition excludes intentional actions where wastes from different generators are purposefully combined to batch or otherwise group waste from more than one waste generator. Intentional commingling can also be used to batch or group waste from several party state generators to reduce the probability of incidental commingling of waste from other sources at a commercial processing facility utilized by both party state and nonparty state generators. Incidental commingling is an unavoidable or otherwise unintentional consequence of processing LLRW in a commercial facility for volume reduction, waste form improvement, physical considerations, and/or to meet disposal criteria. Processing waste for these purposes are recognized to be beneficial and preferred for some waste streams. The adopted definition is based on some risk to occupational or public health and safety or the environment that prevents the party state compact waste from being kept separate from waste from other sources during processing. The commission adopts the definition of "Party state compact waste" consistent with new THSC, §401.2005(8). The commission adopts the definition of "Waste from other sources" as LLRW that is not party state compact waste. The commission adopts the definition of "Waste of international origin" which is consistent with new THSC, §401.2005(9).

*§336.745, Incidental Commingling of Waste*

The commission adopts new §336.745 to establish criteria and thresholds by which incidental commingling of party state compact waste and waste from other sources at a commercial processing facility is considered and reasonably limited. In response to comments, an applicability subsection was added as §336.745(a). Section 336.745(a) clarifies that the commingling limitations do not apply to the commingling of party state compact waste from different party state generators nor to waste from nonparty state generators subject to the terms and requirements of an agreement of the TLLRWDC for the importation of LLRW into the compact for disposal. Because of the addition of a new subsection (a), the remaining subsections were re-lettered. Section 336.745(b) limits the disposal of LLRW that contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources under the thresholds and criteria authorized in §336.745. Subsection (c) limits the waste from other sources to the thresholds and criteria in subsection (g). Subsection (d) prohibits the disposal of LLRW that contains party state compact waste that has been commingled with waste from other sources if the commingling was not incidental to the processing. Because the statute addresses only incidental commingling, the intentional commingling of waste from different generators is not addressed in this section. Subsection (e) requires the licensee's submission of a report to the executive director to ensure that commercially processed waste comports to the commingling requirements. The licensee must submit a report identifying the generator; the waste processor; the waste processing methods; and the volume, physical form and radioactivity of the processed

waste. The report must certify that party state compact waste has not been commingled with waste from other sources, except for commingling incidental to processing and that the content of waste from other sources does not exceed the thresholds and criteria described in subsection (g). The report must also certify that the party state compact waste has not been commingled, either intentionally or unintentionally, with waste of international origin, that it has not been intentionally commingled with nonparty compact waste, that the processed waste meets the requirements of §336.229, Prohibition of Dilution, and that sealed sources have not been destroyed or damaged to alter the physical form of the sealed source as part of processing. Under existing rule in §336.229, no person may reduce the concentration of radioactive constituents by dilution to meet exemption levels or to change the waste's classification or disposal requirements. If the waste contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources, the report must provide additional information, including: the identity and certification of waste inventory from a party state compact generator at the point of waste entrance into and exit from a processing unit or piece of processing equipment where it has been incidentally commingled; certification that the radioactivity content of waste from other sources does not exceed the limits described in subsection (g) and documentation of the methodology for determining the commingled thresholds and criteria; and certification that the commingling was incidental to the processing of the waste. The licensee may not dispose of LLRW that has been commercially processed without submission of the

report required in §336.745(e). The adopted rule requires that the report must be provided a minimum of five days prior to the receipt of the waste. In response to comments, revised thresholds and criteria are established for waste from other sources that is commingled incidentally with compact state party waste. As originally proposed, the only threshold was based on 5% radioactivity. In response to comments, the thresholds and criteria have been revised and are specified for the type of waste. Because different waste streams are subjected to different processing techniques, a single limitation based only on radioactivity is not feasible. Instead, the commission adopts different limitations that are specific to the type of waste stream. Waste from other sources, after processing, may not exceed the limits established in subsection (g). Subsection (g) defines the commingling thresholds and criteria for Class A LLRW waste streams of Dry Active Waste (DAW), Compactable Trash, Nuclear Utility Resins, and Nuclear Utility Filter waste not to exceed 10% by weight of the processed waste and radioactivity not to exceed either 0.05 microcurie ( $\mu\text{Ci}$ ) of any radionuclide per gram or 10% of the concentration limit for Class A LLRW consistent with §336.362, Appendix E; for Class B and C LLRW that is either Nuclear Utility Resin or Nuclear Utility Filters not to exceed 10% by volume and 10% radioactivity; for Class B and C waste streams not identified in the rule not to exceed 10% by volume, total weight, or total radioactivity; and for Class A waste streams not identified in the rule not to exceed 10% by volume, total weight, total radioactivity, or concentration limit for Class A low-level radioactive waste consistent with §336.362, Appendix E. The criteria and thresholds for

commingling under this section are for waste streams authorized by a disposal license issued under this chapter and are binding on any criteria and thresholds that may be established by the TLLRWDC.

*§336.747, Waste of International Origin*

The commission adopts new §336.747 to implement new THSC, §401.207(c) which prohibits the acceptance and disposal of waste of international origin.

**Final Draft Regulatory Impact Analysis**

The commission adopts the rulemaking under the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" as defined in the act. "Major environmental rule" means a rule the specific intent of which is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The adopted rules in Chapter 336 are not anticipated to adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state because there are no significant requirements imposed on radioactive material licensees. The commission adopts these rules for the

purpose of implementing state legislation that requires the commission to adopt rules addressing the incidental commingling of party state compact waste with waste from other sources. The adopted rules also add definitions and implement a statutory prohibition on the receipt and disposal of waste of international origin.

Furthermore, the adopted rules do not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 only applies to a major environmental rule, the result of which is to: 1) exceed a standard set by federal law, unless the rule is specifically required by state law; 2) exceed an express requirement of state law, unless the rule is specifically required by federal law; 3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) adopt a rule solely under the general powers of the agency instead of under a specific state law. The adopted rules do not exceed a standard set by federal law, an express requirement of state law, a requirement of a delegation agreement, nor adopt a rule solely under the general powers of the agency.

The TRCA, THSC, Chapter 401, authorizes the commission to regulate the disposal of LLRW in Texas. THSC, §§401.051, 401.103, and 401.104 authorize the commission to adopt rules for the control of sources or radiation and the licensing of the disposal of radioactive materials. New THSC, §401.207(k) specifically requires the commission to

adopt rules establishing criteria and thresholds for the incidental commingling of party state compact waste with waste from other sources. In addition, the State of Texas is an Agreement State, authorized by the Nuclear Regulatory Commission (NRC) to administer a radiation control program under the Atomic Energy Act. The adopted rules do not exceed the standards set by federal law. The adopted rules implement new requirements in state statutes enacted in SB 1504.

The adopted rules do not exceed an express requirement of state law. The TRCA, THSC, Chapter 401 establishes general requirements for the licensing and disposal of radioactive materials. The TRCA in THSC, §401.207(k) specifically requires the commission to establish criteria and thresholds relating to the commingling of waste.

The commission has also determined that the adopted rules do not exceed a requirement of a delegation agreement or contract between the state and an agency of the federal government. The State of Texas has been designated as an Agreement State by the NRC under the authority of the Atomic Energy Act. The Atomic Energy Act requires that the NRC find that the state radiation control program is compatible with the NRC's requirements for the regulation of radioactive materials and is adequate to protect health and safety. The commission determined that the adopted rules do not exceed the NRC's requirements nor exceed the requirements for retaining status as an Agreement State.

The commission also determined that the rulemaking is adopted under specific authority of the TRCA, THSC, Chapter 401. THSC, §§401.051, 401.103, and 401.104 authorize the commission to adopt rules for the control of sources or radiation and the licensing of the disposal of radioactive materials. New THSC, §401.207(k) specifically requires the commission to adopt rules establishing criteria and thresholds relating to the commingling of waste.

The commission invited public comment regarding the draft regulatory impact analysis determination during the public comment period. One comment was given by *EnergySolutions*, stating disagreement with the TCEQ determination that the proposed rule is not a major environmental rule. *EnergySolutions* reasoning was, since the proposed rule will have a direct negative financial effect on generators in the "Compact", who will now be required to either increase disposal costs for waste sent to the Regional Compact Facility at an undetermined cost or pay significant surcharges in order to meet the new criteria proposed in the rule. *EnergySolutions* stated that the increased costs to Texas generators and increased occupational radiation exposure to process workers, due to this 5% radioactivity commingling rule, was not included in the benefit analysis developed for the rule.

### **Takings Impact Assessment**

The commission evaluated these adopted rules and performed a preliminary assessment of whether the adopted rules constitute a taking under Texas Government Code, Chapter 2007. The specific purpose of the rules is to implement statutory requirements establishing criteria and thresholds for the disposal of LLRW that contains party state compact waste that has been commingled with waste from other sources. The adopted rules also add definitions and implement a statutory prohibition of the acceptance and disposal of waste of international origin.

Promulgation and enforcement of the adopted rules would be neither a statutory nor a constitutional taking of private real property because the adopted rules do not affect real property. Because the adopted rules do not affect real property, the rules do not burden, restrict or limit an owner's right to real property or reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulation. The adopted rules establish criteria and thresholds relating to the commingling of party state compact waste with waste from other sources and implement a prohibition already established in state statute. Therefore, the adopted rules will not constitute a taking under Texas Government Code, Chapter 2007.

### **Consistency with the Coastal Management Program**

The commission reviewed the adopted rules and determined that the rule is neither identified in, nor will it affect, any action/authorization identified in Coastal

Coordination Act Implementation Rules in 31 TAC §505.11, relating to Actions and Rules Subject to the Texas Coastal Management Program (CMP). Therefore, the proposed rulemaking action is not subject to the CMP.

The commission invited public comment regarding the consistency with the coastal management program during the public comment period. Comments were not received on the Coastal Management Program.

### **Public Comment**

The commission held a public hearing on January 12, 2012. The comment period closed on January 23, 2012. The commission received comments from Waste Control Specialist (WCS), *EnergySolutions*, Studsvik, Advocates for Responsible Disposal in Texas (ARDT), Entergy Services, Inc. representing Vermont Yankee, Cox, Smith, and Matthews (CSM) representing the South Texas Project Nuclear Operating Company, Luminant Power, which owns and operates Comanche Peak Nuclear Power Plant, the Southeast Compact Commission, the Sustainable Energy and Economic Development (SEED) Coalition, Texas Radiation Advisory Board (TRAB), and Robert Singleton representing himself. The commission has been working in coordination with the TLLRWDC on this rulemaking through an appointed TLLRWDC Rules Committee. Comments have been received and discussed with the TLLRWDC as part of the commission's coordination efforts. One comment received supported the rulemaking,

eight comments received were against the rulemaking, and nine, including the TLLRWDC, suggested changes.

## **Response to Comments**

### *Comments on Definitions*

WCS commented that the definition of commingling in §336.702(6) be changed to clarify that this definition only applies to the commingling of party state compact waste with waste from other sources.

**Rather than change the definition of commingling, the commission adopts an applicability subsection in new §336.745(a) to explain that the limitations and thresholds established in the section only limit the incidental commingling of party state compact waste with waste from other sources and do not apply to party state compact waste that is commingled with other party state compact waste or waste that is subject to an agreement for importation into the Texas Compact by the Texas Low-Level Radioactive Waste Compact Commission.**

ARDT and CSM commented that waste generated from outside the Compact, that is approved by the TCEQ and the Compact Commission for importation and disposal in the Texas Compact Waste Disposal Facility should become "compact waste" and

therefore, allowed to be commingled with party state compact waste without limitation, with the criteria that the out-of-compact importer will still pay the import rate, only import the amount that was authorized by the TLLRWDC, and the waste will be examined as being compatible for disposal at the facility. ARDT and CSM commented that the definition of "party state compact waste" should consequently be removed and replaced with the following definition for the new term "compact waste", which is from THSC, §401.2005(l): "Compact waste – Low-level radioactive waste that, (A) is generated in a host state or a party state or, (B) is not generated in a host state or a party state but has been approved for importation to this state by the compact commission under Section 3.05 of the compact established under Section 403.006 Texas Health and Safety Code." ARDT and CSM commented that, based on this change, the phrase "party state" should be removed from the following rules: §§336.702(16), 336.702(27), 336.745(a), 336.745(b), 336.745(c), 336.745(d)(2), and 336.745(d)(3). CSM stated that, based on this change, §336.745(a) should be removed in entirety.

**The commission does not agree with the suggestion to remove the definition of "party state compact state waste" and use "compact waste," instead. The limitations on incidental commingling of waste established in this rulemaking do not apply to waste that is approved for importation for disposal in the Texas Low-Level Radioactive Waste Disposal Compact by the TLLRWDC. In response to comments, a new §336.745(a), titled**

**"Applicability", was added to the rule to clarify conditions of commingling that apply to the rule and to recognize that waste may be subject to terms of an agreement with the TLLRWDC on imported waste. The commission believes that these changes are sufficient to clarify this position: thus the definition of party state compact waste does not need to be modified; the term "party state compact waste" does not need to be changed to "compact waste"; and proposed §336.745(a), now §336.745(b), does not need to be removed. The definition of "party state compact waste" is consistent with the definition in TRCA.**

WCS commented that the definition of commercial processing in §336.702(5) should have the terms "storage" and "transfer" removed since storage and transfer refer to the movement of containers and does not require handling or manipulation of the radioactive material.

**The commission respectfully does not agree with this comment. The definition of processing in §336.1203(9) includes storage and transfer as being part of processing. This processing definition is also consistent with the statutory definition in THSC, §401.003(16). No changes have been made in response to this comment.**

WCS commented that the phrase "Any mixing, blending, down-blending, diluting, or other" should be removed from the definition of commingling in §336.702(6) because listing the processes in §336.702(6) is redundant since the processes are listed in the commercial processing definition at §336.702(5). WCS stated that including dilution in the commingling definition is confusing since dilution is prohibited by §336.229. ARDT commented that the words "down-blending" and "diluting" should either be removed from the commingling definition or the definition should be changed to explain why down-blending and diluting are included in the definition.

**The commission agrees that the attempt to provide descriptors in the proposed definition of commingling added confusion. In response to comment, §336.702(6) has been modified by replacing "mixing, blending, down-blending, diluting, or other processing" with "process."**

The Southeast Compact Commission commented that the definition of "commingling" in §336.702(6) should be modified as "any unintentional mixing, blending or diluting that combines radioactive substances from two or more generators as a result of commercial processing of radioactive substances." The TLLRWDC commented that "incidental commingling" and "intentional commingling" should be further discussed and defined. This discussion should

clearly identify the difference between the intentional commingling of party state LLRW versus the intentional commingling of non-party and party wastes.

**Commingling can be intentional or unintentional. This rulemaking addresses *incidental* commingling of party state compact waste with waste from other sources, as required by SB 1504. For purposes of this rulemaking, incidental means unavoidable or otherwise unintentional actions that prevent party state compact waste from being kept separate from waste from other sources because of undue risk to occupational or public health and safety and the environment. This rulemaking does not address intentional commingling of waste, which could be accepted for disposal into the compact disposal facility if all of the waste were generated in a party state or approved for importation for disposal by the TLLRWDC. In response to comment, a discussion has been added in Section By Section of the preamble on variations of intentional commingling of waste. Additionally, the definition of incidental was modified to clarify that commingling was the result of unavoidable or otherwise unintentional actions.**

The Southeast Compact Commission states that the proposed definition of "incidental" in §336.702(16) is unclear and misleading and suggests using the

dictionary definition for incidental: "accompanying but not a major part of something" or "liable to happen as a consequence."

**The commission respectfully does not agree with this comment. The suggested definitions proffered by the Southeast Compact Commission are not sufficient to determine readily whether or not commingling is incidental; they are too ambiguous. The definition of "Liable to happen as a consequence" does not differentiate between intentional or unintentional which is an important aspect of processing decisions and of SB 1504. The association in the definition to undue risk to occupational or public health and the environment should be familiar to licensees who practice "ALARA" (as low as reasonably achievable) principles encouraged by the NRC and Agreement States for safe radiation protection programs. No changes have been made in response to this comment.**

ARDT and CSM commented that the commission should clarify why "containerized class A waste" (§336.702(7)) is the only waste type defined in the rules.

**The definition of "Containerized Class A Waste" was already present in Subchapter H before this rulemaking for other licensing considerations and**

**was not proposed for change as part of this rulemaking. It is a category of Class A that is subject to special requirements under a disposal license issued under Subchapter H of Chapter 336. No changes have been made in response to this comment.**

TRAB commented that the regulations should include a definition of a waste generator.

**The radioactive substances rules define waste generator in §336.1303(7). A generator is defined as a "person, partnership, association, corporation, or any other entity whatsoever that, as part of its activities, produces low-level radioactive waste and is subject to the Compact." This definition has not been proposed to change. No changes have been made in response to this comment.**

*Comments on Limitations of Incidental Commingling*

WCS, CSM, Studsvik, and ARDT commented that the rules should be clear that commingling of party state compact waste with other party state compact waste from several generators be allowed. TLLRWDC recommended that party state waste generators attempt to intentionally commingle, or otherwise batch, their LLRW to reduce the probability of incidental commingling at the processor site. TLLRWDC also recommended that the preamble include discussion of the differences between

intentional commingling of party state waste sources and the intentional commingling of party and nonparty waste streams. WCS stated that the following sentence – "In general, intentional commingling of LLRW from more than one generator is prohibited in order to attribute each waste shipment to a specific generator." - in the third paragraph of the section "Public Benefits and Costs" be removed or changed to clarify that this rule does not limit the commingling of waste from two-party state compact waste generators. ARDT commented that §336.745(d)(2) should be changed to allow the acceptance for disposal of waste from different party state compact waste generators that were commingled at a commercial processing facility and also to provide a method for commingled compact waste to be documented and attributed to the actual generator for tracking and pricing purposes.

**In response to comments, the rule has been revised to add a statement on applicability (§336.745(a)) to clarify that commingling of party state compact waste with other party state compact waste from several generators is allowed. The sentence in "Public Benefits and Costs" cannot be altered since this section does not appear in the adoption preamble. The commission has added discussion in the Section By Section of the preamble on variations of intentional commingling of waste. The commission believes the new applicability rule in §336.745(a) is sufficient, and that the definition in §336.702(6) and that §336.745(e)(2), do not need to be changed to clarify**

**this position. The thresholds and criteria established in §336.745 do not apply to party state compact waste that is commingled with other party state compact waste or waste that is subject to an importation agreement for disposal in Texas by the TLLRWDC.**

WCS commented that it supports the incidental commingling limit of 5% by radioactivity since a higher limit could allow nonparty state waste to be disposed in the Compact Waste Facility at compact rates and without the additional 20% surcharge that is applicable to all nonparty state waste.

**The commission has modified the 5% by radioactivity limitation, based on the comments that such a limit is not technically practical for the processing of waste from party state generators and falls short of providing thresholds and criteria by waste stream. The incidental commingling thresholds and criteria are still designed to minimize as far as practical the amount of nonparty state waste being disposed in the Compact Waste Disposal Facility (without approval for importation for disposal by the TLLRWDC), while allowing for the benefits of processing to be realized.**

ARDT, Entergy Services, Energy*Solutions*, the Southeast Compact Commission, and CSM commented that the 5% by radioactivity limit is arbitrary, unreasonable,

technically impractical, would result in the disposal of as-generated volumes instead of as-processed volumes, which would consequently decrease the available volume in the Compact Waste Disposal Facility, limit treatment options, would result in higher costs, and would increase the radiation exposure and other safety issues to workers. Studsvik, ARDT, Entergy Services, *EnergySolutions*, and CSM commented that the 5% by radioactivity limit should be either higher or based on volume or mass instead of radioactivity. TLLRWDC recommended that the limits be modified and based on waste streams and radionuclides of concern rather than a percentage of total radioactivity. TLLRWDC also recommended that some waste classification or waste streams, however, should have limits based on radioactivity (i.e., Class C LLRW such as nuclear power plant resins).

Studsvik commented that using volume as the unit of measure creates more certainty, improves compliance and recordkeeping accuracy, reduces operational burdens, and minimizes worker dose. Studsvik commented that through its operational knowledge, it is confident that it can meet a 5% by volume commingling limitation. Studsvik stated that the rule could recognize the challenges of radioactivity measurement under certain conditions and allow for alternatives to that requirement while remaining faithful to the intent of SB 1504.

*EnergySolutions* commented that qualitative controls (i.e., simple segregation for

sequencing processing by point-of-origin) are adequate and that qualitative evaluations of potential cross-contamination should be considered for full inventories to be campaigned, not individual packages. *EnergySolutions* also commented that §336.745(e)(3)(B) should be removed.

The Southeast Compact Commission commented that the 5% limit is impossible to demonstrate.

ARDT commented that the rule goes "too far" and would treat waste generated in Texas or Vermont as if it is imported waste if it experiences commingling of more than 5% of the total radioactivity with out-of-Compact waste at commercial processing facilities. ARDT suggested language that "the processor shall certify to TCEQ that the waste has not been downblended or blended, mixed or commingled with LLRW that was not generated in the party states except for waste incidental to the use of commercial processing facilities."

The Southeast Compact Commission commented that TCEQ should consider an alternative to the 5% radioactivity limitation as an approach for the limitation of incidental cross-contamination at commercial processing facilities.

*EnergySolutions*, *Entergy Services*, CSM, and ARDT commented that the reasonable

fraction of commingling is dependent on the processing technique used and that the rule should be based on the type of processing or treatment that the waste has undergone and the volume, mass, form, and concentration of the waste involved.

**The commission respectfully disagrees with the complete removal of radioactivity as a unit of measure concerning commingling limits, although understands the concerns with a 5% limit. The commission does agree that volumetric limits should also be utilized for measuring commingling. The radioactive disposal license for the Compact Waste Disposal Facility imposes volumetric and radioactivity limits for waste that may be accepted for disposal. Therefore, both the volume and the radioactivity added by waste to the Compact Waste Disposal Facility due to incidental commingling must be restricted due to their potential impact to license limitations. The commission has modified the 5% by radioactivity rule based on comments that such a limit is not technically feasible. Waste processing can be divided into specific waste stream categories according to waste type and waste processing. DAW or compactable trash is low radioactivity (Class A LLRW) and is typically processed through compaction and incineration, and possibly supercompaction of the resulting radioactive ash. Resins typically have high radioactivity values (Class B/C LLRW) and are treated using other techniques, such as the THOR<sup>®</sup> process by the**

**Studsvik facility in Erwin, Tennessee. The radioactivity commingling limits have been modified so that there are separate limits for Class A and Class B/C LLRW. Class B/C LLRW has a 10% total radioactivity commingling limit and Class A has two limits: commingling may not exceed 0.05 microcurie (1.85 kilobecquerels) per gram or 10% of the concentration limit for Class A LLRW consistent with radioactivity levels in §336.362. Class A LLRW limits for incidental commingling are structured so that waste classification does not change and extends the use of existing concentration limits in TCEQ rules for other LLRW streams. The different approach for Class A LLRW is in recognition of the different physical properties and radioactivity levels of Class A LLRW up to the Class A limit and its subsequent processing. The 0.05 microcurie per gram limit was based on the exemption limits for specific radionuclides in §336.225(a). Class B/C LLRW radioactivity is necessarily limited for incidental commingling due to the potential impact of this higher radioactivity to the license limitations. The commission respectfully disagrees with the comments that the rule should have exclusively qualitative limits instead of quantitative limits. The commission has modified the rule so that the commingling limits are still quantitative, but set technically achievable commingling limits per waste stream in recognition of the waste process that will limit the amount of waste from other sources being commingled with party state compact waste. Waste**

**streams identified in the rule are DAW, compactable trash, nuclear utility resins, and nuclear utility filters for Class A LLRW and nuclear utility resins and filters for Class B/C LLRW. If a particular waste stream is not identified in the rule, adopted §336.745(g)(6), limits the waste from other sources in that waste to a percentage by volume, weight, total radioactivity, and concentration limits.**

The SEED Coalition and Robert Singleton commented that the 5% limit should be reduced to 1% of radioactivity since it is more protective, that a high commingling radioactivity limit may result in commingling becoming a standard business practice instead of incidental, and that the health and safety of Texas should be considered above processing and disposal costs. The SEED Coalition also stated that an additional cap by volume should be incorporated into the rule.

**The commission respectfully disagrees with this restrictive limitation. A limit of 5% or 1% by radioactivity has been shown to be technically unachievable without a significant increase in cost and radiation exposure to workers at processing facilities. If thresholds and criteria are restrictive, beneficial processing to reduce waste volume or improve waste form may not be performed resulting in a decrease in the available disposal volume at the Compact Waste Disposal Facility. The commission believes that the**

**revised commingling limits by waste stream and the additional required certifications will minimize, to the extent achievable, the amount of waste from other sources being commingled with party state compact waste.**

ARDT commented that the commingling limit should be applied to the raw, pre-processed waste as it is placed as feed stock to waste treatment equipment and that any further commingling would represent only machine residues that can be expected to be incidental quantities in both volume and radioactivity content.

**The commission agrees that the commingling limit should apply to the raw, pre-processed waste as it is placed as feed stock to waste treatment equipment. Radionuclide inventories should be certified before the waste is processed. Pre-sorting to this waste stream would reduce the waste entering the processing unit or piece of processing equipment where commingling is unavoidable. In response to comment, a new requirement and certification has been added to the reporting that identifies the waste inventory at two points - upon entering as well as exiting a processing unit or piece of processing equipment where incidental commingling may occur.**

ARDT stated that the rule must have reasoned justification in accordance with Texas Government Code, §2001.033 and that the commission should provide the legal and

technical basis for limiting commingling at 5% of total radioactivity in the rulemaking preamble.

**The commission believes that it has provided the reasoned justification for this rulemaking. The originally proposed 5% of total radioactivity commingling limit has been modified in response to comments, this comment is addressed by that change in rule language. The commission has explained the rationale for the various thresholds and criteria established in §336.745(g).**

WCS commented that the report submittal time in §336.745(d)(1), now re-lettered as subsection (e)(1), should be changed from ten days prior to receipt to five days prior to receipt to coincide with WCS's waste acceptance process and shipment request process which has a five-day advance.

**Approved Waste Acceptance Criteria in the license for the Compact Waste Disposal Facility, the TCEQ Waste Shipment Verification Form, and WCS procedures require that information on waste shipments be submitted to WCS and the TCEQ at least five days prior to planned receipt of waste. The commission agrees with the comment and to maintain consistency §336.745(e)(1) will be changed to reflect at least a five-day advance**

**submittal time instead of ten days.**

WCS and Energy *Solutions* commented that in proposed §336.745(d)(2), now re-lettered as subsection (e)(2), the word "waste" should be added after the phrase "party state compact" and the phrase "that has" is repeated and should be corrected.

**The proposed rules published in the *Texas Register* do not have these errors. The commentators may have been reading an earlier draft version of the preamble and not the version proposed in the *Texas Register*. No changes have been made in response to this comment.**

WCS commented that §336.745(d)(2), now re-lettered as subsection (e)(2), should be rewritten to the following: "If commercially processed waste from other sources has not been commingled with party state compact waste the processor and licensee shall only be required to certify that waste from other sources has not been commingled with party state compact waste."

**The commission respectfully disagrees with this suggested rewriting of §336.745(e)(2). If a processor has only processed party state compact waste, the rules as adopted are sufficient to allow the processor to certify that there would be no waste from other sources commingled with the party**

**state compact waste. The commission has revised the rule to require a certification that there is no commingling of waste of international origin. No changes have been made in response to this comment.**

*EnergySolutions* commented that §336.745 is specific to waste sent for processing and then returned for disposal at the compact facility, but should be changed to include waste exported for processing and subsequent disposal at a non-compact facility.

**The commission respectfully disagrees with this comment. This rulemaking is based on SB 1504 which is concerned only with the disposal of waste in the Compact Waste Disposal Facility. The inclusion of waste exported from the TLLRWDC for disposal in a non-compact facility is outside the scope of this rulemaking and the authority of the commission. Export of party state compact waste is under the authority of the TLLRWDC and appropriate terms may be added by the TLLRWDC with approval to export for processing. No changes have been made in response to this comment.**

ARDT commented that §336.745 should include provisions for disposal of waste that has been processed at a "certified" waste processor. ARDT stated that the processes and procedures utilized at the facilities of a "certified" waste processor could be initially and subsequently periodically audited by the TCEQ, or an independent authority, to verify

that waste treated at their facility complies with TCEQ rules for waste form, stability, packaging and commingling. ARDT also commented that waste shipments from a certified waste processing should not require advance notification of waste shipments by the licensee to TCEQ.

**Certification of waste processors outside of Texas is not within the jurisdiction of the commission. The commission has authority over what waste will be placed in the Compact Waste Disposal Facility and each waste shipment must be approved and accepted by the commission's resident inspectors. The waste manifest will be examined and if the waste does not meet the license and the approved waste acceptance criteria, it will be rejected. Waste processed at a commercial processing facility is subject to the reporting requirements of §336.745(e) and, if it includes incidentally commingled waste from other sources, it must meet the criteria and thresholds of subsection (g). No changes have been made in response to this comment.**

The SEED Coalition commented that the proposed rule provides no oversight to ensure that processors comply with the TCEQ policy and no penalties for violating it; therefore, the rule should include significant penalties and establish an enforcement mechanism for processors who inaccurately assess or falsely report the amount of commingled

waste.

**The commission does not have jurisdiction over waste processors that are outside of Texas and thus is not able to provide oversight or enforce penalties. The commission has authority to accept or reject any waste shipment for disposal in the Compact Waste Disposal Facility. Each waste shipment must be approved by the commission's resident inspectors who will examine the waste manifest. If the waste disposal licensee is receiving waste processed at a commercial processing facility, there are reporting requirements under §336.745(e) and, if the commercially processed waste includes incidentally commingled waste from other sources, the waste from other sources must meet the criteria and thresholds of §336.745(g). Deliberate falsification of information on the waste manifest or other reports submitted to the agency may be a criminal violation and may be subject to enforcement. No responses have been made in response to this comment.**

ARDT commented that TCEQ should consider adding language that would exempt certain types of waste, such as DAW, from the commingling rule that fall below a certain volume, mass or radioactivity threshold.

**The commingling limitations have been modified and are specific to the waste type.**

WCS commented that party state compact waste may be subject to importation and out of compact disposal rates due to insufficient data to certify that commingling above the 5% radioactivity limit has not occurred. WCS stated that the certifications required to comply and properly document that the waste meets the criteria of §336.745(d)(3), now re-lettered as subsection (e)(3), are heavily dependent on the information provided by the generator and/or commercial processor and requires WCS to take on additional liability. Therefore, WCS will require its own certifications and supporting documentation by the original generator and it expects resistance from the processors in providing this information about their customers to WCS. WCS stated that the following verbiage should be added to the rule: "If incidental commingling of waste during commercial processing results in a contribution of more than 5% of the total radioactivity from waste from other sources, the generator and/or waste processor is unable to definitively determine the contribution from waste from other sources, or the commingling was not incidental, then the generator must follow the process for importation approval of the waste and that waste shall be subject to out of compact disposal rates."

**If waste from other sources is commingled with compact state party waste**

**and cannot meet the reporting or threshold requirements of §336.745, the generator of the waste from other sources, or other persons as determined by the TLLRWDC, may seek an agreement from the TLLRWDC for the importation of the waste into Texas for disposal. No changes have been made in response to this comment.**

ARDT commented that generators should not be forced to sign documents for waste enroute to the compact facility after processing, but that the processor should complete and sign these documents since the processors understand their abilities and techniques.

**This rulemaking does not require generators to sign documents for waste enroute to the Compact Waste Disposal Facility after processing. The licensee in §336.745(e), who is required to file the report described in this rule, is the operator of the Compact Waste Disposal Facility who has a commercial radioactive waste disposal license and not the generator. No changes have been made in response to this comment.**

ARDT stated that the processor should have the responsibility to notify the generator of the post processing results for their waste, such as volume and radioactivity prior to being shipped to obtain concurrence from the generator.

**It is not within the jurisdiction of the commission to require a processor outside of Texas to notify the generator. In order for commercially processed waste to be acceptable for disposal at the compact waste disposal facility, generators and commercial processors should have understanding of these rules to assure that the reporting requirements and limitations can be met. It is the generator's responsibility to ensure that rules can be met prior to making a decision to process their waste. No changes have been made in response to this comment.**

WCS commented that §336.745(d)(3)(B) and (C), now re-lettered as subsection (e)(3)(B) and (C), do not provide any guidance of waste streams that do not meet, or cannot be proven to meet, the incidental commingling criteria, and the language should be changed to more clearly show the intent of these two sections.

**The modification of the commingling limitation based on waste streams found in the adopted §336.745(g) should supply the requested guidance and clarification on the thresholds and criteria to limit specific waste streams. If waste from other sources is commingled with compact state party waste and cannot meet the reporting or threshold requirements of §336.745, the generator of the waste from other sources, or other persons as determined**

**by the TLLRWDC, may seek an agreement from the TLLRWDC for the importation of the waste into Texas for disposal.**

The SEED Coalition and Robert Singleton commented that a provision should be included in the rule that prohibits waste to be disposed of in Texas, or returned to the state, if it has been processed by any processor that accepts international waste or until the processor can certify that no international waste could get commingled with the compact waste. *EnergySolutions* commented that it would certify wastes processed at their facility from the TLLRWDC as having no international component.

**The commission respectfully disagrees with the comments that waste processed at a facility that had processed any international waste should be automatically rejected from being disposed in the Compact Waste Disposal Facility. Processing international waste is uncommon in the United States and waste processors are able to certify that no international waste has been commingled with domestic waste. To clarify the prohibition in this rule, a provision has been added requiring a certification that party state compact waste has not been commingled with waste of international origin.**

*EnergySolutions* commented that requiring waste generators in the Texas Compact to obtain an export permit before making arrangements to process LLRW at facilities

located outside of the Texas Compact could impair the rights of parties to existing contracts by restricting future exports of LLRW to the processing facilities and would act to penalize *EnergySolutions* and its processing facilities. *EnergySolutions* stated that the following sentence be added to §336.745: "The existence of an agreement governing the export for processing of waste at a facility outside of the Texas Compact that was entered into prior to the adoption of these regulations governing 'Exportation of Waste for the purposes of processing,' in which case this factor shall be dispositive so as to authorize the Export Permit."

**Export permits for party state compact waste to be processed outside of Texas or Vermont is the jurisdiction of the TLLRWDC and thus, the commission is not able to address this comment in this rulemaking. No changes have been made in response to this comment.**

The TRAB commented that the preamble should include a discussion of sealed sources that might be subject to processing. The TLLRWDC commented that sealed source should be defined and that sealed sources should not be processed to destroy or intentionally degrade the physical attributes of the source and therefore, should be addressed as a waste stream subject to incidental commingling.

**The definition for sealed sources is found in the radioactive substance rules**

**at §336.2(122) as follows: "Sealed source--Radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions that are likely to be encountered in normal use and handling." The commission intends that sealed sources would not be processed in a manner that would have the possibility of the sealed source being incidentally commingled with other waste. The commission has added a certification requirement to the rule to address this comment.**

The TRAB commented that the regulations should state when a radioactive substance becomes a waste.

**Part of the definition of waste in §336.2(77)(A)(i) is that waste is discarded or unwanted. This is a determination made by the licensed possessor of a radioactive substance at the time that a substance is no longer useful or when a substance can no longer be put to practical beneficial use. The commission does not have authority to declare timing of when a radioactive substance becomes a waste, if the substance is discarded or unwanted in a state other than Texas, or even by a Texas radioactive material licensee if licensed by the Department of State Health Services. If the substance is declared and/or manifested as a waste, then the commission would**

**consider it a waste. No changes have been made in response to this comment.**

The TRAB commented that this rulemaking should include clarification on how the 5% by radioactivity incidental commingling rule would be applied to the introduction of a new radionuclide to a waste, compared to how the rule applies to a radionuclide already in the waste that is increased in radioactivity due to incidental commingling.

**The commission appreciates that distinction made by the TRAB. The 5% by radioactivity incidental commingling rule that was proposed was for total radioactivity and was not determined per radionuclide. The proposed commingling limits have been modified and now include limits based on total radioactivity and the concentration values of specified radionuclides.**

*EnergySolutions* commented that it disagrees with the TCEQ determination that this proposed rule is not a "major environmental rule" since the proposed rule will have a direct negative financial effect on generators in the compact, who will now be required to either increase disposal costs for waste sent to the Regional Compact Facility at an undetermined cost or pay significant surcharges in order to meet the new criteria proposed in the rule. *EnergySolutions* stated that the increased costs to Texas generators and increased occupational radiation exposure to process workers due to this

5% radioactivity commingling rule was not included in the benefit analysis developed for the rule.

**The adopted rules have been revised from proposal to establish different limitations specific to waste stream type for party state compact waste commingled with waste from other sources. As explained in the Final Regulatory Impact Analysis, the commission determined that this rulemaking is not a major environmental rule. If waste from other sources, that is commingled with party state compact waste, cannot meet the limitations established in these rules, the generator of the waste from other sources, or other persons as determined by the TLLRWDC, can seek an agreement from the TLLRWDC to allow importation of the waste to Texas for disposal at the Compact Waste Disposal Facility.**

**SUBCHAPTER H: LICENSING REQUIREMENTS FOR NEAR-SURFACE  
LAND DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE**

**§§336.702, 336.745, 336.747**

**Statutory Authority**

The amendment and new rules are adopted under the Texas Radiation Control Act, Texas Health and Safety Code (THSC), Chapter 401; THSC, §401.011, which provides the commission authority to regulate and license the disposal of radioactive substances, the commercial processing and storage of radioactive substances, and the recovery and processing of source material; §401.051, which authorizes the commission to adopt rules and guidelines relating to control of sources of radiation; §401.103, which authorizes the commission to adopt rules and guidelines that provide for licensing and registration for the control of sources of radiation; §401.104, which requires the commission to provide rules for licensing for the disposal of radioactive substances; §401.201, which provides authority to the commission to regulate the disposal of low-level radioactive waste; §401.207, which authorizes the commission to adopt rules establishing criteria and thresholds; and §401.412, which provides authority to the commission to regulate licenses for the disposal of radioactive substances. The adopted amendment and new rules are also authorized by Texas Water Code, §5.103, which provides the commission with the authority to adopt rules necessary to carry out its powers and duties under the water code and other laws of the state.

The adopted amendment and new rules implement THSC, Chapter 401, including §§401.011, 401.051, 401.057, 401.059, 401.103, 401.104, 401.151, 401.201, 401.2005, 401.207, 401.301, and 401.412.

**§336.702. Definitions.**

Terms used in this subchapter are defined in §336.2 of this title (relating to Definitions). Additional terms used in this subchapter have the following definitions.

(1) Active maintenance--Any significant remedial activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity) and §336.725 of this title (relating to Protection of Individuals from Inadvertent Intrusion) are met. Active maintenance includes ongoing activities such as the pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.

(2) Buffer zone--A portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the disposal site.

(3) Chelating agent--A chemical or complex which causes an ion, usually a metal, to be joined in the same molecule by relatively stable bonding, e.g., amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxycarboxylic acids, and polycarboxylic acids (e.g., citric acid, carboic acid, and gluconic acid).

(4) Commencement of major construction--Any clearing of land, excavation, or other substantial action that would adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.

(5) Commercial processing--The storage, extraction of materials, transfer, volume reduction, compaction, incineration, solidification, or other separation and preparation of radioactive substances from other persons for reuse or disposal,

including any treatment or activity that renders the waste less hazardous, safer for transport, or amenable to recovery, storage, or disposal.

(6) Commingling--Any process that combines radioactive substances from two or more generators resulting from the commercial processing of radioactive substances.

(7) Containerized Class A waste--Class A low-level radioactive waste which presents a hazard because of high radiation levels. High radiation levels are radiation levels from an unshielded container that could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 millisievert) in one hour at 30 centimeters from any surface of the container that the radiation penetrates.

(8) Custodial agency--A government agency designated to act on behalf of the government owner of the disposal site.

(9) Disposal site--That portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.

(10) Disposal unit--A discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal, the disposal unit is usually a trench.

(11) Engineered barrier--A man-made structure or device that is intended to improve the land disposal facility's ability to meet the performance objectives in this subchapter.

(12) Explosive material--Any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

(13) Government agency--Any executive department, commission, independent establishment, or corporation, wholly or partly owned by the United States of America or the State of Texas and which is an instrumentality of the United States or the State of Texas; or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government.

(14) Hydrogeologic unit--Any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.

(15) Inadvertent intruder--A person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction,

or other pursuits in which the person might be unknowingly exposed to radiation from the waste.

(16) Incidental--Unavoidable or otherwise unintentional actions that, with respect to commingling of waste, prevents party state compact waste from being kept separate from waste from other sources without undue risk to occupational or public health and safety or the environment.

(17) Intruder barrier--A sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder meet the performance objectives set forth in this subchapter, or engineered structures that provide equivalent protection to the inadvertent intruder.

(18) Monitoring--Observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.

(19) Party state compact waste--Low-level radioactive waste generated in a party state of the Texas Low-Level Radioactive Waste Disposal Compact.

(20) Pyrophoric material--

(A) Any liquid that ignites spontaneously in dry or moist air at or below 130 degrees Fahrenheit (54.5 degrees Celsius); or

(B) Any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

(21) Reconnaissance-level information--Any information or analysis that can be retrieved or generated without the performance of new comprehensive site-specific investigations. Reconnaissance-level information includes, but is not limited to, relevant published scientific literature; drilling records required by the commission or other state agencies, such as the Railroad Commission of Texas and the Texas Natural Resources Information System; and reports of governmental agencies.

(22) Site--The contiguous land area where any land disposal facility or activity is physically located or conducted including adjacent land used in connection with the land disposal facility or activity, and includes soils and groundwater contaminated by radioactive material. Activity includes the receipt, storage, processing, or handling of radioactive material for purposes of disposal at a land disposal facility.

(23) Site closure and stabilization--Those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site remain stable and not need ongoing active maintenance.

(24) Stability--Structural stability.

(25) Surveillance--Observation of the disposal site for purposes of visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.

(26) Waste--See "low-level radioactive waste" as defined in §336.2 of this title.

(27) Waste from other sources--Any low-level radioactive waste that is not party state compact waste.

(28) Waste of international origin--Low-level radioactive waste that originates outside of the United States or territory of the United States, including waste subsequently stored or processed in the United States.

**§336.745. Incidental Commingling of Waste.**

(a) Applicability. This section does not limit party state compact waste that is commingled with other party state compact waste during processing nor low-level radioactive waste that is subject to an agreement of the Texas Low-Level Radioactive Waste Disposal Compact Commission for the importation of low-level radioactive waste into the compact for disposal. The terms of an agreement of the Texas Low-Level Radioactive Waste Disposal Compact Commission may provide requirements for any processed waste. Acceptance and disposal of waste for all sources by the licensee is limited to the waste specifically authorized by the license issued under this chapter.

(b) A licensee authorized to dispose of waste from other persons may not dispose low-level radioactive waste that contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources except as provided in this section.

(c) A licensee may dispose low-level radioactive waste that contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources that does not exceed the thresholds and criteria established in subsection (g) of this section.

(d) A licensee may not dispose low-level radioactive waste that contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources unless the commingling was incidental to the processing of the waste and processing has not altered the waste class in accordance with §336.229 of this title (relating to Prohibition of Dilution).

(e) No less than five days prior to the receipt by the licensee of low-level radioactive waste that has been commercially processed:

(1) The licensee shall submit a report to the executive director that identifies the generator of the low-level radioactive waste by name, address, and license number; the processor of the low-level radioactive waste by name, address, and license number; the methods used to process the waste; and the volume, physical form and activity of the processed waste received for disposal at the compact waste disposal facility;

(2) If the waste does not contain party state compact waste that has been commingled at a commercial processing facility with waste from other sources, the licensee and the processor shall certify that party state compact waste has not been commingled with low-level radioactive waste from other sources, including commingling with waste of international origin; and

(3) If the waste contains party state compact waste that has been commingled at a commercial processing facility with waste from other sources, the report submitted under paragraph (1) of this subsection must:

(A) identify and certify the waste inventory from a party state compact generator at the point of waste entrance into and exit from a processing unit or piece of processing equipment where it has been commingled with waste from other sources;

(B) certify that the waste from other sources does not exceed the thresholds and criteria established in subsection (g) of this section and provide documentation of how compliance with the thresholds and criteria in subsection (g) of this section were determined;

(C) certify that the commingling of the waste was incidental to the processing of the waste and that the commingled waste could not have been kept separate without undue risk to occupational or public health and safety or the environment;

(D) certify that no waste of international origin was either intentionally or unintentionally commingled and that no nonparty compact waste was intentionally commingled with party state compact waste during processing;

(E) certify that processed waste meets the requirements of §336.229 of this title; and

(F) certify that sealed sources have not been destroyed or damaged to alter the physical form of the sealed source as part of processing.

(f) The licensee may not dispose of low-level radioactive waste that has been commercially processed without submitting the report required in subsection (e) of this section.

(g) Waste streams allowed for acceptance for disposal by the licensee are specifically authorized by the disposal license issued under this chapter. Waste from other sources that is incidentally commingled with compact party state waste may not exceed the thresholds and criteria established in the subsection.

(1) Dry Active Waste or Compactable Trash. Authorized common trash,

Class A low-level radioactive waste-after processing, waste from other sources may not exceed 10% of the total weight of the processed waste. The radioactivity of waste from other sources may not exceed:

(A) 0.05 microcurie (1.85 kilobecquerels) for any radionuclide per gram; or

(B) 10% of concentration limit for Class A low-level radioactive waste consistent with §336.362 of this title (relating to Appendix E. Classification and Characteristics of Low-Level Radioactive Waste).

(2) Nuclear Utility Resins. Authorized Decontamination, Demineralization, or Secondary System Resins, Class A low-level radioactive waste threshold-after processing, waste from other sources may not exceed 10% of the total weight of the processed waste. The radioactivity of waste from other sources may not exceed:

(A) 0.05 microcurie (1.85 kilobecquerels) for any radionuclide per gram; or

(B) 10% of concentration limit for Class A low-level radioactive waste consistent with §336.362 of this title.

(3) Nuclear Utility Resins. Authorized Decontamination, Demineralization, Clean-up, or Secondary System Resins, Class B or C low-level radioactive waste threshold-after processing, waste from other sources may not exceed 10% of the total volume and radioactivity of the processed waste.

(4) Nuclear Utility Filters. Authorized filters and associated waste, Class A low-level radioactive waste threshold-after processing, waste from other sources may not exceed 10% by total weight of the processed waste. The radioactivity of waste from other sources may not exceed:

(A) 0.05 microcurie (1.85 kilobecquerels) for any radionuclide per gram; or

(B) 10% of concentration limit for Class A low-level radioactive waste consistent with §336.362 of this title.

(5) Nuclear Utility Filters. Authorized filters and associated waste, Class B or C low-level radioactive waste threshold-after processing, waste from other sources may not exceed 10% by total volume and radioactivity of the processed waste.

(6) For waste streams not identified in paragraphs (1) - (5) of this

subsection. If other waste streams are processed with incidental commingling of waste from other sources, these waste streams must be specifically identified and fully described in the report submitted under subsection (e) of this section. After processing, the waste from other sources may not exceed 10% by total volume, total weight, total radioactivity, and if classified as Class A low-level radioactivity waste, may not exceed 10% of the concentration limit for Class A low-level radioactive waste consistent with §336.362 of this title.

(7) For all waste streams. If new radionuclides are introduced through incidental commingling at a commercial processing facility, these must be specifically identified and may not result in a change in waste class or increased health and safety risks for handling and disposal of the processed waste.

**§336.747. Waste of International Origin.**

The licensee may not receive or dispose of waste of international origin at a land disposal facility licensed under this chapter.