ATTACHMENT B
Status of FY 1992 Deferrals – As of September 1, 1992
(Amounts in thousands of dollars)

Agency/Bureau/Account	Deferral Number	Amounts Transmitted		Date of Message	Releases(–)		Congres-sional Action	Cumulative Adjust-ments (+)	Amount Deferred as of 9–1–92
		Original Request	Subsequent Change (+)		Cumulative OMB/ Agency	Congres-sionally Required			
DEPARTMENT OF HEALTH AND HUMAN SERVICES									
Social Security Administration Limitation on administrative expenses	D92–5	7,317		09–30–91					7,317
DEPARTMENT OF STATE									
Bureau for Refugee Programs United States emergency refugee and migration assistance fund, executive	D92–6	30,053		09–30–91					
	D92–6A		24,750	12–19–91	69,200			24,520	10,123
DEPARTMENT OF TRANSPORTATION									
Federal Aviation Administration Facilities and equipment (Airport and airway trust fund)	D92–7	1,010,375		09–30–91	1,010,375				0
TOTAL, DEFERRALS		3,988,205	1,803,643		6,411,860	0		1,863,033	1,243,021

03–Sep–92

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Wednesday
September 16, 1992

Part IV

Environmental Protection Agency

40 CFR Parts 264 and 265

Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Financial Responsibility for Third-Party Liability, Closure, and Post-Closure; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 264 and 265

[FRL-4106-2]

RIN 2050-AC71

Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Financial Responsibility for Third-Party Liability, Closure, and Post-Closure

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is amending its financial assurance requirements under subtitle C of the Resource Conservation and Recovery Act (RCRA). On July 1, 1991 (56 FR 30201), the Agency proposed several amendments to the regulations related to third-party liability coverage, namely, the claims reporting provision and the provisions for obtaining a letter of credit. The Agency proposed to expand the use of the non-parent corporate guarantee to owners and operators of hazardous waste facilities for demonstrating financial responsibility for closure and post-closure care. In this action the Agency is promulgating those changes.

EFFECTIVE DATE: September 16, 1992.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline at 1-800-424-9346 (in Washington, DC, call 260-3000), or Ed Coe at (202) 260-6259, Office of Solid Waste (OS-341), U.S. Environmental Protection Agency, Washington DC, 20460.

SUPPLEMENTARY INFORMATION:

Preamble Outline

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I. Authority

This proposed rule is issued under the authority of section 3004 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. 6924.

II. Amendments to the September 1, 1988 Rule Regarding Third Party Liability Coverage

A. Background

On September 1, 1988, the Agency issued a final rule that expanded the instruments available to owners and operators to demonstrate financial-responsibility for third party liability. (see 53 FR 33938). Prior to the September 1, 1988 rule, the RCRA regulations at 40 CFR 264.147 allowed the use of a financial test, a parent corporate guarantee, or insurance for third party liability assurance. In the September 1, 1988 rulemaking, the Agency expanded the options to include the letter of credit, surety bond, trust fund, and non-parent corporate guarantee. The September 1, 1988 rulemaking also established in §§ 264.147 and 265.145 a claims reporting requirement for third-party claims.

Chemical Waste Management, Inc. (CWM) challenged several provisions of the September 1, 1988 rulemaking, in particular, several provisions related to the letter of credit and the claims reporting requirement. On February 23, 1990 the parties entered into a Joint Stipulation of Settlement in which the Agency agreed to: (1) Revise the claims reporting requirement of §§ 264.147 and 265.147 to clarify the type of claims that must be reported; (2) amend § 264.151(k) to authorize the creation of a standby trust fund for owners and operators who obtain letters of credit to demonstrate liability coverage; and (3) issue a correction to §§ 264.147(a)(2) and 265.147(a)(2) to insert a reference to the financial test. In accordance with the February 23 settlement agreement, the Agency proposed changes to the claims reporting requirement of §§ 264.147 and 265.147 and the use of a standby trust fund under § 264.151(k) on July 1, 1991 (56 FR 30201). The technical correction to §§ 264.147(a)(2) and 265.147(a)(2) was also published on that date. Today's notice promulgates the changes pertaining to claims reporting and the standby trust proposed on July 1, 1991.

In addition to the changes resulting from the settlement agreement, today's notice also promulgates a conforming change to §§ 264.147(f)(6) and 265.147(f)(6) to expand the instruments available to owners and operators that no longer meet the requirements of the financial test for liability coverage. This change was proposed in the July 1, 1991 notice.

The July 1, 1991 notice also proposed provisions not promulgated today. First, that notice proposed modifications to the financial tests for closure, post-closure and third-party liability. In addition, it proposed amendments to the post-closure deed requirement at §§ 264.119(b)(2), 264.143(i), 265.119(b)(2), and 265.143(h). EPA is continuing to evaluate comments received on the proposed revisions to the financial tests and has decided not to proceed with those revisions and the revisions to the post-closure deed requirements at this time. EPA believes deferring action on the amendments promulgated today until such time as revisions to the financial tests and all other issues arising from the July 1, 1991 notice are resolved is not necessary to protect human health and the environment and would unduly burden the regulated community. Because the July 1, 1991 notice would have amended the financial tests and other provisions that the Agency is continuing to evaluate, the notice included proposed changes to the wording of the financial assurance instruments in § 264.151 that differ from the language in today's rule. Today's rule amends the language of the financial assurance instruments only to the extent necessary to reflect amendments to §§ 264.143, 264.145, and 264.147, and §§ 265.143, 265.145, 265.147

B. Claims Reporting Requirement

As is discussed above, the September 1, 1988 rule established in §§ 264.147 and 265.147 a requirement that owners and operators report, in writing, to the Regional Administrator whenever: (1) A claim for bodily injury or property damages caused by the operation of a hazardous waste management facility is made against the owner, operator, or instrument providing financial assurance for liability coverage; and (2) the amount of financial assurance for liability coverage is reduced. In its complaint filed in response to the September 1, 1988 rulemaking, CWM asserted that the claims reporting requirement, as worded, was overly broad and thereby unduly burdensome. CWM argued that it required reporting of every claim filed against the owner or operator, no matter how valid.

This reporting requirement was intended to provide the Agency with early warning of potential instrument failure due to pending claims and to provide the Agency with data concerning the incidence of third party claims. EPA certainly did not intend the interpretation of this provision suggested by CWM. Instead, in a memorandum, from Sylvia K. Lowrance to the RCRA Branch Chiefs, of January 25, 1990, EPA clarified that it expected reporting of valid claims only. Today's rule revises §§ 264.147(a)(2), 264.147(b)(2), 265.147(a)(2), and 265.147(b)(2) to clarify that intent and require reporting of third party claims only when: (1) a claim results in reduction of the amount of an instrument; (2) a Certification of Valid Claim is entered between the owner or operator and third party claimant; or (3) a final court order establishing a judgment is issued.

In general, comments generally favored the revised claims reporting requirement. Commentors felt that the revised reporting requirement would clarify the types of claims that need to be reported to the Regional Administrator. However, one commentor felt that "Certification of Valid Claim" was not defined clearly enough. This commentor should note the regulatory language of § 264.151 (h)(2), (k), (l), (m), and (n). In those sections, the Agency has established precise language for a Certification of Valid Claim. This language is not modified by today's rule. In light of the precise language in § 264.151, the Agency disagrees that further clarification of the term, "Certification of Valid Claim", is required.

Another commentor expressed concern that States that have adopted the September 1, 1988 reporting requirement will not adopt the revised reporting requirement contained in this rule. The Agency understands this commentor's concern. However, as was discussed in the preamble of the July 1, 1992 proposal, the revised rule language promulgated today is not more stringent than the claims reporting requirement of the September 1, 1988 rule. Because authorized States can have requirements that are more stringent than the Federal program, States are free to interpret the September 1, 1988 language more broadly than EPA does. This is explained in more detail in the Effect of Rule on State Authorization section found later in this notice. However, the Agency urges States to accept the interpretation of EPA's January 25, 1990 memorandum and adopt the specific language promulgated today.

C. Standby Trust for Owners and Operators Who Use a Letter of Credit to Demonstrate Liability Coverage

The September 1, 1988 rule, discussed above, required that: (1) owners or operators using letters of credit to demonstrate liability coverage designate third-party claimants as beneficiaries in the event of a valid claim, and (2) the issuer of the letter of credit determine whether a claim against the instrument is valid and should be paid. In the February 23, 1990 settlement agreement with CWM, the Agency agreed to amend the letter of credit requirements (§§ 264.147(h) and 265.147(h)) and the language of the letter of credit mechanism (§ 264.151(k)) to allow for the creation of a standby trust fund and the designation of an independent trustee as beneficiary. Thus, the trustee, rather than the issuer of the letter of credit, is responsible for distributing funds to the claimants when a claim for damages is filed against the owner or operator.

This rule promulgates those changes to the letter of credit instrument by adding new §§ 264.147(1), 265.147(1) and 264.151(n) relating specifically to the requirements and instrument language of the standby trust. The Agency believes that these revisions make the letter of credit more available to owners and operators without reducing its integrity.

Commentors generally favored the addition of this financial instrument to those currently available for use by owners and operators to demonstrate financial responsibility.

One commentor expressed concern that the letter of credit with standby trust mechanism would replace the letter of credit mechanism that is currently allowed for use by owners and operators. The Agency reiterates that the letter of credit mechanism with a standby trust is an additional mechanism that owners and operators can use to demonstrate financial responsibility.

One commentor suggested several modifications to the wording of the letter of credit with standby trust instrument that were unrelated to creation of the standby trust. The Agency did not, in proposing this rule, contemplate modification to its existing financial assurance mechanisms, and did not, therefore, solicit comment on those types of changes. Other wording changes were made that were minor and not addressed by this commentor. Therefore the suggestions received from the commentor are outside the scope of this rule, but the Agency does note these suggested wording changes and may address them at a later date. The wording changes suggested by this commentor are potentially major and need to be fully assessed by the Agency before it can consider proposing them.

D. Instruments Available to Owners and Operators that no Longer Meet the Requirements of the Financial Test

The Agency is also promulgating, as proposed, conforming changes to §§ 264.147(f)(6) and 265.147(f)(6). Before these changes, those sections required owners or operators that have been using the financial test to assure for third party liability, but no longer meet the requirements of the test, to obtain insurance. Today's rule expands the available instruments to allow those owners and operators to obtain insurance or a letter of credit, surety bond, trust fund, or a guarantee. EPA received no comments on this issue. These conforming changes implement the intent of the September 1, 1988 rule expanding the allowable instruments for third party liability coverage.

III. The Expanded Guarantee for Demonstrating Financial Assurance for Closure and Post-Closure Care

The use of a parent corporate guarantee for liability coverage was authorized in the interim final rule on July 11, 1986 (51 FR 25350) and promulgated as a final regulation on November 18, 1987 (52 FR 44314). Several commentors on the interim final rule urged EPA to allow non-parent firms to provide guarantees. After analyzing the validity and enforceability of guarantee contracts by non-parent firms, the Agency in the September 1, 1988 rulemaking discussed earlier in this preamble, authorized guarantees for third-party liability coverage provided by: (1) Corporate grandparents, (2) corporate "sibling" firms, and (3) firms with a "substantial business relationship" with the owner or operator. Further discussion of the parent guarantee can be found in the September 1, 1988 rule (53 FR 33938).

Since authorizing the non-parent guarantee as an allowable mechanism for third-party liability coverage, the Agency has received many requests to extend its use to closure and post-closure care financial responsibility requirements. This rule revises §§ 264.143, 264.145, 265.143 and 265.145 to allow the same non-parent guarantee for closure and post-closure as is currently allowed for third-party liability.

In general, commentors generally favored expanding the use of the non-parent guarantee mechanism to owners and operators who wish to demonstrate financial responsibility for closure and post-closure care.

One commentor felt that the expanded non-parent guarantee should be classified as more stringent than the current rule. The Agency disagrees. A program that allows an additional instrument for compliance is less stringent than a program that does not allow the use of that instrument. Thus, though this rule expands the allowable instruments under the Federal program, the States can choose whether or not to adopt it. This is explained in more detail in the Effect of Rule on State Authorization section found later in this notice.

IV. Effective Date

Today's rule is effective immediately. Section 3010(b) of RCRA provides that regulations respecting permits for the treatment, storage, or disposal of hazardous waste shall take effect six months after the date of promulgation. However, section 3010(b)(1) of the RCRA allows EPA to shorten the time to the effective date if the Agency finds that the regulated community does not need six months to come into compliance with the new regulation.

The provisions of this rule either reduce the regulatory burden or provide additional flexibility in complying with the regulations for owners and operators.

As a result, the Agency finds that the regulated community does not need six months to come into compliance. Hence, today's rule is immediately effective under section 553(d) of the Administrative Procedure Act.

V. State Authorization

A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State (See 40 CFR part 271 for the standards and requirements for authorization). Following authorization, the Agency retains enforcement authority under sections 3008, 7003, and 3013 of RCRA, although authorized States have primary enforcement responsibility.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA), a State with final authorization administered its hazardous waste program entirely in lieu of the Federal program. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities in a State where the State was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obligated to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized States until the State adopted the requirements as state law.

In contrast, under section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time that they take effect in nonauthorized States. EPA is directed to carry out those requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. While States must still adopt HSWA-related provisions as state law to retain final authorization, the HSWA requirements and prohibitions apply in authorized States in the interim.

B. Effect of Rule on State Authorization

Today's rule proposes standards that are not effective in authorized States because the requirements are not imposed pursuant to HSWA. Thus, the requirements are applicable only in those States that do not have final authorization. In authorized States, the requirements will not be applicable until the State revises its program to adopt equivalent requirements under state law.

In general, 40 CFR 271.21(e)(2) requires States that have final authorization to modify their programs to reflect Federal program changes and to subsequently submit the modifications to EPA for approval. It should be noted, however, that authorized States are only required to modify their programs when EPA promulgates Federal standards that are more stringent or broader in scope than the existing Federal standards. Section 3009 of RCRA allows States to impose standards more stringent than those in the Federal program. For those Federal program changes that are less stringent or reduce the scope of the Federal program, States are not required to modify their programs (See 40 CFR 271.1(i)).

The provisions of today's rule that expand the allowable instruments for demonstrating financial assurance are less stringent than the current program. Those provisions are: (1) Revisions to § 264.147(h) (4) and (5), §§ 265.147(h) (4) and (5), and 264.151(k), and addition of new § 264.151(n), which provide for the use of a stand-by trust with the letter of credit to demonstrate financial assurance for liability coverage requirements; and (2) revisions to §§ 264.147(f)(6) and 265.147(f)(6), which expand the mechanisms available to owners and operators that no longer meet the requirements of the financial test for liability coverage; and (3) revisions to §§ 264.143(f)(10), 264.145(f)(11), 265.143(e)(11), and 265.145(e)(11), which expand the use of the non-parent guarantee to owners or operators demonstrating financial assurance for closure and post-closure care. For these Federal program changes that are less stringent or reduce the scope of the Federal program, an authorized State is not required to modify its authorized program. If the State does modify its program, EPA must approve the modification for the state requirements to become Subtitle C RCRA requirements.

The September 1, 1988 rule related to liability coverage established a claims reporting requirement at §§ 264.147(a)(7) and (b)(7) and 265.147(a)(7) and (b)(7). The preamble characterized all provisions of that rule as less stringent and, therefore, authorized States were not required to adopt the new provisions, including the claims reporting requirement. However, upon further consideration the Agency has determined that this claims reporting requirement was, in fact, more stringent than the Federal program in effect before that time because there was no reporting requirement before that time.

Because the claims reporting requirement of §§ 264.147(a)(7), 264.147(b)(7), 265.147(a)(7), and 265.147(b)(7) was more stringent than the Federal Program in place prior to the September 1, 1988 rule, States should have been required to modify their programs to include it in order to maintain an equivalent program. In accordance with § 271.21(e)(2), the deadline for States to modify their program to reflect changes adopted on September 1, 1988 was July 1, 1990. However, the States were not notified of this obligation since the rule was originally classified as less stringent. Because of the confusion related to the stringency characterization of the claims reporting requirement and the fact that the Agency is in the process of clarifying that requirement, the Agency will, for purposes of determining applicable deadlines under § 271.21(e)(2), treat the claims reporting requirement of the September 1, 1988 rule as if it were promulgated and amended today. This means that the deadline for adopting the provision is the applicable deadline under § 271.21(e)(2) for today's final rule. States that have not yet adopted the reporting requirement of the September 1, 1988 rule should not do so but should adopt the clarified version promulgated today. In addition, States whose programs have been modified to adopt the current claims reporting requirement but wish to adopt the clarified reporting requirement should follow the deadlines of 40 CFR 271.21(e)(2) for today's final rule.

The revisions to the claims reporting requirement that are promulgated today, however, are not more stringent than the current claims reporting requirement at §§ 264.147(a)(7) and (b)(7) and 265.147(a)(7) and (b)(7) promulgated in the September 1, 1988 rule. Therefore, States that have already adopted the current claims reporting requirement are not required to adopt the clarified reporting requirement, though EPA urges them to do so.

A commentor suggested that the Agency's treatment of the revised claims notification language as not being more stringent than the language promulgated on September 1, 1988 imposed an arbitrary and unreasonable burden on the regulated community. The commentor believed that EPA's determination that the proposed language was not more stringent than the September 1, 1988 language would require the regulated community to challenge 50 state rules in litigation in 50 States. In the commentor's view, the Agency should vacate the claims reporting provisions of the September 1, 1988 rule, vacate approvals of state program revisions that adopted the September 1, 1988 language, and require States to change their rules to conform to the newly promulgated language.

EPA carefully considered commentor's views and concerns about the state authorization aspects of today's final rule and has determined that it does not have the authority to grant the relief that commentor suggests. Under RCRA section 3009, the Agency cannot require a State to adopt today's language if the State has a claims reporting provisions that is broader (or that the State interprets as being broader) than that required by the RCRA program. However, EPA has taken several steps that it believes will be effective in minimizing the likelihood of and need for the excessive litigation suggested by the commentor. First, on January 25, 1990, EPA issued a memorandum from Sylvia K. Lowrance to the RCRA Branch Chiefs entitled "Clarification of 40 CFR 264.147(a)(7), (b)(7), and § 265.147(a)(7), (b)(7)" in which EPA interpreted the September 1, 1988 language (see Docket Number 91–RCFP–FFFFF). This guidance on implementing the 1988 reporting requirement directs States and Regions to require reporting of only valid claims, that is, those required by today's revised reporting requirement. Thus, in States, that have adopted the 1988 reporting requirement and are following the guidance set forth in the January 25, 1990 memorandum, a failure to revise the state program to adopt today's provisions would have no practical effect on owners and operators (though for purposes of clarity the Agency encourages those States to adopt today's provision).

There are other factors that should reduce the problem cited by the commentor. First, many States have not yet adopted the language of the September 1, 1988 rule; these States will be able to obtain approval by submitting today's language and need not submit the September 1, 1988 language. Second, many States that adopted the September 1, 1988 claims reporting provision automatically conform their regulations and statutes to the provisions of the Federal program; therefore, these States will adopt today's clarified language in due course without litigation. Third, many of the States that adopted the September 1, 1988 language, obtained authorization, and do not automatically use the Federal regulatory language, will want to adopt today's clarification. Therefore, EPA believes the regulated community will not need to challenge these state rules as applied.

For the few States that have adopted the September 1, 1988 provision, that interpret the language more expansively than EPA, and that wish to retain that language, EPA lacks a legal and practical mechanism for requiring these States to adopt today's language. EPA cannot require States to modify their programs to comply with less stringent Federal program changes. However, for the reasons discussed above, EPA anticipates that there will be far fewer States in this position than the commentor suggests.

VI. Regulatory Analysis

A. Regulatory Impact Analysis

Under Executive Order 12291, EPA must determine whether a regulation is "major" and thus whether it must prepare and consider a Regulatory Impact Analysis in connection with the rule. Today's rule is not major because it will not result in an annual effect on the economy of $100 million or more, nor will it result in an increase in costs or prices to industry. There will be no adverse impact on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. Therefore the Agency has not prepared a Regulatory Impact Analysis for today's rule. This rule has been reviewed by the Office of Management and Budget in accordance with Executive Order 12291.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, 5 U.S.C. 601 et seq. at the time an Agency publishes a proposed or final rule, it must prepare a Regulatory Flexibility Analysis that describes the impact of the rule on small entities, unless the Administrator certifies that the rule will not have a significant economic impact on a substantial number of small entities. Today's rule expands the instruments available for owner or operator to demonstrate financial responsibility. Therefore, pursuant to 5 U.S.C. 601b, I certify that this regulation will not have a significant economic impact on a substantial number of small entities.

Dated: September 4, 1992.

F. Henry Habicht II,

Acting Administrator.

List of Subjects

40 CFR Part 264

Air pollution control, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds.

40 CFR Part 265

Air pollution control, Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

40 CFR part 264 is amended as follows:

PART 264—STANDARDS FOR OWNERS OR OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for part 264 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924 and 6925.

2. Section 264.143 is amended by revising the introductory text of paragraph (f)(10) to read as follows:

264.143 Financial assurance for closure.

* * * * *

(f) * * *

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the

requirements for owners or operators in paragraphs (f)(1) through (8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in § 264.151(h). The certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

* * * * *

3. Section 264.145 is amended by revising the introductory text of paragraph (f)(11) to read as follows:

§ 264.145 Financial assurance for post-closure care.

* * * * *

(f) * * *

(11) An owner or operator may meet the requirements for this section by obtaining a written guarantee. The guarantor must be the direct of higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (9) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in § 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

* * * * *

4. Section 264.147 is amended by revising paragraphs (a)(7), (b)(7), and (f)(6) and by adding new paragraphs (h)(4) and (h)(5) to read as follows:

§ 264.147 Liability requirements.

(a) * * *

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) * * *

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A Claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

* * * * *

(f) * * *

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the Regional Administrator within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

* * * * *

(h) * * *

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(5) The wording of the standby trust fund must be identical to the wording specified in § 264.151(n).

* * * * *

5. Section 264.151 is amended by revising paragraphs (f), (g), (h), and (k) and adding a new paragraph (n) to read as follows:

§ 264.151 Wording of the instruments.

* * * * *

(f) A letter from the chief financial officer, as specified in § 264.143(f) or 264.145(f), or § 265.143(e) or 265.143(e) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Letter From Chief Financial Officer

[Address to Regional Administrator of every Region in which facilities for which financial responsibility is to be demonstrated through the financial test are located].

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in subpart H of 40 CFR parts 264 and 265.

[Fill out the following five paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write

"None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care].

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: ______.

2. This firm guarantees, through the guarantee specified in subpart H of 40 CFR parts 264 and 265, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: ______. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ______; or (3) engaged in the following substantial business relationship with the owner or operator ______, and receiving the following value in consideration of this guarantee ______]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. In States where EPA is not administering the financial requirements of subpart H of 40 CFR part 264 or 265, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: ______.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in subpart H of 40 CFR parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: ______.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: ______.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of § 264.143 or § 264.145, or of paragraph (e)(1)(i) of § 265.143 or § 265.145 of this chapter are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of § 264.143 or § 264.145, or of paragraph (e)(1)(ii) of § 265.143 or § 265.145 of this chapter are used.]

Alternative I

1. Sum of current closure and post-closure cost estimate [total of all cost estimates shown in the five paragraphs above] $______

*2. Total liabilities [if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4] $______

*3. Tangible net worth $______

*4. Net worth $______

*5. Current assets $______

*6. Current liabilities $______

7. Net working capital [line 5 minus line 6] $______

*8. The sum of net income plus depreciation, depletion, and amortization $______

*9. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) $______

10. Is line 3 at least $10 million? (Yes/No) ______

11. Is line 3 at least 6 times line 1? (Yes/No) ______

12. Is line 7 at least 6 times line 1? (Yes/No) ______

*13. Are at least 90% of firm's assets located in the U.S.? If not, complete line 14 (Yes/No) ______

14. Is line 9 at least 6 times line 1? (Yes/No) ______

15. Is line 2 divided by line 4 less than 2.0? (Yes/No) ______

16. Is line 8 divided by line 2 greater than 0.1? (Yes/No) ______

17. Is line 5 divided by line 6 greater than 1.5? (Yes/No) ______

Alternative II

1. Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the five paragraphs above] $______

2. Current bond rating of most recent issuance of this firm and name of rating service ______

3. Date of issuance of bond ______

4. Date of maturity of bond ______

*5. Tangible net worth [if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line] $______

*6. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) $______

7. Is line 5 at least $10 million? (Yes/No) ______

8. Is line 5 at least 6 times line 1? (Yes/No) ______

*9. Are at least 90% of firm's assets located in the U.S.? If not, complete line 10 (Yes/No) ______

10. Is line 6 at least 6 times line 1? (Yes/No) ______

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(f) as such regulations were constituted on the date shown immediately below.

[Signature] ______
[Name] ______
[Title] ______
[Date] ______

(g) A letter from the chief financial officer, as specified in § 264.147(f) or § 265.147(f) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Letter From Chief Financial Officer

[Address to Regional Administrator of every Region in which facilities for which financial responsibility is to be demonstrated through the financial test are located].

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or post-closure care" if applicable] as specified in subpart H of 40 CFR parts 264 and 265.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, and address].

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in subpart H of 40 CFR parts 264 and 265: ______

The firm identified above guarantees, through the guarantee specified in subpart H of 40 CFR parts 264 and 265, liability coverage for [insert "sudden" or "nonsudden" of "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: ______. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ______; or (3) engaged in the following substantial business relationship with the owner or operator ______, and receiving the following value in consideration of this guarantee ______]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following five paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure and/or post-closure cost estimate covered by the test are shown for each facility: ______.

2. The firm identified above guarantees, through the guarantee specified in subpart H of 40 CFR parts 264 and 265, the closure and post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for closure or post-closure care so guaranteed are shown for each facility: ______.

3. In States where EPA is not administering the financial requirements of subpart H of 40 CFR parts 264 and 265, this firm is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H or 40 CFR parts 264 and 265. The current closure or post-closure cost estimates covered by such a test are shown for each facility: ______.

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanisms specified in subpart H of 40 CFR parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: ______.

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under part 144 and is assured through a financial test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: ______.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of § 264.147 or § 265.147 are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of § 264.147 or § 265.147 are used.]

Alternative I

1. Amount of annual aggregate liability coverage to be demonstrated $______.

*2. Current assets $______.

*3. Current $______.

4. Net working capital (line 2 minus line 3) $______.

*5. Tangible net worth $______.

*6. If less than 90% of assets are located in the U.S., give total U.S. assets $______.

7. Is line 5 at least $10 million? (Yes/No) ______.

8. Is line 4 at least 6 times line 1? (Yes/No) ______.

9. Is line 5 at least 6 times line 1? (Yes/No) ______.

*10. Are at least 90% of assets located in the U.S.? (Yes/No) ______. If not, complete line 11.

11. Is line 6 at least 6 times line 1? (Yes/No) ______.

Alternative II

1. Amount of annual aggregate liability coverage to be demonstrated $______.

2. Current bond rating of most recent issuance and name of rating service ______.

3. Date of issuance of bond ______.

4. Date of maturity of bond ______.

*5. Tangible net worth $______.

*6. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) $______.

7. Is line 5 at least $10 million? (Yes/No) ______.

8. Is line 5 at least 6 times line 1? ______.

9. Are at least 90% of assets located in the U.S.? If not, complete line 10. (Yes/No) ______.

10. Is line 6 at least 6 times line 1? ______.

[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or post-closure care.]

Part B. Closure or Post-Closure Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraphs (f)(1)(i) of § 264.143 or § 264.145 and (f)(1)(i) of § 264.147 are used or if the criteria of paragraphs (e)(1)(i) of § 265.143 or § 265.145 and (f)(1)(i) of § 265.147 are used. Fill in Alternative II if the criteria of paragraphs (f)(1)(ii) of § 264.143 or § 264.145 and (f)(1)(ii) of § 264.147 are used or if the criteria of paragraphs (e)(1)(i) of § 265.143 or § 265.145 and (f)(1)(ii) of § 265.147 are used.]

Alternative I

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) $______

2. Amount of annual aggregate liability coverage to be demonstrated $______

3. Sum of lines 1 and 2 $______

*4. Total liabilities (if any portion of your closure or post-closure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6) $______

*5. Tangible net worth $______

*6. Net worth $______

*7. Current assets $______

*8. Current liabilities $______

9. Net working capital (line 7 minus line 8) $______

10. The sum of net income plus depreciation, depletion, and amortization $______

*11. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.) $______

12. Is line 5 at least $10 million? (Yes/No)

13. Is line 5 at least 6 times line 3? (Yes/No)

14. Is line 9 at least 6 times line 3? (Yes/No)

*15. Are at least 90% of assets located in the U.S.? (Yes/No) If, not, complete line 16.

16. Is line 11 at least 6 times line 3? (Yes/No)

17. Is line 4 divided by line 6 less than 2.0? (Yes/No)

18. Is line 10 divided by line 4 greater than 0.1? (Yes/No)

19. Is line 7 divided by line 8 greater than 1.5? (Yes/No)

Alternative II

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) $______

2. Amount of annual aggregate liability coverage to be demonstrated $______

3. Sum of lines 1 and 2 $______

4. Current bond rating of most recent issuance and name of rating service ______

5. Date of issuance of bond ______

6. Date of maturity of bond ______

*7. Tangible net worth (if any portion of the closure or post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line) ______ $______

*8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.) $______

9. Is line 7 at least $10 million? (Yes/No)

10. Is line 7 at least 6 times line 3? (Yes/No)

*11. Are at least 90% of assets located in the U.S.? (Yes/No) If not complete line 12.

12. Is line 8 at least 6 times line 3? (Yes/No)

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(g) as such regulations were constituted on the date shown immediately below.

[Signature] ______

[Name] ______

[Title] ______

[Date] ______

(h)(1) A corporate guarantee, as specified in § 264.143(f) or § 264.145(f), or § 265.143(e) or § 265.145(e) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Corporate Guarantee for Closure or Post-Closure Care

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of State], herein referred to as guarantor. This guarantee is made on behalf of the [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in 40 CFR [either 264.141(h) or 265.141(h)]" to the United States Environmental Protection Agency (EPA).

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 40 CFR 264.143(f), 264.145(f), 265.143(e), and 265.145(e).

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

3. "Closure plans" and "post-closure plans" as used below refer to the plans maintained as required by subpart G of 40 CFR parts 264 and 265 for the closure and post-closure care of facilities as identified above.

4. For value received from [owner or operator], guarantor guarantees to EPA that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care" or "closure and post-closure care"] of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in subpart H of 40 CFR part 264 or 265, as applicable, in the name of [owner or operator] in the amount of the current closure or post-closure cost estimates as specified in subpart H of 40 CFR parts 264 and 265.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and to [owner or operator] that he intends to provide alternate financial assurance as specified in subpart H of 40 CFR part 264 or 265, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the EPA Regional Administrator by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by an EPA Regional Administrator of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post-closure care, he shall establish alternate financial assurance as specified in subpart H of 40 CFR part 264 or 265, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to 40 CFR part 264 or 265.

9. Guarantor agrees to remain bound under this guarantee for as long as [owner or operator] must comply with the applicable financial assurance requirements of subpart H of 40 CFR parts 264 and 265 for the above-listed facilities, except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the EPA Regional Administrator(s) approve(s), alternate closure and/or post-closure care coverage complying with 40 CFR 264.143, 264.145, 265.143, and/or 265.145.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator]

Guarantor may terminate this guarantee 120 days following the receipt of notification, through certified mail, by the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and by [the owner or operator].

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in subpart H of 40 CFR part 264 or 265, as applicable, and obtain written approval of such assurance from the EPA Regional Administrator(s) within 90 days after a notice of cancellation by the guarantor is received by an EPA Regional Administrator from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

12. Guarantor expressly waives notice of acceptance of this guarantee by the EPA or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 264.151(h) as such regulations were constituted on the date first above written.

Effective date: __________

[Name of guarantor] __________

[Authorized signature for guarantor] __________

[Name of person signing] __________

[Title of person signing] __________

Signature of witness or notary: __________

(2) A guarantee, as specified in § 264.147(g) or § 265.147(g) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of ________" and insert name of State; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the State of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: "our subsidiary;" "a subsidiary of [name and address of common parent corporation], or which guarantor is a subsidiary;" or "an entity with which guarantor has a substantial business relationship, as defined in 40 CFR [either 264.141(h)]", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 40 CFR 264.147(g) and 265.147(g).

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA identification number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State.] This corporate guarantee satisfies RCRA third-party liability requirements for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

(A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert owner or operator];

(2) Premises that are sold, given away or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert owner or operator];

(4) Personal property in the care, custody or control of [insert owner or operator];

(5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the EPA Regional Administrator[s] for the Region[s] in which the facility[ies] is[are] located and to [owner or operator] that he intends to provide alternate liability coverage as specified in 40 CFR 264.147 and 265.147, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the EPA Regional Administrator by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by an EPA Regional Administrator of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in 40 CFR 264.147 or 265.147 in the name of [owner or operator], unless [owner or operator] has done so.

8. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by 40 CFR 264.147 and 265.147, provided that such modification shall become effective only if a Regional Administrator does not disapprove the modification within 30 days of receipt of notification of the modification.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of 40 CFR 264.147 and 265.147 for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the EPA Regional Administrator(s) approve(s), alternate liability coverage complying with 40 CFR 264.147 and/or 265.147.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's hazardous waste treatment, storage, or disposal facility should be paid in the amount of $

[Signatures] ______

Principal ______

(Notary) Date ______

[Signatures] ______

Claimant(s) ______

(Notary) Date ______

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in 40 CFR 264.151(h)(2) as such regulations were constituted on the date shown immediately below.

Effective date: ______

[Name of guarantor] ______

[Authorized signature for guarantor] ______

[Name of person signing] ______

[Title of person signing] ______

Signature of witness of notary: ______

* * * * *

(k) A letter of credit, as specified in § 264.147(h) or 265.147(h) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

Name and Address of Issuing Institution ______

Regional Administrator(s) ______

Region(s) ______

U.S. Environmental Protection Agency ______

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No ______ in the favor of ["any and all third-party liability claimants" or insert name of trustee of the standby trust fund], at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] U.S. dollars $______ per occurrence and the annual aggregate amount of [in words] U.S. dollars $______, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars $______ per occurrence, and the annual aggregate amount of [in words] U.S. dollars $______, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. ______, and [insert the following language if the letter of credit is being used without a standby trust fund: "(1) a signed certificate reading as follows:

Certificate of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ]. We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures] ____________

Grantor ____________

[Signatures] ____________

Claimant(s) ____________

or (2) a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

This letter of credit is effective as of [date] and shall expire on [date] at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the USEPA Regional Administrator for Region [Region #], and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess" coverage]."

We certify that the wording of this letter of credit is identical to the wording specified in 40 CFR 264.151(k) as such regulations were constituted on the date shown immediately below. [Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits published by the International Chamber of Commerce" or "the Uniform Commercial Code"].

* * * * *

(n)(1) A standby trust agreement, as specified in § 264.147(h) or 265.147(h) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Standby Trust Agreement

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator] a [name of a State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert, "incorporated in the State of ____________" or "a national bank"], the "trustee."

Whereas the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. *Definitions.* As used in this Agreement:

(a) The term *Grantor* means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term *Trustee* means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. *Identification of Facilities.* This agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA Identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. *Establishment of Fund.* The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of ____________ [up to $1 million] per occurrence and ____________ [up to $2 million] annual aggregate for sudden accidental occurrences and ____________ [up to $3 million] per occurrence and ____________ [up to $6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee or [insert Grantor] arising from , and in the course of, employment by [insert Grantor]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor].

This exclusion applies:

(A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Grantor];

(2) Premises that are sold, given away or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

(3) Property loaned [insert Grantor];

(4) Personal property in the care, custody or control of [insert Grantor];

(5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert "primary" or "excess"] coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. *Payment for Bodily Injury or Property Damage.* The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signature] ______________________

Grantor ______________________

[Signatures] ______________________

Claimant(s) ______________________

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. *Payments Comprising the Fund.* Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of 40 CFR 264.151(k) and Section 4 of this Agreement.

Section 6. *Trustee Management.* The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a–2(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. *Commingling and Investment.* The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a–1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. *Express Powers of Trustee.* Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. *Taxes and Expenses.* All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. *Advice of Counsel.* The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. *Trustee Compensation.* The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. *Successor Trustee.* The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. *Instructions to the Trustee.* All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the EPA Regional Administrator hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 14. *Amendment of Agreement.* This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator if the Grantor ceases to exist.

Section 15. *Irrevocability and Termination.* Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA

Regional Administrator, or by the Trustee and the EPA Regional Administrator, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.

The Regional Administrator will agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. *Immunity and indemnification.* The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonable incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. *Choice of Law.* This Agreement shall be administered, construed, and enforced according to the laws of the State of [enter name of State].

Section 18. *Interpretation.* As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 264.151(n) as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]
Attest:
[Title]
[Seal]

[Signature of Trustee]
Attest:
[Title]
[Seal]

(2) The following is an example of the certification of acknowledgement which must accompany the trust agreement for a standby trust fund as specified in section 264.147(h) or 265.147(h) of this chapter. State requirements may differ on the proper content of this acknowledgement.

State of ____

County of ____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

40 CFR part 265 is amended as follows:

PART 265—INTERIM STATUS STANDARDS FOR OWNERS OR OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

1. The authority citation for part 265 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6924, 6925, and 6935.

2. Section 265.143 is amended by revising the introductory text of paragraph (e)(10) to read as follows:

§ 265.143 Financial assurance for closure.

* * * * *

(e) * * *

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (e)(1) through (8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in § 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (e)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

* * * * *

3. Section 265.145 is amended by revising the introductory text of paragraph (e)(11) to read as follows:

§ 265.145 Financial assurance for post-closure care.

* * * * *

(e) * * *

(11) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (e)(1) through (9) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in § 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (e)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

* * * * *

4. Section 265.147 is amended by revising paragraphs (a)(7), (b)(7), and (f)(6), and by adding new paragraphs (h)(4) and (h)(5) to read as follows:

§ 265.147 Liability requirements.

(a) * * *

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) * * *

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

* * * * *

(f) * * *

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the Regional Administrator within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

* * * * *

(h) * * *

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(5) The wording of the standby trust fund must be identical to the wording specified in § 264.151(n).

* * * * *

[FR Doc. 92-22248 Filed 9-15-92; 8:45 am]

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Wednesday
September 16, 1992

Part V

Department of Transportation

Federal Aviation Administration

14 CFR Parts 21 and 36

Alternative Noise Certification Procedure for Primary, Normal, Transport, and Restricted Category of Helicopters Not Exceeding 6,000 Pounds Maximum Takeoff Weight; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 21 and 36

[Docket No. 26910; Amendment Nos. 21-71, and 36-20]

RIN: 2120-AE50

Alternative Noise Certification Procedure for Primary, Normal, Transport, and Restricted Category of Helicopters not Exceeding 6,000 Pounds Maximum Takeoff Weight

AGENCY: Federal Aviation Administration (DOT).

ACTION: Final rule; Request for comments.

SUMMARY: This final rule adds a new appendix to the noise standards regulations. The new appendix provides for an alternative noise certification procedure for primary, normal, transport, and restricted category helicopters not exceeding 6,000 pounds maximum takeoff weight. The new appendix is an optional alternative to existing helicopter noise requirements and is not an additional regulatory requirement. Applicants for certification may demonstrate compliance with the noise standards of either Appendix H or the less costly but more stringent new Appendix J. The new certification procedure is intended to provide regulatory relief to manufacturers of light helicopters by substantially reducing the costs of demonstrating compliance with the noise regulations.

DATES: Effective September 11, 1992.

The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of September 16, 1992.

Comments must be submitted on this final rule on or before January 15, 1993.

ADDRESSES: Send comments on this final rule in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-10), Docket No. 26910, 800 Independence Avenue SW., Washington, DC 20591, or deliver comments in triplicate to: FAA Rules Docket, room 915G, 800 Independence Avenue SW., Washington, DC. Comments may be inspected in room 915G between 8:30 a.m. and 5 p.m., weekdays, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Kenneth E. Jones, Research and Engineering Branch (AEE-110), Technology Division, Office of Environment and Energy, FAA, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3554, facsimile (202) 267-5594.

SUPPLEMENTARY INFORMATION: The purpose of this rulemaking is to add an alternative noise certification procedure to the existing requirements prescribed in the Federal Aviation Regulations (14 CFR part 36). This amendment is based on Notice No. 92-7 (57 FR 28142, June 24, 1992; Docket No. 26910) in which comments were invited. All comments received were fully considered in the issuance of this Final Rule.

Additional Comments Invited

Interested persons are invited to participate in this rulemaking by submitting written data, views, or arguments and by commenting on the overall regulatory, environmental, energy, or economic aspects that might suggest a need to modify the rule. The additional comment period, subsequent to this publication of the final rule, is being initiated to accommodate requests for extension of the comment period for the Notice of Proposed Rulemaking (NPRM). Comments should identify the regulatory docket number (26910) and be submitted in triplicate to the address above. All comments received, as well as summaries of substantive public contact with Federal Aviation Administration (FAA) personnel on this rule will be filed in the docket, and will be considered by the Administrator. The docket is available for public inspection both before and after the closing date for comments. The FAA will acknowledge the receipt of a comment if the commenter includes a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 26910." When the comment is received by the FAA, the postcard will be dated, time stamped, and returned to the commenter.

Background

Helicopter Noise Standards Development: FAA

On July 9, 1979, the FAA first addressed helicopter noise certification requirements by publishing an NPRM, Notice No. 79-13 (44 FR 42410). After consideration of the economic impact of the proposed rule, the NPRM was withdrawn (46 FR 61486, December 17, 1981). Because of advances in helicopter noise abatement technology, the FAA again initiated rulemaking and issued NPRM No. 86-3 (51 FR 7878, March 6, 1986), which resulted in the present helicopter noise certification standards, part 36, appendix H (53 FR 3534, February 5, 1988). Appendix H was effective upon publication.

Data submitted recently to the ICAO by various helicopter manufacturers indicates that the cost of an appendix H noise test for a light helicopter can range from $121,000 to $239,000. These figures do not include the substantial non-recurring costs for equipment and training. In addition, because the current rule requires that an applicant for a supplemental type certificate (STC) either demonstrate that the modified helicopter is no noisier than the original helicopter or perform a noise test, the costs associated with helicopter STC's have had an adverse effect on the development of helicopter modifications.

In the 1980's, the United States (in appendix H) adopted a complex and comprehensive helicopter noise test procedure that was developed with the support of ICAO. During the development of the ICAO-recommended procedure for the original helicopter noise certification requirements, the relative cost and complexity of the proposed testing procedures were debated as a potential problem for manufacturers of small, low-cost helicopters. Because the majority of civil helicopters produced in the United States are exported, the unilateral adoption by the United States of an additional simplified noise certification procedure for light helicopters would have little practical benefits for the U.S. manufacturers without the adoption of a similar procedure by foreign countries that would make U.S.-manufactured helicopters acceptable to importing nations. Therefore, the United States and other members of ICAO addressed this issue by participating in the research and development of a simplified noise certification procedure with the support of ICAO. The final rule adopts a similar procedure to provide immediate regulatory relief to U.S. light helicopter manufacturers and modifiers in anticipation of the formal adoption of the standards proposed by ICAO.

Helicopter Standards Development: ICAO

The current ICAO helicopter noise standards (Chapter 8, Annex 16) parallel those of appendix H. When ICAO adopted its helicopter noise standards in 1985, it recognized that a simpler flight test procedure was needed for lighter helicopters. Accordingly, the ICAO committee responsible for formulating noise certification standards, the Committee on Aviation Environmental Protection (CAEP), formed a working group and charged it with the development of a new standard applicable to light helicopters. The product of the working group's efforts, an alternative noise certification procedure for piston-powered helicopters, was amended at the request of the United States during the most recent CAEP meeting (December 1991) to include turbine-powered helicopters and to establish the maximum weight at 6,000 pounds. Compared to the current ICAO standard (Chapter 8), the new ICAO Chapter 11 standard will: (1) Change the noise metric from Effective Perceived Noise Level (EPNL) to Sound Exposure Level (SEL); (2) reduce the required microphone locations from three to one; (3) require only a level flyover test instead of level flyover, approach, and takeoff tests; and (4) reduce the complexity of the data corrections procedures. However, these changes make it impossible to set a limit that is equally stringent for all helicopters. For this reason, it was undesirable to attempt to develop a replacement standard for the existing ICAO Chapter 8 standard. Thus, the CAEP decided to develop an alternative standard (ICAO Chapter 11) that is simpler to perform, but that has an SEL limit that is more stringent (by two decibels) than the current ICAO Chapter 8 EPNL limit. After an extensive analysis of existing data, the CAEP set the Chapter 11 SEL limit such that it is unlikely that an applicant would pass the newly recommended ICAO Chapter 11 standard and yet fail a full ICAO Chapter 8 test if the Chapter 8 test were also performed.

The new ICAO Chapter 11 standard was approved by the CAEP during its December 1991 meeting in Montreal, Canada. The CAEP approval was the major hurdle facing the new ICAO standard. Before formal adoption, the CAEP recommendations must be submitted to the ICAO council, which in turn will send them to ICAO member States for comment. If member States unanimously concur, the Council will issue the recommended standard. If member States do not concur, the Council will refer the issue to the ICAO Air Navigation Commission (ANC) along with member States' comments. The ANC will review the CAEP recommendations and member States' comments, and make recommendations to the Council, which in turn will send the revisions back to the member States for approval. The ICAO staff estimates that the new ICAO Chapter 11 will be formally adopted in November 1993.

Synopsis of the Rule

Part 36 of the Federal Aviation Regulations (14 CFR) contains noise standards for aircraft type and airworthiness certification. Subpart H and the related appendix H prescribe noise levels and test procedures for civil helicopters certificated in the primary, normal, transport, or restricted category, including the rules governing the issuance of original, amended, or supplemental type certificates for helicopters for which application is made on or after March 6, 1986.

This final rule adds and reserves a new appendix I, and adds a new appendix J to part 36. It also amends subpart H of part 36 to incorporate the requirements of the new appendix J. The amendments to subpart H and the new requirements of appendix J do not represent additional regulatory requirements, but rather provide an alternative helicopter noise certification procedure for light helicopters that complements the existing helicopter noise test requirements of appendix H. The term "light helicopters" as used in this preamble refers to helicopters in the primary, normal, transport, or restricted category not exceeding 6,000 pounds maximum certificated takeoff weight. Compared to the existing appendix H requirements, the test procedures of appendix J are simpler and less costly, but more stringent relative to the existing noise limits under appendix H. An applicant has the option of certificating a light helicopter under appendix H or the new, less costly but more stringent appendix J. The noise limits prescribed under appendix J are, on the average, two decibels more stringent than the noise limits prescribed under appendix H. If an applicant fails the more stringent limits prescribed under appendix J, the applicant would be able to apply for certification under the existing requirements prescribed under appendix H. The need for this optional certification standard is based on the unanticipated and disproportionate costs to small helicopter manufacturers that are associated with the testing requirements of appendix H.

The following is a section-by-section discussion of the final rule.

Section 21.115 Applicable Requirements

This section sets forth the airworthiness, noise, and fuel venting and exhaust emissions requirements that must be met by each applicant for a supplemental type certificate. Section 21.115(a) is amended to reinstate a reference to the noise requirements of 14 CFR Part 36. This reference was inadvertently removed in recent rulemaking.

Appendix J to Part 36

Part 36 is amended by adding a new appendix J. Appendix J provides an alternative noise certification procedure for certain civil helicopters certificated in the primary, normal, transport, or restricted category.

Appendix J follows the general outline and all applicable definitions, technical specifications, reference conditions, reference flight procedures, and the specific language of the existing appendix H on a section-by-section basis. Appendix J provides a high degree of commonality between U.S. standards and those expected to be adopted by ICAO and other ICAO member countries. However, subsequent to development of the specifications for the ICAO Chapter 11 standard, three technical issues of significance were identified by the FAA, that have led to differences between appendix J and the ICAO Chapter 11 test standards that are presently proposed. After review of these issues, the FAA found the potential errors associated with them to be excessive and contrary to the agency's expectations regarding the accuracy and integrity of the aircraft noise certification process. The three issues are discussed below.

As proposed, chapter 11 does not provide for a correction of off-reference conditions (in particular, ambient temperature) regarding the mechanical generation of noise at its source during the flyover test procedure. Noise levels generated by a typical helicopter vary as a function of rotor tip speed and the speed of sound. Since the speed of sound varies as a function of ambient temperature, helicopter noise levels will also vary as a function of ambient temperature. Appendix J and chapter 11 require the measurement of noise levels at, or corrected to, the reference ambient temperature of 77 degrees Fahrenheit. At temperatures above the reference, the helicopter noise generated at the source is less than the noise generated at the reference temperature. At temperatures less than the reference, the noise generated is correspondingly greater than at reference conditions. The FAA's solution to the off-reference generation of noise caused by off-reference temperature is to require an adjustment to the reference airspeed so the helicopter is flown at the reference advancing blade tip Mach number. Such a calculated adjustment to the reference airspeed will be made just prior to the actual flight test, and will account for the ambient temperature at the time of the test. This is the procedure proposed by the International Coordinating

Council of the Aerospace Industries Association in their working paper WP/48 presented at the recent CAEP meeting in Montreal (December 1991). A copy of working paper WP/48 is included in the docket.

Chapter 11 also does not provide for a correction of off-reference atmospheric attenuation. The FAA's solution to the error caused by failure to correct for off-reference atmospheric attenuation is to reduce the size of the test window prescribed under section J36.101(c) to preclude testing in the portion of the temperature and relative humidity test window where high rates of atmospheric absorption are encountered. By restricting the test window, any error caused by off-reference atmospheric absorption is reduced, and the need for correction is negated.

The FAA's third concern is the Chapter 11 provision allowing the use of a strip chart recorder and an "estimation" equation to determine SEL from the duration and the maximum A-weighted level of the noise trace. During development of the NPRM, the FAA examined data from numerous helicopter noise tests which indicated that the error introduced by the strip chart method ranged from zero to 1.7 decibels when compared with helicopter noise measured and analyzed by the Appendix H procedure. The error did not favor the applicant in any of the data. Accordingly, the NPRM did not include the strip chart method as one of the allowable measurement methods specified under proposed section J36.109(d). As proposed, appendix J would have allowed the use of an integrating sound level meter to directly measure the SEL during the flyover, or the helicopter flyover noise signal could be tape recorded for subsequent analysis by an integrating sound level meter.

After further consideration of this issue subsequent to issuance of the NPRM, the FAA has decided to permit the use of a strip chart recorder and an "estimation" equation as an optional method of calculating SEL from maximum level and duration readings taken from the strip chart trace. This change is made in the interest of harmonizing appendix J and ICAO Chapter 11. The addition of the strip chart method as an optional measurement method has no impact on any other provision of appendix J. Since the amount of error, if any, is unpredictable from helicopter to helicopter, the consequence of the use of the strip chart method relative to the other measurement methods is also unpredictable. However, since the FAA's data indicate that any error from the strip chart method works against applicants, the FAA advises all applicants wishing to use such a procedure that errors are possible, and suggests that the applicants choose one of the other SEL-measurement methods specified under appendix J. The strip chart method involves the use of strip chart recorder and equations for calculating SEL from the time-history trace recorded on the strip chart. Accordingly, section J36.109(d)(1) includes the strip chart recorder as an optional measurement method. Further, a new section J36.109(b)(5) is added to the final rule to incorporate the equations necessary to calculate the SEL from the strip chart trace.

Appendix H has a provision that allows less stringent limits, i.e., Stage 2 plus 2 EPNdB, for acoustical changes for Stage 1 helicopters, and a provision that allows similar less stringent limits for the first civil version of a military helicopter. In the interest of harmonizing the U.S. and ICAO helicopter noise certification regulations, these provisions were not included in the proposed rule. The practical effect of not including these provisions is that certain older helicopters will not have the benefit of the more liberal noise limits allowed under appendix H.

With the adoption of appendix J, applicants have a choice of two noise certification procedures for certain helicopters. An analysis performed to demonstrate a "no acoustic change" must assume that either appendix H or appendix J is the noise certification basis of the parent helicopter. For the purpose of demonstrating "no acoustic change" under § 21.93(b), the demonstration must be consistent with the noise certification basis of the parent helicopter. Thus, if the parent helicopter is certificated under part 36, appendix H, the "no acoustic change" analysis must consider all three flight configurations (flyover, approach, takeoff). If the parent is certificated under part 36, appendix J, the "no acoustic change" analysis is limited to consideration of flyover noise levels. If the parent helicopter is a Stage 1 helicopter, the noise certification basis of the parent helicopter is under appendix H. Subject to the approval of the FAA, the noise certification basis of a Stage 2 helicopter having a maximum certificated takeoff weight of not more than 6,000 pounds may be changed from appendix H to appendix J through an FAA-approved reanalysis of the original appendix H noise test data for that helicopter, or by retesting that helicopter under the requirements of appendix J. Helicopters that are noise certificated under appendix J can be converted to appendix H noise certification only by performing the noise tests prescribed under appendix H.

Section 36.1, 36.6, 36.801, 36.805, and 36.1581 are also amended to add a reference the alternative noise certification procedure contained in the new appendix J.

Discussion of Comments

Interested persons were afforded the opportunity to participate in development of this rulemaking by submitting written comments to the public regulatory docket on or before July 6, 1992. All comments received have been reviewed and duly considered in promulgating this amendment; comments received after July 6, 1992, have been considered to the extent possible without delaying this rulemaking action. Seven comments were received; two from individuals, two from helicopter industry groups, and three from a foreign civil aviation authority.

Three requests for an extension of the comment period were received by the FAA. The FAA considered these requests and determined that any further delay in the issuance of this rule would result in an undue burden on U.S. manufacturers of light helicopters and would be contrary to the public interest. However, the FAA has determined that the interests of all affected persons will best be served by establishing a time during which comments on this final rule will be considered. At the conclusion of this comment period, the FAA will, if appropriate, take action to amend this rule.

One commenter suggests that use of the parenthetical phrase "(internal load)" is inappropriate and does not convey the proper intent as proposed in section J36.3(d) in prescribing the reference helicopter weight at which the noise tests are to be performed. The FAA agrees and offers the following discussion to clarify the matter. The maximum certificated takeoff weight to be used for noise certification purposes is the "maximum weight" defined under § 27.25(a) or § 29.25(a) of this chapter unless the applicant chooses a lesser noise certification weight and complies with any associated restrictions. If the applicant chooses to conduct the noise certification tests at a weight less than the maximum weight established under § 27.25(a) or § 29.25(a), then as prescribed under § 36.1581, that lesser weight must be furnished as an operating limitation in the operating limitations section of the Rotorcraft

Flight Manual, in FAA-approved manual material, or on an FAA-approved placard. Alternatively, in anticipation of future changes in type design involving a change in weight, an applicant may choose to conduct supplemental flight tests to establish a sensitivity curve of noise versus weight whereby a noise certification level can be calculated, through interpolation, for the change in type design and the associated maximum weight. It is not the intent of the FAA to require noise certification testing at the weight defined under § 27.25(c) or § 29.25(c), "total weight with jettisonable external load." The effort in the NPRM to qualify the noise certification weight by the parenthetical phrase "(internal load)" in section J36.3(d) was found to be confusing and is not adopted in the final rule.

A commenter requests FAA guidance on supplemental noise flight testing to develop noise versus drag data in anticipation of future changes in type design involving the addition (or removal) of aerodynamically-significant optional external devices. Appendix J does not require supplemental noise flight testing. Requests for supplemental testing will be considered by the FAA under the equivalent procedure provision of § 36.801. The same commenter also suggests that the helicopter should be tested in a clean configuration and that all future changes in type design involving the addition of external drag-inducing attachments should be exempted from the acoustic change provisions prescribed under § 21.93(b) of this chapter. The FAA will study this suggestion for a future rulemaking action; however, the suggestion is outside the scope of this rulemaking action.

Three commenters note the difference in height (above ground) between the relative humidity and temperature measurement locations as prescribed in the NPRM, and recommend that the measurements be made at the same height. The FAA agrees that such measurements, which are used to determine absolute humidity by the off-reference atmospheric attenuation correction method of Aerospace Recommended Practice 866A, should be made at the same location and the same height above the ground. The FAA agrees that the temperature, relative humidity, and wind speed and direction measurements should be made between the heights of 4 feet and 33 feet. This provision will ensure that an applicant can make one set of meteorological measurements that will satisfy the requirements of appendix J and of ICAO chapter 11. Section J36.101(c)(4) is adopted with the change noted above.

Several commenters suggest that the temperature and relative humidity test window proposed in section J36.101(c) be reduced in size to eliminate testing under highly absorptive regions of the test window. In a related suggestion, if the temperature and relative humidity test window is reduced in size, they suggest the adoption of a "zero correction window" over the remaining portion of the reduced temperature and relative humidity test window where correction for off-reference atmospheric attenuation would not be required. Such a "zero correction window" would be achieved by eliminating the requirement for correction of off-reference atmospheric attenuation proposed in section J36.113 and by eliminating the procedures for performing the correction of off-reference atmospheric attenuation proposed in section J36.205(c). The FAA agrees. The commenters differ slightly in the amount of reduction they recommend in the size of the test window. The final rule adopts the test window proposed in section J36.101(c) with the added requirement that testing may not take place where combinations of temperature and relative humidity would result in a rate of atmospheric attenuation greater than 10dB per 100 meters (30.5 dB per 1000 ft) in the one-third octave band centered at 8 kiloHertz. With the test window thus restricted, any error caused by off-reference atmospheric attenuation is reduced and the need for correction is negated. These changes further serve to harmonize Appendix J with Chapter 11 and are adopted in anticipation of a similar restriction in the test window being adopted by ICAO member States during individual implementation of the Chapter 11 standards. Proposed section J36.113, which prescribed the requirement for off-reference atmospheric attenuation correction, is not adopted. Proposed section J36.205(c), which prescribed the procedures for the correction of off-reference atmospheric attenuation, is not adopted. Proposed section J36.101(c)(2), which prescribes the temperature and relative humidity test window, is adopted with the change noted above.

One commenter submits data demonstrating the adverse impact of anomalous conditions in temperature and relative humidity vertical profiles on the accuracy of the noise test results. The commenter suggests that proposed section J36.101(c)(6) be changed to add the phrase "other anomalous meteorological conditions" to the weather restrictions prescribed under that section. The FAA agrees. The commenter is correct that the air temperature measured at the reference altitude, which is required elsewhere in the test procedure, will provide sufficient information for test personnel to detect the presence of an anomalous conditions along the noise propagation path. The FAA also agrees with the commenter that the proposed change is consistent with the requirements of ICAO chapter 11. Proposed section J36.101(c)(6), which is redesignated as section J36.101(c)(5) in the final rule, is adopted with the changes noted.

Two commenters suggest a clarification in the language describing the number and direction of the test flyovers in proposed section J36.105(b) to explicitly require flyovers in equal numbers in opposite directions so that the helicopter is tested with both headwind and tailwind components when winds aloft are present. The FAA agrees. The intent of the proposed provision is to nullify the effect of off-reference ground speed caused by winds aloft on the average noise level calculated from the individual noise levels of each flyover event. A test helicopter flying along the established reference flight path with a tailwind will experience an increase in the flyover velocity relative to the noise measurement position, thus reducing the acoustical duration of the flyover and lowering the measured SEL value. Conversely, if the helicopter is flown in the opposite direction with a headwind under the same meteorological conditions, lowering the groundspeed and increasing acoustical duration, the consequent increase in the measured SEL value caused by the headwind should numerically offset the opposite effects caused by the tailwind. By requiring equal numbers of flights in opposite directions, correcting individual flyovers for off-reference groundspeed is not necessary. Proposed section J36.105(b) is adopted with the suggested clarification. However, one of the commenters notes that applicants should be aware that, although Appendix J does not require the measurement of ground speed and the correction of off-reference ground speed for individual flyovers, failure to correct the individual flyovers for off-reference groundspeed can adversely affect the number of flyovers required to establish statistically a 90 percent confidence limit that does not exceed ±1.5 dB(A) as prescribed under section J36.203(b). An applicant may elect to measure groundspeed during the flyovers and correct for off-reference groundspeed in order to improve the confidence limit under the provisions of section J36.205(e) which simply states that such measurements and corrections are not required. Such measurement and correction procedures would require FAA approval. In a similar manner, applicants may perform the necessary measurements and apply corrections for off-reference source noise and atmospheric attenuations as permitted in section J36.205(d) and section J36.205(f), respectively.

One commenter states that any differences between Appendix J and ICAO chapter 11 would be economically burdensome because industry will have to test to two different procedures. The FAA disagrees. One of the basic criteria used by the FAA in developing appendix J was that any additional or different appendix J requirements would impose little or no additional costs on the applicant when compared to chapter 11 requirements. Appendix J differs from chapter 11 in two procedures. Appendix J has a temperature and relative humidity test window that is smaller than the test window allowed in chapter 11, and appendix J requires testing at an adjusted reference airspeed to offset the effects of off-reference source noise; Chapter 11 does not require that applicants make a similar adjustment. Foreign certification authorities have expressed their general acceptance of the adjusted reference airspeed procedure required under appendix J as an equivalency to the procedure prescribed under chapter 11. The smaller temperature and relative humidity test window in appendix J, or a similar restriction, is expected to be adopted by other ICAO countries. In the worst-case scenario where an applicant is required to test at two airspeeds to satisfy different certificating authorities, the addition of six additional flyovers during a certification test is not considered a significant technical, logistical, or economic challenge. The FAA concludes that these additional requirements do not involve a significant economic burden.

One commenter states that although the adjustment process in section J36.105(c)(1) for source noise variation is based on the tip speed of the main rotor blades, the main rotor system may not be the primary source of noise for a given helicopter, leading to substantial inaccuracies in the measurement procedure. The FAA disagrees. The actual source of noise is irrelevant to the correction process. This is an issue common to an appendix H test as well. For a typical noise certification test, the relative noise levels produced by various sources of noise on a given helicopter will not be known accurately, nor is it necessary for the dominant source to be known. Since the RPM of the rotor system is a fixed value and ambient temperature is an uncontrolled variable, what is really measured by source noise sensitivity testing is helicopter noise versus airspeed as adjusted to a reference temperature, not main rotor, tail rotor, or engine noise versus tip speed. If, for example, a piston helicopter is entirely dominated by exhaust noise, the peak helicopter noise will be insensitive to changes in main rotor tip speed (and helicopter airspeed). Under appendix J, any change in the SEL caused by the change in duration from the difference between reference and adjusted reference airspeeds is corrected by the mandatory <delta J_3> correction. Thus, it is not necessary to account for the dominant source of noise for a given helicopter for purposes of correction of the effects of off-reference source noise.

In the worst-case situation where source noise is entirely independent of airspeed, RPM, or ambient temperature, the mandatory procedure for addressing off-reference source noise will have no net effect on the measured noise levels. In all other situations, the procedure will improve the accuracy of the test procedure. However, knowledge of the dominant source of noise would be important under appendix H and appendix J when an applicant for a change in type design alters the helicopter noise source(s) (i.e., blade diameter, RPM, etc.) and wishes to use the source noise sensitivity curves previously measured under Appendix H, or measured as an option under Appendix J, during the noise testing of the parent helicopter. In a related comment, one commenter states that the term "translational speed" as used in the calculation of advancing blade tip Mach number under section J36.105(c)(1)(i) is inappropriate and should be replaced with "true air speed". The FAA agrees that the terminology "true air speed" is more descriptive of the actual airspeed required in the calculation, and section J36.105(c)(1)(i) is adopted with the change as noted. The remainder of section J36.105(c)(1) is adopted as proposed.

One commenter requests a 3 dB reduction in the maximum allowable noise levels prescribed by section J36.305(a). The commenter states that the increase in maximum allowable noise levels proposed in ICAO chapter 11 over the maximum allowable noise levels contained in ICAO chapter 8, and consequently, appendix J over appendix H, accounts for small inaccuracies inherent in the simplification process, and that such inaccuracies are removed by the addition of adjustment procedures for the effects of off-reference ambient temperature on source noise and off-reference temperature and relative humidity on atmospheric attenuation. The FAA disagrees. These limits are not based on a perceived inaccuracy incurred as a result of not providing for a correction for the effects of off-reference relative humidity and/or temperature on source noise and atmospheric attenuation. The process used to establish the maximum allowable noise levels were based entirely on fundamental differences between the SEL and EPNL metrics, and the helicopter-to-helicopter variation in the relationship between: (1) SEL and EPNL; (2) the centerline noise level and the average of the noise levels from three microphone locations; and (3) flyover noise levels and the relative noise levels from the flyover, approach, and takeoff test procedures. Accordingly, section J36.305(a) is adopted as proposed.

One commenter states that the ± 3 knot limit on airspeed variation is too restrictive operationally and suggests an alternative specification. The FAA disagrees. Appendix J prescribes a ± 3 knot airspeed specification under section J36.105(c)(1)(ii) as opposed to the ± 5 knot specification in appendix H under section H36.105(d). However, appendix H has a requirement for an adjustment for off-reference airspeed under section H36.205(e). Appendix J does not have a similar requirement. Therefore, appendix J requires a more restrictive limitation on variation in airspeed to minimize any error that might occur from the absence of a correction for off-reference airspeed. However, the FAA will consider an alternative specification as an equivalent procedure if the alternative specification provides a mechanism for ensuring that the average of the noise levels from the individual flyovers is representative of the noise level measured at reference airspeed conditions. Chapter 11 also has a ± 3 knot airspeed requirement. Accordingly, section J36.105(c)(1)(ii) is adopted as proposed.

One commenter states that a sound level meter will: (1) Result in a longer "10 dB down" duration time than would appendix H, which will increase the SEL; and (2) sample a wider frequency spectrum than otherwise required under Appendix H using the 24 contiguous one-third octave bands. The FAA agrees that the skill of the sound level meter operator in starting and stopping the integration at the precise 10 dB down points in the time history may have some small effect on the SEL value. The FAA reviewed data from recent helicopter noise research tests to assess the influence of the difference between the spectral width sampled by a sound level meter and that sampled using the appendix H data reduction procedure. The net SEL difference between the two procedures for twelve helicopter certification-type noise tests was found to be zero.

Two commenters request changes to or clarification of the requirement under section J36.111(b)(6) that helicopter speed, position, and engine performance data be recorded at an FAA-approved sampling rate. The FAA agrees. Section J36.111(b)(6) has been rewritten to better define the requirement. The phrase "FAA-approved sampling rate" is consistent with the requirements of ICAO chapter 11 and appendix H and recognizes that an appropriate sampling rate for a given parameter may depend on the equipment, operators, and procedures employed by the applicant. The requirement that the parameters must be "recorded" does not necessarily imply that electronic data recording systems must be used. For many of the parameters, an FAA-approved cockpit observer may scan the appropriate instrumentation throughout the measured portion of the flyover and record the data by hand. The observer may note the lateral position of the helicopter relative to ground markers to ensure that the helicopter stays within the prescribed limits for lateral deviation. Audio cassette recorders and video camcorders may be useful to augment a cockpit observer. The section is adopted with the change noted.

One commenter states that an inconsistency exists between appendix J and appendix H regarding the definition of the reference rotor RPM, and recommends that the word "maximum" (corresponding to the top of the green arc on the rotor tachometer) be added to the prescribed rotor operating condition prescribed under sections J36.3(c) and J36.105(c)(2). The FAA agrees. Sections J36.3(c) and J36.105(c)(2) are adopted with the change noted below.

One commenter states that the data adjustment limitation of 2 dB under proposed section J36.205(g) is too restrictive given the possibility that the correction for off-reference atmospheric absorption can alone approach this limit, and recommends that the restriction be eliminated. Although the requirement for correction of off-reference atmospheric absorption was not adopted in the final rule, the comment is still valid and the FAA agrees in part. The final rule retains the 2 dB limitation, but changes the applicability of the restriction to only those corrections made to account for the differences between test and reference flight procedures prescribed under section J36.105. The change also brings the restriction in Appendix J into harmony with the similar restriction in ICAO chapter II. Section J36.205(g) is adopted with the change noted above.

One commenter states that the requirement of section J36.109(e)(2)(i) to calibrate the noise measurement system at intervals not exceeding one hour is unnecessarily restrictive, and recommends a 1.5 to 2 hour maximum interval as more appropriate. The FAA disagrees. Experience has shown that the one-hour restriction is not a hindrance to the orderly conduct of the flight test. The time necessary to perform a required calibration is at most a few minutes for a tape recording system and even less for a sound level meter. The ICAO chapter 11 requires such calibrations before the start of testing and at intervals during the test. Unless substantial complications occur or the applicant extends the test to perform additional supplemental tests, the entire test series prescribed under this rule can be performed in less than one hour. Good engineering practice, in general, dictates frequent equipment calibration at available opportunities in order to monitor equipment performance. Accordingly, section J36.109(e)(2)(i) is adopted as proposed.

In proposed section J36.109(d), the FAA proposed to retain the discretion to require the applicant to tape record the noise signal from the flyover tests. This proposed provision is consistent with a similar requirement in ICAO chapter 11. The FAA intended to reserve the authority to require such recordings as an auditing procedure for a given test and for maintaining the integrity of the overall helicopter certification process by auditing the application of the rule and monitoring the rule's efficacy as a representative test for unusual and previously (acoustically) untested helicopter design configurations. One commenter requests that this provision be deleted, and that application criteria be provided if the provision is retained. After further consideration, the FAA has determined that the development of uniform and equitable application criteria across the broad spectrum of potential applicants is not practicable. Accordingly, the FAA agrees that the proposed provision should be deleted in the final rule. However, the FAA retains the authority to perform acoustic measurements and recordings in parallel with the applicant during a noise test conducted for the purpose of demonstrating compliance with this rule. The FAA also retains the authority to independently review all recorded data, including the tape recorded helicopter flyover noise if recorded by the applicant. The proposed section J36.109(d)(1) is adopted with the change noted above and, as previously discussed in this preamble, with the added provision that a strip chart recorder may be used as one of the methods to measure the helicopter flyover noise.

One commenter suggests adding a requirement that multi-engine helicopters be tested with all engines operating at approximately the same power. The FAA agrees that this is an important factor and will consider it for further rulemaking, since such a requirement was not proposed in the NPRM. Accordingly, section J36.105(c)(3) is adopted as proposed.

No comments were received on the NPRM concerning the form of the equation for calculating the allowable noise limit in section J36.301. The proposed equation follows the general form of the equations incorporated in the ICAO aircraft noise standards. However, the FAA has previously published equations for part 36 noise limits in Advisory Circular 36.1 that are different in form from their ICAO counterparts. The FAA inadvertently overlooked the published FAA equations during the development of the NPRM. After further consideration, the FAA has changed the form of the proposed equation in section J36.301 to coincide with the general equation form used in the other appendixes of this part as presented in FAA Advisory Circular 36.1. The slight difference in the form of the FAA equations and the form of the ICAO equations may be the subject of future discussions regarding the harmonization of the FAA rules and the ICAO standards. However, the FAA does not wish to pursue the harmonization issue on a piecemeal basis. The maximum difference between the equation proposed in the NPRM and the equation adopted in the final rule is 0.0005 dB, which occurs at 6,000 pounds.

Proposed section J36.105(d) includes the appendix H requirement that "at least one flyover test in the flyover test series must be conducted at a test weight at or above the maximum takeoff weight for which certification under this part is requested." No comments were received on this proposed requirement. However, after further consideration, the FAA has not adopted this requirement in the final rule. This change is made in the interest of harmonizing the requirements of appendix J with the requirements of ICAO chapter 11. Deleting this requirement in the final rule does not adversely affect the conduct of the test and does not diminish the integrity of the rule. The affected section retains the requirement that the helicopter test weight for each flyover must be within plus 5 percent or minus 10 percent of the maximum takeoff weight. However, applicants should understand that the deviations allowed under section J36.105 from reference test conditions must be random. An applicant will not be permitted to deliberately abuse the allowable random deviations prescribed in section J36.105 to artificially lower the noise levels measured during the flyover test. The proposed section J36.105(d) is adopted with the change noted above.

Regulatory Evaluation Summary

This section summarizes the regulatory evaluation prepared by the FAA on the amendments to 14 CFR part 36—Noise Standards: Aircraft Type and Airworthiness Certification. This summary and the full regulatory evaluation quantify, to the extent practicable, estimated costs to manufacturers, modifiers, and Federal, State, and local governments, as well as anticipated benefits.

Executive Order 12291, February 17, 1981, directs federal agencies to promulgate new regulations or modify existing regulations only if potential benefits to society for each regulatory change outweigh potential costs. The Executive Order requires the preparation of a Regulatory Impact Analysis of all "major" rules except those responding to emergency situations or other narrowly defined exigencies. A "major" rule is one that is likely to result in an annual effect on the economy of $100 million or more, that is likely to result in a major increase in consumer costs, that has a significant adverse effect on competition, or that is highly controversial.

The FAA has determined that this final rule is not "major" as defined in the Executive Order; therefore, a full regulatory impact analysis that includes the identification and evaluation of cost-reducing alternatives to this rule has not been prepared. Instead, the agency has prepared a more concise document termed a regulatory evaluation that analyzes only this final rule without identifying alternatives. In addition to a summary of the regulatory evaluation, this section also contains a Regulatory Flexibility Determination required by the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) and an International Trade Impact Assessment. If more detailed information is desired, the reader may examine the full regulatory evaluation contained in the docket.

Under this final rule, an applicant seeking certification of a light helicopter will be permitted to choose between two noise certification procedures: Appendix H of appendix J. The new noise certification procedure, appendix J, will (1) reduce the required microphone locations from three to one; (2) require only a level flyover test rather than level flyover, approach, and takeoff tests as in Appendix H; and (3) reduce the complexity of the data correction procedures. Compared to Appendix H, each of these three factors will lower compliance costs.

Benefit Analysis

The FAA has determined that this final rule will accommodate the advancement of the helicopter manufacturing industry by reducing compliance costs and improving relationships among manufacturers, modifiers, and operators of helicopters, while providing a potential for a reduced level of noise. The following is a discussion of the benefits, including reduced compliance costs, that will accrue as a result of this final rule.

The Appendix J noise certification procedure will create a commonality with international standards. The International Civil Aviation Organization (ICAO), Committee on Aviation Environmental Protection, met in December of 1991 in Montreal, Canada, and recommended noise certification standards for light helicopters that are very similar to the U.S. certification procedures contained in this final rule.

In July 1991, the FAA conducted a series of acoustic flight tests of 12 helicopter configurations in order to supplement an existing light helicopter noise data base of seven helicopter models. An analysis of the 19 helicopter tests resulted in the establishment of an SEL-based limit under Appendix J that is, on average, 2.0 dB more stringent than the limit each of the 19 helicopters would have to meet under Appendix H.

The more stringent noise certification requirements may foster better relationships between the airports, heliports, local communities, and helicopter operators by providing the potential for quieter helicopters. In some instances, local communities have opposed the establishment of nearby heliports. For example, a zoning request for a heliport to be located just outside of Washington, DC, was denied in the mid-to-late 1980's. Excessive noise was cited as one reason for not granting this request.

In recent years, the number of heliports, helistops, and helipads at airports has increased. In 1987, there were 3,325 heliports in the United States; by the end of 1990, that number had increased to 4,462. As the number of heliports has grown, so has the U.S. helicopter fleet. The FAA estimates that the new alternative procedure will encourage manufacturers to comply with the substantially less costly but more stringent Appendix J requirements, and therefore may result in the manufacturer of quieter light helicopters.

In addition to providing for a reduced level of noise, the FAA estimates that the manufacturers of light helicopters will have lower one-time noise certification procedure costs. These savings include those primarily associated with the noise abatement technology. The present value cost savings to helicopter manufacturers will be about $5.43 million over the next 15 years.

A helicopter modifier may concentrate on a particular type of aircraft, and that entity may be in the business of continually developing, selling, and installing modification kits for a particular type of aircraft. The present value cost savings to helicopter modifiers will be $17.01 million over the next 15 years. The FAA has examined the impact that this final rule will have on helicopter operators, and concludes that there will be no impact on helicopter operators. In addition, the FAA estimates that the agency will have lower costs because less labor will be required to process and witness the new test procedure. On a per-certificate basis, the annual cost savings to the FAA will be about $12,300. The present value cost savings to the FAA is estimated to be $1.78 million over the next 15 years.

International Trade Impact Analysis

The final rule will have little or no impact on trade for either U.S. firms doing business in foreign countries, or foreign firms doing business in the United States. In the U.S. market, foreign manufacturers will have the option of producing helicopters that satisfy the new standards and, therefore, will not be at a competitive disadvantage with U.S. manufacturers.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 requires agencies to review rules that have "a significant economic impact on substantial number of small entities".

The FAA's criteria for "a substantial number" is a number that is not less than 11 and that is more than one-third of the small entities subject to this final rule.

According to FAA Order 2100.14A, "Regulatory Flexibility Criteria and Guidance," the definition of a small entity (aircraft and aircraft parts manufacturer) is one with 75 or fewer employees. There are no small U.S. helicopter manufacturers that are manufacturing helicopters for the U.S. market.

Although FAA Order 2100.14A does not specifically identify the aircraft modifiers affected by this rulemaking as an entity type in its lists of threshold criteria, an "aircraft repair facilities" entity is listed in the order. This entity would include repair stations certificated and rated under 14 CFR part 145 and shops employing persons who are holders of a mechanic or repairman certificate issued under 14 CFR part 65 that deal with helicopters. Mechanics employed by such entities may perform maintenance, preventative maintenance, and alteration work as prescribed by § 43.3 of 14 CFR part 43. The corresponding size threshold given in the order is 200 employees.

An aircraft modifier conducts engineering and supplemental type certificate application activities, and typically performs the alteration work. A modifier also may separately offer repair or maintenance services. The nature of the work performed by a modifier is generally analogous to that of an aircraft repair facility, and the corresponding threshold levels given in the order are assumed to apply here. For the purpose of this regulatory flexibility determination, an aircraft modifier is considered a small entity if it has 200 or fewer employees.

The Order does not define a threshold value for significant annualized cost for the aircraft repair facilities entity. The FAA estimates that the annualized 1991 cost threshold is $5,400.

Based upon information presented in the cost analysis, the one-time cost savings to a small modifier will be about $155,290 per supplemental type certificate. Annualized at 10 percent over 10 years, the costs savings will be $27,270. This is above the annualized cost threshold.

The total population of modifiers is about 200, and in recent years, about 75 of them have applied for supplemental type certificates which require a noise test under 14 CFR part 36. Typically, between 10 to 12 modifiers would initiate a change annually. Using the lower population estimate, about 16 percent (12/75=0.16) of the total population of rotorcraft modifiers would be affected annually.

The FAA concludes that a substantial number of small entities (more than one third) are not affected significantly by this final rule. Therefore, the final rule would not impose a significant economic impact on a substantial number of small entities, and thus, a regulatory flexibility analysis is not required.

Federalism Implications

The regulations adopted herein do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Environmental Analysis

The procedures implemented by this rule have been determined to not significantly affect the quality of the human environment.

Pursuant to the Department of Transportation "Policies and Procedures for Considering Environmental Impacts" (FAA Order 1050.1D), a Finding of No Significant Impact has been prepared and placed in the docket.

Justification for Immediate Adoption

The FAA has determined that further delay in the adoption of this rule would cause undue burden to U.S. manufacturers of light helicopters. Many U.S. manufacturers of light helicopters have new type certification projects that are nearing completion. These certification actions will require noise testing. These manufacturers have participated in and supported the establishment of the ICAO standards similar to those adopted here. Without this rule, these U.S. manufacturers must comply with the more costly testing requirements of appendix H of this chapter. Accordingly, the FAA has determined that good cause exists to make this rule effective in less than 30 days.

Interested persons are invited to submit comments as they may desire regarding this amendment. Communications should identify the docket number and be submitted in triplicate to the address above. All communications received on or before the close of the comment period will be considered by the Administrator. Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. After review of the comments, if the FAA finds that changes are appropriate, it will initiate rulemaking proceedings to amend the regulations. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested parties.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number ______." The postcard will be date stamped and returned to the commenter.

Because of the substantial public interest in this rule noted above, the FAA has determined that this rule is significant under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979).

Conclusion

For the reasons stated above, I certify that this final rule: (1) Is not a major rule under Executive Order 12291; (2) is a significant rule under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) does not have a significant economic impact on a substantial number of small entities. In addition, this final rule has little or no impact on trade opportunities for U.S. firms doing business overseas, or on foreign firms doing business in the United States.

List of Subjects

14 CFR Part 21

Aircraft, Helicopters, Noise control.

14 CFR Part 36

Aircraft, Helicopters, Incorporation by reference, Noise control.

The Amendments

Accordingly, the Federal Aviation Administration amends 14 CFR parts 21 and 36 of the Federal Aviation Regulations as follows:

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS

1. The authority citation for part 21 is revised to read as follows:

Authority: 49 U.S.C. App. 1344, 1348(c) 1352, 1354(a), 1355, 1421 through 1431, 1502, 1651(b)(2); 42 U.S.C. 7572; E.O. 11514, 35 FR 4247, 3 CFR 1966–1970 Comp., p. 902; 49 U.S.C 106(g).

2. Section 21.115(a) is revised to read as follows:

§ 21.115 Applicable requirements.

(a) Each applicant for a supplemental type certificate must show that the altered product meets applicable airworthiness requirements as specified in paragraphs (a) and (b) of § 21.101 and, in the case of an acoustical change described in § 21.93(b), show compliance with the applicable noise requirements of part 36 of this chapter and, in the case of an emissions change described in § 21.93(c), show compliance with the applicable fuel venting and exhaust emissions requirements of part 34 of this chapter.

* * * * *

PART 36—NOISE STANDARDS: AIRCRAFT TYPE AND AIRWORTHINESS CERTIFICATION

3. The authority citation for part 36 is revised to read as follows:

Authority: 49 U.S.C. App. 1344, 1348, 1354(a), 1355, 1421, 1423, 1424, 1425, 1428, 1429, 1430, 1431(b), 1651(b)(2), 2101, 2121 through 2125; 42 U.S.C. 4321, et seq.; E.O. 11514, 35 FR 4247, 3 CFR, 1966–1970 Comp., p. 902; 49 U.S.C. 106(g).

4. Section 36.1 is amended by revising paragraph (h) to read as follows:

§ 36.1 Applicability and definitions.

* * * * *

(h) For the purpose of showing compliance with this part, for helicopters in the primary, normal, transport, and restricted categories, the following terms have the specified meanings:

(1) *Stage 1 noise level* means a takeoff, flyover, or approach noise level greater than the Stage 2 noise limits prescribed in section H36.305 of Appendix H of this part, or a flyover noise level greater than the Stage 2 noise limits prescribed in section J36.305 of appendix J of this part.

(2) *Stage 1 helicopter* means a helicopter that has not been shown under this part to comply with the takeoff, flyover, and approach noise levels required for Stage 2 helicopters as prescribed in section H36.305 of Appendix H of this part, or a helicopter that has not been shown under this part to comply with the flyover noise level required for Stage 2 helicopters as prescribed in section J36.305 of Appendix J of this part.

(3) *Stage 2 noise level* means a takeoff, flyover, or approach noise level at or below the Stage 2 noise limits prescribed in section H36.305 of Appendix H of this part, or a flyover noise level at or below the Stage 2 limit prescribed in section J36.305 of Appendix J of this part.

(4) *Stage 2 helicopter* means a helicopter that has been shown under this part to comply with Stage 2 noise limits (including applicable tradeoffs) prescribed in section H36.305 of Appendix H of this part, or a helicopter that has been shown under this part to comply with the Stage 2 noise limit prescribed in section J36.305 of Appendix J of this part.

5. Section 36.6 is amended by adding a new paragraph (c)(1)(v) to read as follows:

§ 36.6 Incorporation by reference.

* * * * *

(c) * * *

(1) * * *

(v) IEC Publication No. 804, entitled "Integrating-averaging Sound Level Meters," first edition, dated 1985.

* * * * *

6. Section 36.11 is revised to read as follows:

§ 36.11 Acoustical change: Helicopters.

This section applies to all helicopters in the primary, normal, transport, and restricted categories for which an acoustical change approval is applied for under § 21.93(b) of this chapter on or after March 6, 1986. Compliance with the requirements of this section must be demonstrated under appendix H of this part, or, for helicopters having a maximum certificated takeoff weight of not more than 6,000 pounds, compliance with this section may be demonstrated under Appendix J of this part.

(a) *General requirements.* Except as otherwise provided, for helicopters covered by this section, the acoustical change approval requirements are as follows:

(1) In showing compliance with the requirements of appendix H of this part, noise levels must be measured, evaluated, and calculated in accordance with the applicable procedures and conditions prescribed in parts B and C of appendix H of this part. For helicopters having a maximum certificated takeoff weight of not more than 6,000 pounds that alternatively demonstrate compliance under appendix J of this part, the flyover noise level prescribed in appendix J of this part must be measured, evaluated, and calculated in accordance with the applicable procedures and conditions prescribed in parts B and C of appendix J of this part.

(2) Compliance with the noise limits prescribed in section H36.305 of appendix H of this part must be shown in accordance with the applicable provisions of part D of appendix H of this part. For those helicopters that demonstrate compliance with the requirements of appendix J of this part, compliance with the noise levels prescribed in section J36.305 of appendix J of this part must be shown in accordance with the applicable provisions of part D of appendix J of this part.

(b) *Stage 1 helicopters.* Except as provided in § 36.805(c), for each Stage 1 helicopter prior to a change in type design, the helicopter noise levels may not, after a change in type design, exceed the noise levels specified in section H36.305(a)(1) of appendix H of this part where the demonstration of compliance is under appendix H of this part. The tradeoff provisions under section H36.305(b) of appendix H of this part may not be used to increase any Stage 1 noise level beyond these limits. If an applicant chooses to demonstrate compliance under appendix J of this part, for each Stage 1 helicopter prior to a change in type design, the helicopter noise levels may not, after a change in type design, exceed the Stage 2 noise levels specified in section J36.305(a) of Appendix J of this part.

(c) *Stage 2 helicopters.* For each helicopter that is Stage 2 prior to a change in type design, the helicopter must be a Stage 2 helicopter after a change in type design.

7. Section 36.801 is revised to read as follows:

§ 36.801 Noise measurement.

For primary, normal, transport, or restricted category helicopters for which certification is sought under appendix H of this part, the noise generated by the helicopter must be measured at the noise measuring points and under the test conditions prescribed in part B of appendix H of this part, or under an FAA-approved equivalent procedure. For those primary, normal, transport, and restricted category helicopters having a maximum certificated takeoff weight of not more than 6,000 pounds for which compliance with appendix J of this part is demonstrated, the noise generated by the helicopter must be measured at the noise measuring point and under the test conditions prescribed in part B of appendix J of this part, or an FAA-approved equivalent procedure.

8. Section 36.803 is revised to read as follows:

§ 36.803 Noise evaluation and calculation.

The noise measurement data required under § 36.801 and obtained under appendix H of this part must be corrected to the reference conditions contained in part A of appendix H of this part, and evaluated under the procedures of part C of appendix H of this part, or an FAA-approved equivalent procedure. The noise measurement data required under § 36.801 and obtained under appendix J of this part must be corrected to the reference conditions contained in part A of appendix J of this part, and evaluated under the procedures of part C of appendix J of this part, or an FAA-approved equivalent procedure.

9. Section 36.805 is revised to read as follows:

§ 36.805 Noise limits.

(a) Compliance with the noise levels prescribed under part D of appendix H of this part, or under part D of appendix J of this part, must be shown for helicopters for which application for issuance of a type certificate in the primary, normal, transport, or restricted category is made on or after March 6, 1986.

(b) For helicopters covered by this section, except as provided in paragraph (c) or (d)(2) of this section, it must be shown either:

(1) For those helicopters demonstrating compliance under Appendix H of this part, the noise levels of the helicopter are no greater than the applicable limits prescribed under section H36.305 of Appendix H of this part, or

(2) For helicopters demonstrating compliance under Appendix J of this part, the noise level of the helicopter is no greater than the limit prescribed under section J36.305 of appendix J of this part.

(c) For helicopters for which application for issuance of an original type certificate in the primary, normal, transport, or restricted category is made on or after March 6, 1986, and which the FAA finds to be the first civil version of a helicopter that was designed and constructed for, and accepted for operational use by, an Armed Force of the United States or the U.S. Coast Guard on or before March 6, 1986, it must be shown that the noise levels of the helicopter are no greater than the noise limits for a change in type design as specified in section H36.305(a)(1)(ii) of Appendix H of this part for compliance demonstrated under appendix H of this part, or as specified in section J36.305 of appendix J of this part for compliance demonstrated under appendix J of this part. Subsequent civil versions of any such helicopter must meet the Stage 2 requirements.

(d) Helicopters in the primary category:

(1) Except as provided in paragraph (d)(2) of this section, for a helicopter for which application for a type certificate in the primary category is made, and that was not previously certificated under Appendix H of this part, compliance with Appendix H of this part must be shown.

(2) For a helicopter that:

(i) Has a normal or transport type certificate issued under this chapter,

(ii) Has a standard airworthiness certificate issued under this chapter,

(iii) Has not undergone an acoustical change from its type design,

(iv) Has not previously been certificated under Appendix H of this part, and

(v) For which application for conversion to the primary category is made, no further showing of compliance with this part is required.

10. Section 36.1581 is amended by revising paragraph (f) to read as follows:

§ 36.1581 Manuals, markings, and placards.

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(f) For primary, normal, transport, and restricted category helicopters, if the weight used in meeting the takeoff, flyover, or approach noise requirements of appendix H of this part, or the weight used in meeting the flyover noise requirement of appendix J of this part, is less than the certificated maximum takeoff weight established under either § 27.25(a) or § 29.25(a) of this chapter, that lesser weight must be furnished as an operating limitation in the operating limitations section of the Rotorcraft Flight Manual, in FAA-approved manual material, or on an FAA-approved placard.

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11. A new Appendix I is added and reserved.

12. A new Appendix J is added to read as follows:

Appendix J—Alternative Noise Certification Procedure For Helicopters Under Subpart H Having A Maximum Certificated Takeoff Weight Of Not More Than 6,000 Pounds

Part A—Reference Conditions

J36.1 General.
J36.3 Reference Test Conditions.
J36.5 [Reserved]

Part B—Noise Measurement Procedure Under § 36.801

J36.101 Noise certification test and measurement conditions.
J36.103 [Reserved]
J36.105 Flyover test conditions.
J36.107 [Reserved]
J36.109 Measurement of helicopter noise received on the ground.
J36.111 Reporting requirements.
J36.113 [Reserved]

Part C—Noise Evaluation and Calculation Under § 36.803

J36.201 Noise evaluation in SEL.
J36.203 Calculation of noise levels.
J36.205 Detailed data correction procedures.

Part D—Noise Limits Procedure Under § 36.805

J36.301 Noise measurement, evaluation, and calculation.
J36.303 [Reserved]
J36.305 Noise limits.

Part A—Reference Conditions

Section J36.1 General

This appendix prescribes the alternative noise certification requirements identified under § 36.1 of this part and subpart H of this part for helicopters in the primary, normal, transport, and restricted categories having maximum certificated takeoff weight of not more than 6,000 pounds including:

(a) The conditions under which an alternative noise certification test under subpart H of this part must be conducted and the alternative measurement procedure that must be used under § 36.801 of this part to measure the helicopter noise during the test;

(b) The alternative procedures which must be used under § 36.803 of this part to correct the measured data to the reference conditions and to calculate the noise evaluation quantity designated as Sound Exposure Level (SEL); and

(c) The noise limits for which compliance must be shown under § 36.805 of this part.

Section J36.3 Reference Test Conditions

(a) *Meteorological conditions.* The following are the noise certification reference atmospheric conditions which shall be assumed to exist from the surface to the helicopter altitude:

(1) Sea level pressure of 2116 pounds per square foot (76 centimeters mercury);

(2) Ambient temperature of 77 degrees Fahrenheit (25 degrees Celsius);

(3) Relative humidity of 70 percent; and

(4) Zero wind.

(b) *Reference test site.* The reference test site is flat and without line-of-sight obstructions across the flight path that encompasses the 10 dB down points of the A-weighted time history.

(c) *Level flyover reference profile.* The reference flyover profile is a level flight 492 feet (150 meters) above ground level as measured at the noise measuring station. The reference flyover profile has a linear flight track and passes directly over the noise monitoring station. Airspeed is stabilized at $0.9V_H$; $0.9V_{NE}$; $0.45V_H$ + 65 kts ($0.45V_H$ + 120 km/h); or $0.45V_{NE}$ + 65 kts ($0.45V_{NE}$ + 120 km/h), whichever of the four speeds is least. Rotor speed is stabilized at the power on maximum normal operating RPM throughout the 10 dB down time period.

(1) For noise certification purposes, V_H is defined as the airspeed in level flight obtained using the minimum specification engine power corresponding to maximum continuous power available for sea level, 77 degree Fahrenheit (25 degrees Celsius) ambient conditions at the relevant maximum certificated weight. The value of V_H thus defined must be listed in the Rotorcraft Flight Manual.

(2) V_{NE} is the never-exceed airspeed.

(d) The weight of the helicopter shall be the maximum takeoff weight at which noise certification is requested.

Section J36.5 [Reserved]

Part B—Noise Measurement Procedure Under § 36.801

Section J36.101 Noise certification test and measurement conditions

(a) *General.* This section prescribes the conditions under which helicopter noise certification tests must be conducted and the measurement procedures that must be used to measure helicopter noise during each test.

(b) *Test site requirements.* (1) The noise measuring station must be surrounded by terrain having no excessive sound absorption characteristics, such as might be caused by thick, matted, or tall grass, shrubs, or wooded areas.

(2) During the period when the flyover noise measurement is within 10 dB of the maximum A-weighted sound level, no obstruction that significantly influences the sound field from the helicopter may exist within a conical space above the noise measuring position (the point on the ground vertically below the microphone), the cone is defined by an axis normal to the ground and by half-angle 80 degrees from this axis.

(c) *Weather restrictions.* The test must be conducted under the following atmospheric conditions:

(1) No rain or other precipitation;

(2) Ambient air temperature between 36 degrees and 95 degrees Fahrenheit (2 degrees and 35 degrees Celsius), inclusively, and relative humidity between 20 percent and 95 percent inclusively, except that testing may not take place where combinations of temperature and relative humidity result in a rate of atmospheric attenuation greater than 10 dB per 100 meters (30.5 dB per 1000 ft) in the one-third octave band centered at 8 kiloHertz.

(3) Wind velocity that does not exceed 10 knots (19 km/h) and a crosswind component that does not exceed 5 knots (9 km/h). The wind shall be determined using a continuous averaging process of no greater than 30 seconds;

(4) Measurements of ambient temperature, relative humidity, wind speed, and wind direction must be made between 4 feet (1.2 meters) and 33 feet (10 meters) at the noise monitoring station. Unless otherwise approved by the FAA, ambient temperature and relative humidity must be measured at the noise measuring station at the same height above the ground.

(5) No anomalous wind conditions (including turbulence) or other anomalous meteorological conditions that will significantly affect the noise level of the helicopter when the noise is recorded at the noise measuring station; and

(6) The location of the meteorological instruments must be approved by the FAA as representative of those atmospheric conditions existing near the surface over the geographical area where the helicopter noise measurements are made. In some cases, a fixed meteorological station (such as those found at airports or other facilities) may meet this requirement.

(d) *Helicopter testing procedures.* (1) The helicopter testing procedures and noise measurements must be conducted and processed in a manner which yields the noise evaluation measure designated Sound Exposure Level (SEL) as defined in section J36.109(b) of this appendix.

(2) The helicopter height relative to the noise measurement point sufficient to make corrections required under section J36.205 of this appendix must be determined by an FAA-approved method that is independent of normal flight instrumentation, such as radar tracking, theodolite triangulation, laser trajectography, or photographic scaling techniques.

(3) If an applicant demonstrates that the design characteristics of the helicopter would prevent flight from being conducted in accordance with the reference test conditions prescribed under section J36.3 of this appendix, then with FAA approval, the reference test conditions used under this appendix may vary from the standard reference test conditions, but only to the extent demanded by these design characteristics which make compliance with the reference test conditions impossible.

Section J36.103 [Reserved]

Section J36.105 Flyover test conditions

(a) This section prescribes the flight test conditions and allowable random deviations for flyover noise tests conducted under this appendix.

(b) A test series must consist of at least six flights with equal numbers of flights in opposite directions over the noise measuring station:

(1) In level flight and in cruise configuration;

(2) At a height of 492 feet ±50 feet (150 ±15 meters) above the ground level at the noise measuring station; and

(3) Within ±10 degrees from the zenith.

(c) Each flyover noise test must be conducted:

(1) At the reference airspeed specified in section J36.3(c) of this appendix, with such airspeed adjusted as necessary to produce the same advancing blade tip Mach number as associated with the reference conditions;

(i) Advancing blade tip Mach number (M_{AT}) is defined as the ratio of the arithmetic sum of blade tip rotational speed (V_R) and the helicopter true air speed (V_T) over the speed of sound (c) at 77 degrees Fahrenheit (1135.6 ft/sec or 346.13 m/sec) such that $M_{AT} = (V_R + V_T)/c$; and

(ii) The airspeed shall not vary from the adjusted reference airspeed by more than ±3 knots (±5 km/hr) or an equivalent FAA-approved variation from the reference advancing blade tip Mach number. The adjusted reference airspeed shall be maintained throughout the measured portion of the flyover.

(2) At rotor speed stabilized at the power on maximum normal operating rotor RPM (±1 percent); and

(3) With the power stabilized during the period when the measured helicopter noise level is within 10 dB of the maximum A-weighted sound level (L_{AMAX}).

(d) The helicopter test weight for each flyover test must be within plus 5 percent or minus 10 percent of the maximum takeoff weight for which certification under this part is requested.

(e) The requirements of paragraph (b)(2) of this section notwithstanding, flyovers at an FAA-approved lower height may be used and the results adjusted to the reference measurement point by an FAA-approved method if the ambient noise in the test area, measured in accordance with the requirements prescribed in section J36.109 of this appendix, is found to be within 15 dB(A) of the maximum A-weighted helicopter noise level (L_{AMAX}) measured at the noise measurement station in accordance with section J36.109 of this appendix.

Section J36.107 [Reserved]

Section J36.109 Measurement of helicopter noise received on the ground

(a) *General.* (1) The helicopter noise measured under this appendix for noise certification purposes must be obtained with FAA-approved acoustical equipment and measurement practices.

(2) Paragraph (b) of this section identifies and prescribes the specifications for the noise evaluation measurements required under this appendix. Paragraphs (c) and (d) of this section prescribe the required acoustical equipment specifications. Paragraphs (e) and (f) of this section prescribe the calibration and measurement procedures required under this appendix.

(b) *Noise unit definition.* (1) The value of sound exposure level (SEL, or as denoted by symbol, L_{AE}), is defined as the level, in decibels, of the time integral of squared 'A'-weighted sound pressure (P_A) over a given time period or event, with reference to the square of the standard reference sound pressure (P_0) of 20 micropascals and a reference duration of one second.

(2) This unit is defined by the expression:

$$L_{AE} = 10\,Log_{10} \frac{1}{T_0}\int_{t_1}^{t_2} \left(\frac{P_A(t)}{P_0}\right)^2 dt \quad dB$$

Where T_0 is the reference integration time of one second and $(t_2\text{-}t_1)$ is the integration time interval.

(3) The integral equation of paragraph (b)(2) of this section can also be expressed as:

$$L_{AE} = 10\,Log_{10} \frac{1}{T_0}\int_{t_1}^{t_2} 10^{0.1 L_A(t)}\, dt \quad dB$$

Where $L_A(t)$ is the time varying A-weighted sound level.

(4) The integration time (t_2-t_1) is practice shall not be less than the time interval during which $L_A(t)$ first rises to within 10 dB(A) of its maximum value (L_{AMAX}) and last falls below 10 dB(A) of its maximum value.

(5) The SEL may be approximated by the following expression:

$L_{AE} = L_{AMAX}$ + <delta> A

where <delta> A is the duration allowance given by:

<delta> A = 10 $\log_{10}$ (T)

where $T = (t_2-t_1)/2$ and L_{AMAX} is defined as the maximum level, in decibels, of the A-weighted sound pressure (slow response) with reference to the square of the standard reference sound pressure (P_0).

(c) *Measurement system.* The acoustical measurement system must consist of FAA-approved equipment equivalent to the following:

(1) A microphone system with frequency response that is compatible with the measurement and analysis system accuracy prescribed in paragraph (d) of this section;

(2) Tripods or similar microphone mountings that minimize interference with the sound energy being measured;

(3) Recording and reproducing equipment with characteristics, frequency response, and dynamic range that are compatible with the response and accuracy requirements of paragraph (d) of this section; and

(4) Acoustic calibrators using sine wave noise and, if a tape recording system is used, pink noise, of known levels. When pink noise (defined in section H36.109(e)(1) of Appendix H of this part) is used, the signal must be described in terms of its root-mean-square (rms) value.

(d) *Sensing, recording, and reproducing equipment.* (1) The noise levels measured from helicopter flyovers under this appendix may be determined directly by an integrating sound level meter, or the A-weighted sound level time history may be written onto a graphic level recorder set at "slow" response from which the SEL value may be determined. With the approval of the FAA, the noise signal may be tape recorded for subsequent analysis.

(i) The SEL values from each flyover test may be directly determined from an integrating sound level meter complying with the Standards of the International Electrotechnical Commission (IEC) Publication No. 804, "Integrating-averaging Sound Level Meters," as incorporated by reference under § 36.6 of this part, for a Type 1 instrument set at "slow" response.

(ii) The acoustic signal from the helicopter, along with the calibration signals specified under paragraph (e) of this section and the background noise signal required under paragraph (f) of this section may be recorded on a magnetic tape recorder for subsequent analysis by an integrating sound level meter identified in paragraph (d)(1)(i) of this section. The record/playback system (including the audio tape) of the tape recorder must conform to the requirements prescribed in section H36.109(c)(3) of Appendix H of this part. The tape recorder shall comply with specifications of IEC Publication No. 561, "Electro-acoustical Measuring Equipment for Aircraft Noise Certification," as incorporated by reference under § 36.6 of this part.

(iii) The characteristics of the complete system shall comply with the recommendations given in IEC Publication No. 651, "Sound Level Meters," as incorporated by reference under § 36.6 of this part, with regard to the specifications concerning microphone, amplifier, and indicating instrument characteristics.

(iv) The response of the complete system to a sensibly plane progressive wave of constant amplitude shall lie within the tolerance limits specified in Table IV and Table V for Type 1 instruments in IEC Publication No. 651, "Sound Level Meters," as incorporated by reference under § 36.6 of this part, for weighting curve "A" over the frequency range of 45 Hz to 11500 Hz.

(v) A windscreen must be used with the microphone during each measurement of the helicopter flyover noise. Correction for any insertion loss produced by the windscreen, as a function of the frequency of the acoustic calibration required under paragraph (e) of this section, must be applied to the measured data and any correction applied must be reported.

(e) *Calibrations.* (1) If the helicopter acoustic signal is tape recorded for subsequent analysis, the measuring system and components of the recording system mut be calibrated as prescribed under section H36.109(e) of Appendix H of this part.

(2) If the helicopter acoustic signal is directly measured by an integrating sound level meter:

(i) The overall sensitivity of the measuring system shall be checked before and after the series of flyover tests and at intervals (not exceeding one-hour duration) during the flyover tests using an acoustic calibrator using sine wave noise generating a known sound pressure level at a known frequency.

(ii) The performance of equipment in the system will be considered satisfactory if, during each day's testing, the variation in the calibration value does not exceed 0.5 dB. The SEL data collected during the flyover tests shall be adjusted to account for any variation in the calibration value.

(iii) A performance calibration analysis of each piece of calibration equipment, including acoustic calibrators, reference microphones, and voltage insertion devices, must have been made during the six calendar months proceeding the beginning of the helicopter flyover series. Each calibration shall be traceable to the National Institute of Standards and Technology.

(f) *Noise measurement procedures.* (1) The microphone shall be of the pressure-sensitive capacitive type designed for nearly uniform grazing incidence response. The microphone shall be mounted with the center of the sensing element 4 feet (1.2 meters) above the local ground surface and shall be oriented for grazing incidence such that the sensing element, the diaphragm, is substantially in the plane defined by the nominal flight path of the helicopter and the noise measurement station.

(2) If a tape recorder is used, the frequency response of the electrical system must be determined at a level within 10 dB of the full-scale reading used during the test, utilizing pink or pseudorandom noise.

(3) The ambient noise, including both acoustical background and electrical noise of the measurement systems shall be determined in the test area and the system gain set at levels which will be used for helicopter noise measurements. If helicopter sound levels do not exceed the background sound levels by at least 15 dB(A), flyovers at an FAA-approved lower height may be used and the results adjusted to the reference measurement point by an FAA-approved method.

(4) If an integrating sound level meter is used to measure the helicopter noise, the instrument operator shall monitor the continuous A-weighted (slow response) noise levels throughout each flyover to ensure that the SEL integration process includes, at minimum, all of the noise signal between the maximum A-weighted sound level (L_{AMAX}) and the 10 dB down points in the flyover time history. The instrument operator shall note the actual db(A) levels at the start and stop of the SEL integration interval and document these levels along with the value of L_{AMAX} and the integration interval (in seconds) for inclusion in the noise data submitted as part of the reporting requirements under section J36.111(b) of this appendix.

Section J36.111 Reporting Requirements

(a) *General.* Data representing physical measurements, and corrections to measured data, including corrections to measurements for equipment response deviations, must be recorded in permanent form and appended to the record. Each correction is subject to FAA approval.

(b) *Data reporting.* After the completion of the test the following data must be included in the test report furnished to the FAA:

(1) Measured and corrected sound levels obtained with equipment conforming to the standards prescribed in section J36.109 of this appendix;

(2) The type of equipment used for measurement and analysis of all acoustic, aircraft performance and flight path, and meteorological data;

(3) The atmospheric environmental data required to demonstrate compliance with this appendix, measured throughout the test period;

(4) Conditions of local topography, ground cover, or events which may interfere with the sound recording;

(5) The following helicopter information:

(i) Type, model, and serial numbers, if any, of helicopter, engine(s) and rotor(s);

(ii) Gross dimensions of helicopter, location of engines, rotors, type of antitorque system, number of blades for each rotor, and reference operating conditions for each engine and rotor;

(iii) Any modifications of non-standard equipment likely to affect the noise characteristics of the helicopter;

(iv) Maximum takeoff weight for which certification under this appendix is requested;

(v) Aircraft configuration, including landing gear positions;

(vi) V_H or V_{NE} (whichever is less) and the adjusted reference airspeed;

(vii) Aircraft gross weight for each test run;

(viii) Indicated and true airspeed for each test run;

(ix) Ground speed, if measured, for each run;

(x) Helicopter engine performance as determined from aircraft instruments and manufacturer's data; and

(xi) Aircraft flight path above ground level, referenced to the elevation of the noise measurement station, in feet, determined by an FAA-approved method which is independent of normal flight instrumentation, such as radar tracking, theodolite triangulation, laser trajectography, or photoscaling techniques; and

(6) Helicopter position and performance data required to make the adjustments prescribed under section J36.205 of this appendix and to demonstrate compliance with the performance and position restrictions prescribed under section J36.105 of this appendix must be recorded at an FAA-approved sampling rate.

Section J36.113 [Reserved]

Part C—Noise Evaluation and Calculations Under § 36.803

Section J36.201 Noise Evaluation in SEL

The noise evaluation measure shall be the sound exposure level (SEL) in units of dB(A) as prescribed under section J36.109(b) of this appendix. The SEL value for each flyover may be directly determined by use of an integrating sound level meter. Specifications for the integrating sound level meter and requirements governing the use of such instrumentation are prescribed under section J36.109 of this appendix.

Section J36.203 Calculation of Noise Levels

(a) To demonstrate compliance with the noise level limits specified under section J36.305 of this appendix, the SEL noise levels from each valid flyover, corrected as necessary to reference conditions under section J36.205 of this appendix, must be arithmetically averaged to obtain a single SEL dB(A) mean value for the flyover series. No individual flyover run may be omitted from the averaging process, unless otherwise specified or approved by the FAA.

(b) The minimum sample size acceptable for the helicopter flyover certification measurements is six. The number of samples must be large enough to establish statistically a 90 percent confidence limit that does not exceed ± 1.5 dB(A).

(c) All data used and calculations performed under this section, including the calculated 90 percent confidence limits, must be documented and provided under the reporting requirements of section J36.111 of this appendix.

Section J36.205 Detailed Data Correction Procedures

(a) When certification test conditions measured under part B of this appendix differ from the reference test conditions prescribed under section J36.3 of this appendix, appropriate adjustments shall be made to the measured noise data in accordance with the methods set out in paragraphs (b) and (c) of this section. At minimum, appropriate adjustments shall be made for off-reference altitude and for the difference between reference airspeed and adjusted reference airspeed.

(b) The adjustment for off-reference altitude may be approximated from:

<delta>$J_1 = 12.5 \log_{10}(H_T/492)$ dB;

where <delta>J_1 is the quantity in decibels that must be algebraically added to the measured SEL noise level to correct for an off-reference flight path, H_T is the height, in feet, of the test helicopter when directly over the noise measurement point, and the constant (12.5) accounts for the effects on spherical spreading and duration from the off-reference altitude.

(c) The adjustment for the difference between reference airspeed and adjusted reference airspeed is calculated from:

<delta>$J_3 = 10 \log_{10}(V_{RA}/V_R)$ dB;

Where <delta>J_3 is the quantity in decibels that must be algebraically added to the measured SEL noise level to correct for the influence of the adjustment of the reference airspeed on the duration of the measured flyover event as perceived at the noise measurement station, V_R is the reference airspeed as prescribed under section J36.3.(c) of this appendix, and V_{RA} is the adjusted reference airspeed as prescribed under section J36.105(c) of this appendix.

(d) No correction for source noise during the flyover other than the variation of source noise accounted for by the adjustment of the reference airspeed prescribed for under section J36.105(c) of this appendix need be applied.

(e) No correction for the difference between the reference ground speed and the actual ground speed need be applied.

(f) No correction for off-reference atmospheric attenuation need be applied.

(g) The SEL adjustments must be less than 2.0 dB(A) for differences between test and reference flight procedures prescribed under section J36.105 of this appendix unless a larger adjustment value is approved by the FAA.

(h) All data used and calculations performed under this section must be documented and provided under the reporting requirements specified under section J36.111 of this appendix.

Part D—Noise Limits Procedure Under § 36.805

Section J36.301 Noise Measurement, Evaluation, and Calculation

Compliance with this part of this appendix must be shown with noise levels measured, evaluated, and calculated as prescribed under parts B and C of this appendix.

Section J36.303 [Reserved]

Section J36.305 Noise Limits

For compliance with this appendix, the calculated noise levels of the helicopter, at the measuring point described in section J36.101 of this appendix, must be shown to not exceed the following (with appropriate interpolation between weights):

(a) For primary, normal, transport, and restricted category helicopters having a maximum certificated takeoff weight of not more than 6,000 pounds and noise tested under this appendix, the Stage 2 noise limit is 82 decibels SEL for helicopters with maximum certificated takeoff weight at which the noise certification is requested, of up to 1,764 pounds and increasing at a rate of 3.01 decibels per doubling of weight thereafter. The limit may be calculated by the equation:

$L_{AE(limit)} = 82 + 3.01[\log_{10}(MTOW/1764)/\log_{10}(2)]$ dB;

where MTOW is the maximum takeoff weight, in pounds, for which certification under this appendix is requested.

(b) The procedures required in this amendment shall be done in accordance with the International Electrotechnical Commission IEC Publication No. 804, entitled "Integrating-averaging Sound Level Meters," First Edition, dated 1985. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the Bureau Central de la Commission Electrotechnique Internationale, 1, rue de Varembe, Geneva, Switzerland or the American National Standard Institute, 1430 Broadway, New York City, New York 10018, and can be inspected at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

Issued in Washington, DC, on September 11, 1992.

Thomas C. Richards,

Administrator.

[FR Doc. 92-22382 Filed 9-11-92; 8:45 a m]

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federal register

Wednesday
September 16, 1992

Part VI

Department of the Interior

Bureau of Indian Affairs

Indian Gaming; Notice

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian Gaming

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of approved amendment to Tribal-State Compact.

SUMMARY: Pursuant to 25 U.S.C. 2710, of the Indian Gaming Regulatory Act of 1988 (Pub. L. 100-497), the Secretary of the Interior shall publish, in the **Federal Register**, notice of approved Tribal-State Compacts for the purpose of engaging in Class III (casino) gambling on Indian reservations. The Assistant Secretary—Indian Affairs, Department of the Interior, through his delegated authority has approved the Amendment to the Preamble and section 1 of the Tribal-State Compact for Control of Blackjack on the Red Lake Band of Chippewa Reservation in Minnesota, which was approved on September 25, 1991.

DATES: This action is effective September 16, 1992.

ADDRESSES: Office of Tribal Services, Bureau of Indian Affairs, Department of the Interior, MS/MIB 4603, 1849 "C" Street, NW., Washington DC 20240.

FOR FURTHER INFORMATION CONTACT: Hilda Manuel, Chief, Division of Tribal Government Services Bureau of Indian Affairs, Washington, DC 20240, (202) 208-7446.

SUPPLEMENTARY INFORMATION: This is to give notice of a change to the Tribal-State Compact between the Red Lake Band of Chippewa Indians and the State of Minnesota, which was published as a notice in the **Federal Register** in 56 FR 50222 on October 3, 1991. The compact has been amended by the Amendment to the Preamble and Section 1 of the Tribal-State Compact for Control of Blackjack on the Red Lake Band of Chippewa Reservation in Minnesota, enacted on July 9, 1992.

Dated: September 9, 1992.

Eddie F. Brown,

Assistant Secretary—Indian Affairs.

[FR Doc. 92-22380 Filed 9-15-92; 8:45 am]

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